

Neonatal Unit Student Workbook



Student name: _____

Supervisor: _____

Assessor: _____

This is your own personal workbook that you may wish to complete to use towards your Pebblepad. Please work through and discuss with your mentors as time allows.

	Student Sign	Mentor Sign
Orientation to the unit		
Receive handover of your baby		
Opportunity to handover baby		
Bedside safety checks (neopuff, suction and alarm limits)		
Complete daily jobs & encourage involvement		
Ensure emergency equipment location is known & how to fast bleep		
Ensure the student understands what PPE is required		
Checking fluid calculation/fluid regime		
Complete care plan		
Complete tissue viability tool		
Complete pain assessment tool		
Observe the use of badger system		
Awareness of preterm formula milk		
Awareness of term formula milk		
Specialist formula milks (infatrini, HE SMA, neocate)		
How to decant EBM safely (using 2 person check)		
Checking EBM at bedside (using 2 person check)		
Using and calculating breast milk fortifier		
Discuss & show various teats		
Demonstrate how to make gaviscon & its calculation		
Discuss the use of carobel		
Document observations		

Performing cares		
Checking babies temperature		
How to weigh a baby		
Weighing of nappies & calculation		
Demonstrate how to make a 'nest'		
Discuss importance of temperature control		
Discuss humidity policy		
Discuss transition from incubator to a cot		
Discuss preterm/term observation parameters		
Observe NGT feeding		
Perform NGT feed		
Observe NGT insertion		
Perform NGT insertion		
Discuss blood sampling & observe		
Where possible participate in parent craft		
Is aware of the commonly used drugs in neonates		
Understands drug calculations		
Observe an admission		
Observe a discharge		
Document in patient notes		
Assist with cannulation		
Watch an ROP be performed		
Watch the discharge DVDs		

Daily tasks-

- Receive handover for your babies
- Check neopuff, suction and alarm limits
- Check fluids
- Complete new daily chart
- Complete care plans, pain chart and tissue viability chart
- Check babies IV lines, long lines etc and skin integrity
- Check medication times and doses
- Clean space with clinell wipes and ensure topped up
- Complete daily jobs in job book
- Ensure unit stock is topped up
- Complete daily update on Badger

★ You may wish to take home an admission and discharge pack to familiarise yourself with as you will be expected to help with admissions and discharges- ask your mentor for these. ★

Safer sleep quiz-

Safer sleep is a very important aspect on the neonatal unit which we must ensure parents are familiar with prior to discharge as this reduces the risk of SIDS (sudden infant death syndrome). This quiz is from the Lullaby trust website, you may wish to complete this online instead and look at their website for further information and resources.



1. Babies only need to sleep on their backs at night- they can sleep on their front or side during the day. True or false?
2. You should take your baby out of their car seat as soon as you get to your destination. True or false?
3. Babies should not have pillows for sleep. True or false?
4. It doesn't matter what kind of mattress you use in a baby's cot. True or false?

5. It is not safe to share a bed with a baby who was born prematurely or of low birth weight. True or false?

6. What is ok to include in a baby's cot or Moses basket?

- Soft toys
- Duvet
- Cot bumpers
- Baby sleep bag
- Fitted sheet

7. What is the minimum age your baby can sleep in their own room?

- 3 months
- 6 months
- 12 months

**The ABCs
of Safer Sleep**

A Always sleep your baby... **B** ...on their back... **C** ...in a clear cot or sleep space.
(Free of bumpers, toys, pillows and loose bedding)

Safer sleep for baby, sounder sleep for you

Following the ABCs for every sleep day and night will help to protect your baby from Sudden Infant Death Syndrome (SIDS) giving you the peace of mind to enjoy this special time.

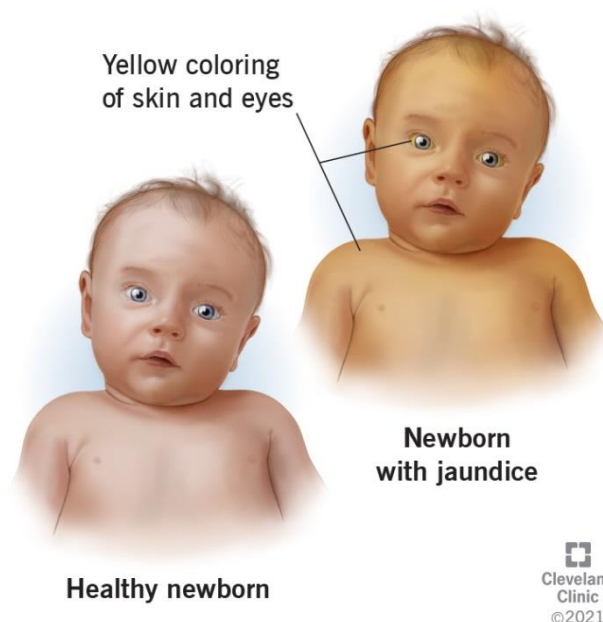
For support and advice on sleeping your baby safely The Lullaby Trust can help
Visit: www.lullabytrust.org.uk
Contact us on: 0808 802 6869
Email: info@lullabytrust.org.uk

the lullaby trust
A charity for babies - support for families

Jaundice-

Jaundice is a common occurrence on the neonatal unit. Jaundice is caused by too much bilirubin in the blood; this is a yellow substance in the blood that is released from the breakdown of red blood cells. The bilirubin is removed from the blood by the liver and it is then excreted in the urine and faeces. For most babies jaundice is harmless; however if levels get too high and are left untreated then this can lead to brain damage called kernicterus.

