East of England Neonatal

Operational Delivery Network

NEONATAL PASSPORT

Teaching Package

East of England Neonatal Operational Delivery Network

Collaborative working to deliver high quality care to our babies and their families

Contents

Acknowledgement

The East of England Neonatal ODN would like to give special thanks to the North West Neonatal ODN, Paula Pierce, Sophie Phillips and Nigel Gooding