Jaundice in Newborns



Signs and symptoms-

- Babies with jaundice usually have a yellow colouring of their skin and the whites of their eyes.
- Sleepiness/ lethargy
- Poor feeding
- Chalk coloured faeces

Factors that increase the likelihood of jaundice-

- prematurity (due to having an immature liver)
- receiving inadequate fluid intake
- if a baby has a different blood type from the mother (the mother's body makes antibodies that attack the baby's red blood cells)
- the baby has a genetic problem that makes red blood cells more fragile
- the baby is born with high red blood cell numbers (polycythaemia)

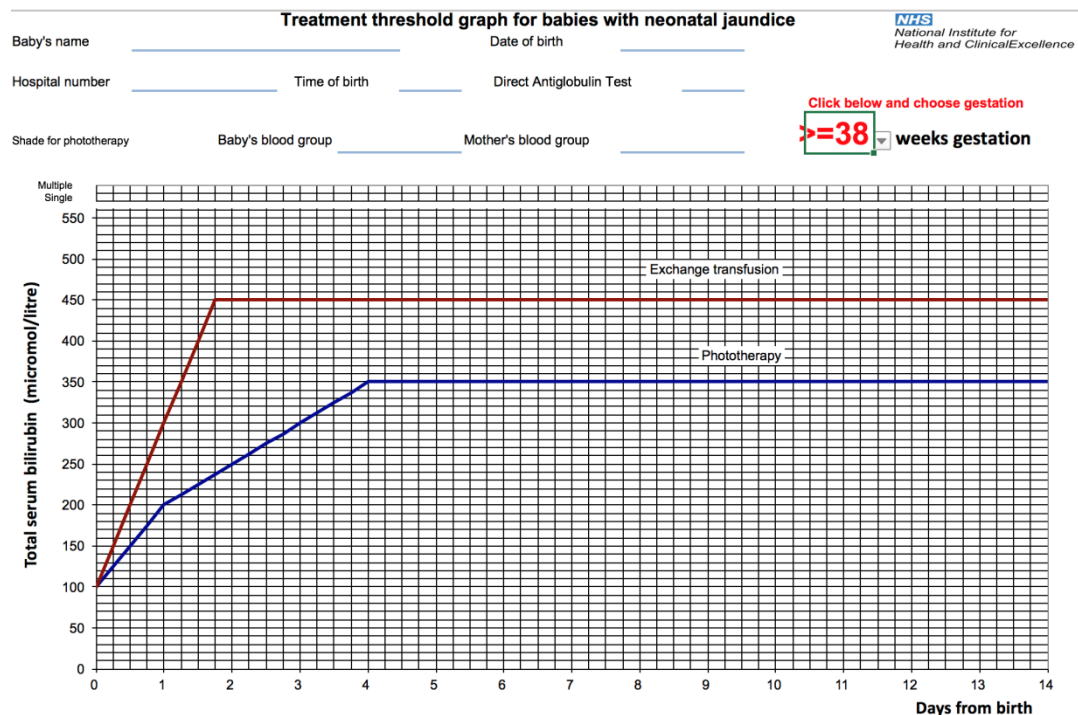
If a baby is suspected to have jaundice then their bilirubin levels will be checked. This can be done by either using a special light meter machine which is placed on the ear (known as a TCB/ transcutaneous bilirubin) or a blood test known as an MSB (micro-serum bilirubin) taken via a heel prick. The lab will then test the blood for the bilirubin level and once we have this result it is then plotted onto a jaundice chart that is based on the baby's gestation.

Treatment-

If a baby's jaundice level is above the treatment level on the jaundice chart then they will start a treatment called phototherapy. This is a light that is placed on top of the incubator which changes the bilirubin to a form that can easily be excreted from the body. When receiving phototherapy the baby wears no clothing so that their skin is exposed. They also wear an eye mask that is changed every 12 hours. Light-therapy blankets may also be used.

On the jaundice chart there is also a treatment line for an 'exchange transfusion'. This is an emergency procedure that is carried out where the baby's blood is replaced with blood from a donor to quickly reduce bilirubin levels. However, it is very rare that we carry out this procedure.

Another treatment may involve intravenous immunoglobulins. Babies with blood type incompatibilities receive this via an intravenous line. The immunoglobulins block antibodies that attack red blood cells and reduce the need for an exchange transfusion. This is also a rare procedure for us to carry out.



Respiratory support-

Some babies may require respiratory support to help them to breathe. Here are some of the devices you may see on our unit:

A ventilator is a device that supports or recreates the process of breathing by using pressure to achieve gaseous exchange, resulting in carbon dioxide to be excreted. A ventilator may be required for a few hours, days or weeks. If a baby on our unit is on a ventilator for more than 72 hours then they will be transferred to a tertiary unit.



CPAP is an acronym for “continuous positive airway pressure”. Babies born before 36 weeks gestation may not have fully developed lungs and may have difficulty breathing on their own. In these cases the infant wears either a nasal mask or prongs that are connected to the CPAP which sends a stream of air into the nose and down the trachea. This creates a small amount of positive pressure in the airway that keeps the lungs slightly inflated making it easier for the baby to inflate their lungs when breathing. CPAP is not recommended in term babies due to the risk of causing pneumothorax.

A BiPAP (Bilevel positive airway pressure) is similar to CPAP except the BiPAP delivers a high pressure during inhalation and then changes to a low pressure when exhaling whereas a CPAP delivers a set pressure constantly. We use the same machine for both BiPAP and CPAP.



A VapoTherm (also known as a high flow machine) allows the delivery of high flows of gas that is humidified to body temperature. This device uses nasal cannula to deliver the gases to spontaneously breathing babies.

Nasogastric tubes and Orogastric tubes-

The placement and usage of nasogastric tubes (NGT's) and orogastric tubes (OGT's) is common practice and probably the most common procedure carried out on the Neonatal Unit (NNU) on a daily basis. Whilst thousands across the UK are inserted daily without incident, there is a risk of misplacement into the lungs during insertion, or moving out of the stomach at a later stage. During your time on the NNU you will be expected to correctly use an NGT or an OGT to feed a baby and you may wish to learn how to insert these tubes.

What are the indications for passing an NGT or OGT?

Many of the infants admitted to NNU will require an NGT as they will be too sick or too immature to undertake oral feeds and co-ordinate their suck, swallow and breathing reflex. To enable adequate nutrition and hydration an NGT/ OGT will be inserted to provide milk and medications.

NGT's and OGT's are also required for gastric decompression for infants who are receiving respiratory support such as continuous positive end expiratory pressure (CPAP) and high flow through the nasal passages. An OGT or NGT will be inserted to prevent the over distension of the stomach and to also facilitate enteral feeding.

Indications for passing a gastric tube:

- Prematurity
- Neurological impairment
- Respiratory compromise
- Sick term infants
- Gastrointestinal anomalies both pre and post-surgery.

Why is Nasogastric tube / Orogastric tube feeding performed?

There are many reasons why babies are unable to feed. Gastric tubes can be used to:

1. Provide a method of feeding and administration of medication that will require minimal patient effort when the baby is unable to tolerate their required daily oral intake.
2. Provide a route that allows adequate mls/kg of fluid/nutrition.
3. Prevent tiredness which may occur from oral feeding
4. Provide a safe method of feeding for a baby who is unable to feed normally.

Many factors can contribute to difficulties with feeding:

1. Difficulty with sucking, swallowing and breathing in babies who are immature or have an illness that affects their breathing.
2. Pain and discomfort caused by gastric reflux.
3. Pain or unpleasant sensations in and around the mouth caused by medical interventions including suctioning and intubation.
4. Teat aversion caused by delaying opportunity to orally feed due to illness or prematurity.

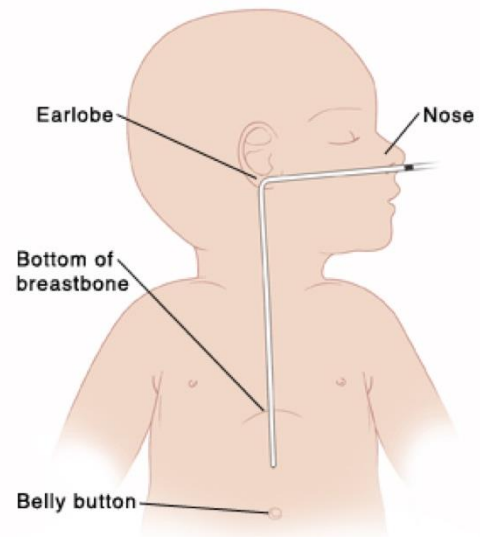
Insertion procedure-

Equipment

- 20ml syringe
- Appropriate sized NGT
- Duoderm
- Tape
- Scissors
- pH testing strips

Estimating the length of the NGT

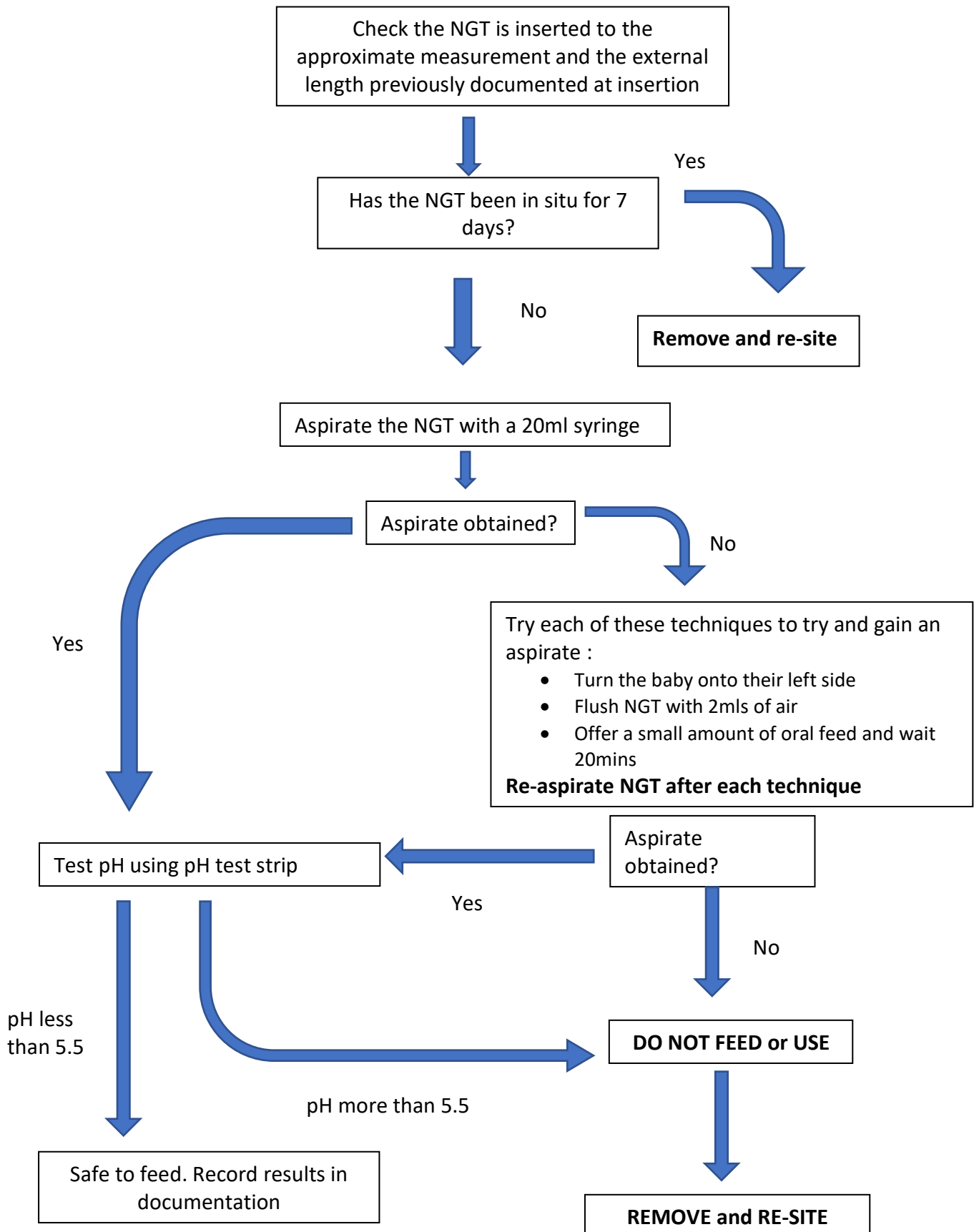
Measure from the tip of the nose to the earlobe and to midpoint between bottom of the breastbone and navel.



1. Swaddle baby and place on their back with their head slightly extended to push the nose upwards. Cut a small strip of duoderm and attach to the cheek, avoiding the eye area.
2. Place the tip of the NGT into the nostril and advance the NGT backwards and downwards through the nostril slowly until the required length is reached.
3. Secure the NGT with a pre-cut piece of adhesive tape or duoderm, cut to the same length as the duoderm.
4. Check the NGT is in the correct position by attaching a 20ml syringe to the NGT and aspirating fluid then testing the pH using the pH strips. Feeding should only commence if the pH is <5.0
5. If you are unable to obtain an aspirate please tell your mentor and follow the 'decision tree for NGT placement checks' on the next page.
6. Document the position, length and pH of the NGT on the NGT insertion sheet in the baby's care plan. All NGTs should be checked prior to any feed or medication administration.

It is essential to prepare the baby for the procedure as much as possible to reduce pain and discomfort. Swaddling the baby and administering sucrose where appropriate should be gold standard. Also as babies can become bradycardic during the procedure due to vagal stimulation, suction and oxygen should be readily available during the procedure. Explain the procedure to parents and always ensure you wash your hands and apply gloves.

Decision tree for NGT placement checks-

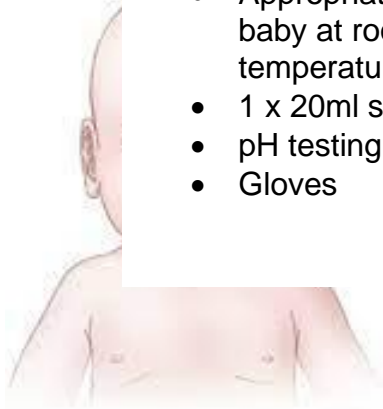


Feeding using an NGT-



Equipment-

- Appropriate feed for baby at room temperature or warmed
- 1 x 20ml syringe
- pH testing strips
- Gloves



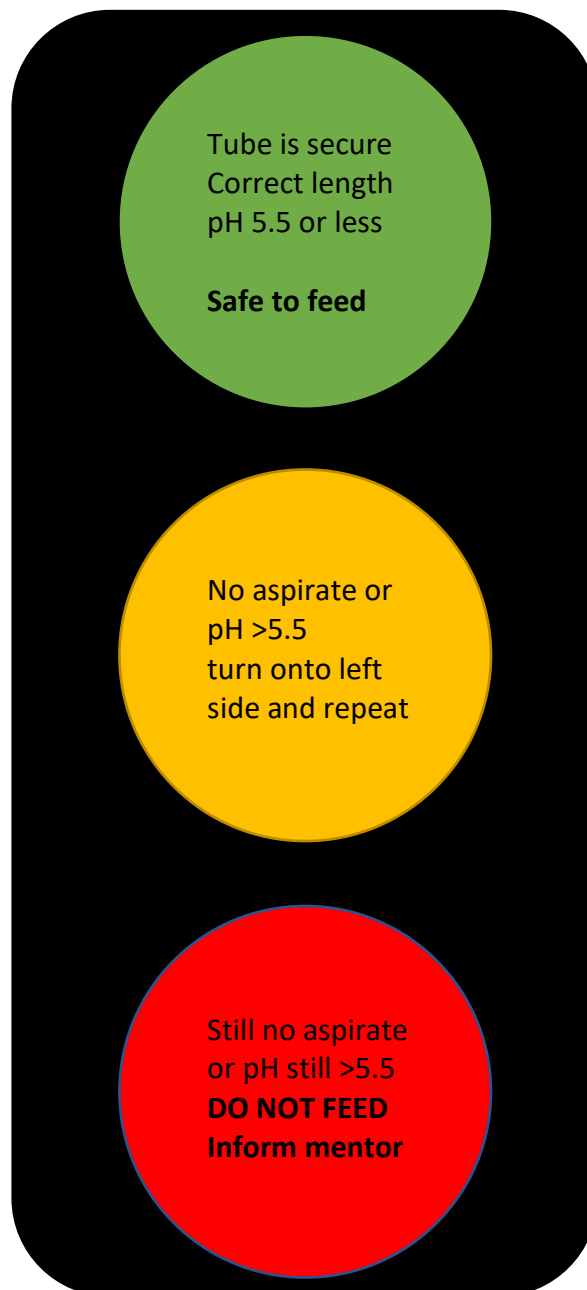
Procedure-

1. Measure out the babies requirement of milk ensuring if expressed breast milk (EBM) is used that it is checked by a 2nd member of staff ensuring the correct milk and that it remains in date, label and double initial the milk,. After warming the milk, a two person cot side check also to be carried out when taking the milk to the baby.
2. Wash hands and apply gloves.
3. Ensure the baby is in an appropriate feeding position.
4. Check the position of the tube by aspirating and checking the pH. Only proceed if safe to do so.
5. Remove the plunger from the 20ml syringe and attach the syringe to the end of the feeding tube.
6. Slowly pour the required amount of feed into the feeding tube (or to the 20mls mark if feed is more than this), allowing the milk to commence draining into the tube, gentle pressure may be applied using the plunger to encourage the feed to start flowing.
7. The feed rate should not exceed 20mls per minute, to adjust the rate raise or lower the syringe to allow gravity to adjust the flow. If feed is given too quickly this will interfere with peristalsis causing regurgitation.
8. When the feed is complete use the plunger to gently clear the milk from the feeding tube, remove the syringe and then replace the cap.
9. Document clearly on the feed chart the aspirate, pH, feed amount and if using EBM the initials of x2 staff members who checked it.

Complications-
(always inform your mentor first)

- The NGT is pulled out, dislodged or blocked – **Remove and replace the NGT.**
- The pH is ≥ 5.5 – **Do NOT feed or use, remove and re-site.**
- The aspirate is green, yellow, blood stained – **Inform medical staff for review.**

If the baby coughs, cokes, gags or vomits, becomes unwell or changes colour whilst feeding – **STOP immediately and shout for help**



c. You are unable to get a reaction less than 5.5 from the aspirate.

6. When feeding via a NGT, what would you do in the following situations?

a. The baby vomits.

b. The tube becomes dislodged.

c. The baby becomes cyanosed/apnoeic.

Record of supervised practice-

	Staff member Date/ Sign	Supervisor Date/ Sign	Comments
Observe passing of NGT by a staff member			
Supervised practice 1			
Supervised practice 2			
Supervised practice 3			
Competent to practise independently			

Commonly used drugs on the neonatal unit-

(Research these using the BNF and use this page to describe their use)

- Multivitamins/ Abidec _____
- Sytron _____
- Folic acid _____
- Omeprazole _____
- Gaviscon _____
- Sodium Chloride _____
- Potassium acid phosphate _____
- Benzylpenicillin _____
- Gentamicin _____
- Chlorothiazide _____
- Caffeine _____
- Acidophilus _____

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 μg) 1000 nanograms

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

Abidec (multivitamins) is prescribed at 0.6mls if a baby is receiving all EBM and 0.3mls if a baby is receiving a combination of EBM and formula.

Drugs Calculations Quiz-

1. Spironolactone syrup is available as 25mg in 5mls. A baby requires 15mg. How many mls should be given?
2. A baby weighs 1kg and is prescribed IVI 10% glucose at 60mls/kg. What is the hourly rate that the fluids should be running at?
3. A baby is having full feeds of EBM every 3 hours via bottle, how much Abidec (multivitamins) should they be prescribed?
4. A baby is prescribed 17.2mg of caffeine 20mg in 1ml, what dose should be administered?
5. Caffeine is available as 20mg in 1ml, your patient weighs 1.25kg. What dose should be prescribed?
6. Your patient is receiving feeds made up of 50% EBM and 50% Nutriprem 1, how much Abidec should they receive?
7. What are the side effects of Folic acid?

Neonatal unit quiz-

1. Can you list 3 common reasons for admission to the neonatal unit?
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 -
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2. What is meant by the term 'bradycardia'?
3. Can you describe what jaundice is?
4. What is meant by the term 'pneumothorax'?
5. Can you state the difference between gestational age and current gestational age?

6. Can you list 3 different types of respiratory support and describe how they work?

-

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7. How often should you change a humidity chamber on an incubator?

8. How many people should check EBM before giving to a baby?

9. What would you expect a babies mean blood pressure to be?

10. What is the lowest gestation we accept on our unit?

Commonly used neonatal terminology-

Acidosis- a high level of natural acid in the blood. This can be because the lungs are not working well, or because not enough oxygen is reaching parts of the body. It can be a combination of both. Sometimes, the body produces too much acid, or the kidneys do not remove the acids from the blood. This is called metabolic acidosis.

Anaemia- a low level of haemoglobin in the blood (see 'Haemoglobin').

Apnoea- a pause in breathing for 20 seconds or longer.

Apnoea of prematurity- premature babies may have an apnoea because the part of the brain that controls breathing is not fully developed yet. Often the baby starts breathing on their own, but might need to be gently helped by moving them slightly. Caffeine is often given to help with this. Most babies will grow out of apnoea of prematurity by the time they are around 36 weeks.

Aspirate- this is about 'checking the aspirate' before putting a milk feed down a nasogastric or orogastric tube. This means that a syringe is attached to the end of the feeding tube to get a small amount of the baby's stomach contents. It will be tested by using a pH paper or stick to make sure that the tube is in the stomach and it is safe for feeding.

Audiology (hearing) tests- there are two ways of assessing a baby's hearing. Both involve placing earphones over the baby's ears to deliver a series of clicks. The baby's responses to the clicks are then analysed.

Bagging- putting a mask connected to a squeezable bag or pressure device over the baby's nose and mouth to help breathing.

Bilirubin- a yellow part in the blood that gives a yellow colouring to the skin. High levels can cause jaundice and may be dangerous if the levels get too high.

Blood cultures- if doctors think that a baby may have an infection, a small blood sample is taken and added to and sent to the laboratory for testing. Results are available after 48 hours. When it is known what bacteria are in the baby's body, the team can check that the baby is on the right antibiotics to kill that bacteria.

Blood gas- this is a test done to find out the levels of oxygen, carbon dioxide gases and acids in the blood. Medical staff do this to work out how well the lungs and circulation are functioning, and to make sure any breathing help they are getting is working well.

Blood pressure- this is the pressure generated in the body's arteries by the pumping of the heart. It is often monitored in babies who are unwell.

Blood transfusion- this is when extra blood is given from a donor. A blood transfusion might be needed to treat severe anaemia (a serious lack of red blood cells), low blood pressure, or during or after an operation.

Bradycardia- this is when the heart rate slows down for a period of time. This is common in premature babies. It is usually part of apnoea of prematurity (see above). The baby usually recovers on their own. Sometimes, the staff might need to stimulate the baby to make them respond.

Cannula- a very small, short, soft plastic tube that is put into a baby's vein to give fluids or medicines straight into the bloodstream without having to keep using needles.

Cannulae- soft plastic prongs which go into the nose to send oxygen into the lungs.

Cerebrospinal fluid (CSF)- fluid made within the parts of the brain which flow down and around the spinal cord. If anything gets in the way of this flow, fluid can't be removed and the pressure rises. This can cause the parts of the brain to get bigger, which can lead to a condition called hydrocephalus.

Cerebral Function Monitor (CFM)- a machine which monitors the background electrical activity in the brain.

Chest drain- a tube passed through the chest wall into the space between the lungs and the outside of the chest to drain off air or fluid leaking from the lung.

Corrected gestational age- the age a premature baby would currently be if they had been born on their due date.

Continuous positive airway pressure (CPAP)- a type of respiratory support used to help a baby's breathing and helping them have fewer moments of apnoea. Using a CPAP machine, the lungs are expanded by applying a small amount of pressure (oxygen or air) through small prongs just inside the nose or by a small mask over the nose.

Cyanosis- when there is not enough oxygen in the blood, it can make the skin, lips, the tongue and nails appear a blue, dusky colour.

Electrolytes- salts in the body (which can be measured in blood tests) that are essential for the body to work.

Endotracheal tube (ET tube)- soft plastic tube put through the mouth or nose into the windpipe (trachea), which is attached to a ventilator to help breathing. It is often called a tracheal or ET tube.

Exchange transfusion- replacing a baby's blood with blood from an adult donor. This is done if a baby's jaundice level is very high and they are not getting better with treatment.

Expressed breast milk (EBM)- expressing breast milk means to use a pump, hands or both to get milk from the mum's breasts. The milk can be stored in a fridge or freezer or given directly to the baby.

Extubate- removing the endotracheal tube (see above) from the windpipe.

Fontanelle- soft spots on a baby's head that disappear by 18 months, as the skull bones grow and join together.

Family-centred care- this means involving families in the care of their baby on the unit.

Gestational age- the number of weeks the baby has been in the womb is known as the gestation. Being born at term means being born after 37 full weeks in the womb but before 42 weeks.

Glucose monitor- this is a machine that can measure the amount of glucose (sugars) in the blood.

Grunting- a noise made by a baby with breathing difficulty.

Haemoglobin- This is found in red blood cells and carries oxygen around the body.

Head circumference- measurement of the biggest distance around the baby's head.

Humidity- to prevent premature babies losing too much water through their skin, they are often looked after in warm, humidified incubators. Humidity (water) is also added to the gases the baby breathes through the ventilator, CPAP or high-flow machines.

Hydrocephalus- when too much fluid is present inside the parts of the brain. The increased pressure in the brain might cause the head size to increase very quickly.

Hypocalcaemia- a low blood calcium level.

Hypoglycaemia- a low blood glucose level.

Hypothermia- a body temperature of below 35.5°C

Hypoxia- a low amount of oxygen in the body tissues.

Incubator- a heated bed covered by a clear plastic box that allows the baby to be kept warm without clothes so that they can be monitored very closely. Humidity and extra oxygen can be run into the incubator if needed.

Intra-ventricular haemorrhage (IVH)- this is a common in premature babies where there is bleeding into the fluid chambers (ventricles) of the brain. IVHs are graded 1-4, according to their size, and are found on an ultrasound scan. Grade 1 bleeds are quite common in premature babies and tend to have no long-term consequences. Grade 4 bleeds (the biggest) means that there is bleeding into the brain tissue and may mean the baby has difficulties as they develop and grow.

Intravenous (IV) lines- fine tubes (cannula) that are sometimes put into a blood vessel in order to give fluid or medicine directly into the blood.

Jaundice- a yellowness of the skin and/or whites of the eyes caused by a high level of bilirubin (see above) in the blood. It is very common in babies, and is caused by the normal breakdown of the baby's red blood cells. However, high levels can be dangerous and phototherapy (shining blue light onto the baby's skin) may be needed to prevent high levels.

Long line- this is a longer cannula that is put into a vein in the arm, leg or head, with the end of the line lying close to the heart. It is also sometimes called a central line. These lines are used to give the baby IV nutrition directly into a vein when the starting of milk feeds has to be delayed. They can also be used for medication.

Low birth weight (LBW)- there are three categories of low birth weight:

Low birth weight (LBW) - a weight at birth of less than 2500g

Very low birth weight (VLBW) – a weight at birth of less than 1500g

Extremely low birth weight (ELBW) – a weight at birth of less than 1000g

Low flow oxygen- a way of giving small amounts of oxygen to babies

Lumbar puncture (LP)- Meningitis is a very bad infection around the outside layers (called membranes) of their brain and spinal cord. The doctor or nurse practitioner will put a small needle into one of the spaces low down in the baby's back, take some of the fluid and send it for testing.

Meconium- a dark sticky solid that builds up in the baby's digestive system before they are born. It usually starts being passed as bowel movements within 24 hours after birth.

Meconium aspiration- a baby who becomes distressed during labour may pass meconium while they are still in the womb. If the baby then breathes in the fluid which is surrounding them, the sticky material can block part of the airways. This can cause inflammation in the lung, and mean the baby finds it hard to breathe soon after they are born.

Nasogastric tube (NGT)- a long, thin, soft plastic tube that is passed through a baby's nose into their stomach. This tube is used to give milk to a baby until they are strong enough to take oral feeds.

Necrotising enterocolitis (NEC)- a serious condition where tissue in the bowel (small and large intestines) becomes inflamed. NEC can make a baby temporarily unable to take milk, and at its worst it can cause parts of the bowel to become so damaged that tissue within it dies. NEC can affect just a small part of the bowel, or sometimes the whole bowel can be affected.

NICU- the neonatal intensive care unit.

Oedema- swelling caused by too much fluid in the tissues under the skin.

Orogastric tube (OGT)- a fine tube passed through the mouth and into the stomach to give a baby milk feeds, similar to an NGT.

Parenteral nutrition- nutrition given directly into the bloodstream. It is often called total parenteral nutrition or TPN. The liquid contains sugars, proteins, fats and vitamins – everything the baby needs to grow. Parenteral feeding solutions are often given through a long line.

Patent ductus arteriosus (PDA)- where the small connection between the vessels supplying the lungs with blood, and the vessels supplying blood to the body, stays open.

Peak Inspiratory Pressure (PIP)- the pressure applied by the ventilator to inflate the lungs (breathing in).

PEEP (positive end expiratory pressure)- pressure applied during breathing out. This helps to stop the lungs from collapsing while the baby is on the ventilator

Persistent pulmonary hypertension of the newborn (PPHN)- before birth, the blood vessels of the lungs are narrow. If the blood vessels do not dilate after birth, lungs can't get enough blood flow. Oxygen, ventilation, and sometimes nitric oxide and drugs, are given to open the narrow vessels.

pH- the acidity (low pH value) or alkalinity (raised pH value) of the blood.

Phototherapy- using blue light to reduce the bilirubin level in babies with jaundice

Pneumothorax- when the lung has leaked air between the lung and chest wall (rib cage). This makes it hard for the lungs to expand and take in air. The air can be removed using a chest drain.

Posset- when the baby brings up a small amount of milk after feeding.

Pre-eclampsia- this condition is quite common in pregnancies and can cause the baby to be born prematurely. It can be dangerous, particularly if it develops quickly. The main symptoms are headaches and swollen feet, which are linked to having high blood pressure. Bed-rest can help, but sometimes the only way to stop pre-eclampsia is to deliver the baby early.

Retinopathy of prematurity (ROP)- damage to the retina (back) area of the eye that is sensitive to light. Premature babies and those born with a very low birth weight are at a higher risk of this condition. It is linked to the amount of oxygen in the blood reaching the retina. It is most common in premature babies born before 32 week's gestation, or babies born weighing under 1500g at birth. These babies are regularly checked for retinopathy of prematurity by a specialist ophthalmologist (a doctor who is an expert in the eyes).

Stridor- a harsh noise made by a baby on breathing in, because of a blockage in the upper airway.

Surfactant- a mixture of chemicals that stop the lungs from collapsing when the baby breathes out. The lungs start making this at about 24 weeks' gestation, but is not well developed before 36 weeks'. This can be the cause of respiratory distress syndrome. Replacement surfactant can be given as a liquid into the lungs of the premature baby soon after birth.

Tachycardia- a rapid heartbeat. Sometimes health professionals might say a baby is 'tachy' if they have a fast heart rate.

Tachypnoea- rapid breathing rate.

Transient tachypnoea of the newborn (TTN)- this affects babies born at term. In the womb babies have their lungs full of fluid (amniotic fluid) which is very important for lung growth. When they are born, the baby takes a few deep breaths and pushes the fluid out into their circulation. If the baby does not take enough deep breaths, the lungs keep some of the fluid.

Trophic feeds- very small volume tube feeds that are given to prepare the gut at the start of feeding.

Umbilical catheter (UVC or UAC)- a plastic tube put through one an umbilical artery or vein. A catheter in the artery is used to take blood samples and to measure blood pressure. A catheter in the vein is used to give fluids and drugs.

Ventilation- mechanical respiratory support, so that the baby will be able to have normal levels of oxygen and carbon dioxide in their blood when unable to achieve them for themselves.

Ventricle (cardiac)- the pumping chamber of the heart.

Ventricle (brain)- space within the brain filled with cerebrospinal fluid (see above). This is where bleeding most commonly occurs in premature babies (see intra-ventricular haemorrhage above).

Vitamin K- a naturally occurring vitamin that is important for the clotting of blood. Newborn babies often don't have enough vitamin K and are given it to stop them from bleeding too much. We must have parental consent to administer this.

Record of communication/additional feedback

These records can be completed by Practice Supervisors, Practice Assessors, Academic Assessor or any other members of the team involved in the supervision and/or assessment of the student.

Communication/additional feedback:

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Name		Designation	
Signature		Date	

More pages can be downloaded as per university guidelines

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Record of working with and learning from others/ inter-professional working

Student Reflection: Reflect on your learning in outreach/short placements or with members of the multi-disciplinary team who are supervising your learning and summarise below.

Student's Name:

Signature:

Date:

Practice Supervisor's Comments:

Practice Supervisor's Name:

Signature:

Date:

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Student reflection on an episode of care-

(This could be used towards your episodes of care on Pebblepad)

Within your reflection, describe the episode of care and how you assessed, planned, delivered and evaluated person-centred care.

What did you do well?

What would you have done differently?

Describe how you have begun to work more independently in the provision of care and the decision making process.

What learning from this episode of care could be transferred to other areas of practice?

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Useful websites and further research-

Tommys- <https://www.tommys.org>

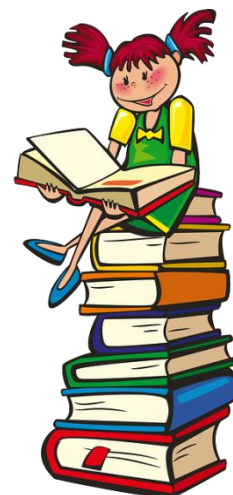
Bliss- <https://www.bliss.org.uk>

Lullaby trust- <https://www.lullabytrust.org.uk>

Sands- <https://www.sands.org.uk>

The baby Friendly Initiative- <https://www.unicef.org.uk/babyfriendly/>

The Breastfeeding Network- <https://www.breastfeedingnetwork.org.uk>



You may also wish to sign up to the E-learning for Health website and complete the following modules (you do get certificates for these) –

- Avoiding term admissions into neonatal units
- Infant feeding
- Small wonders
- Reducing avoidable term admissions
- Breastmilk provision for preterm and sick neonates

(<https://www.e-lfh.org.uk>)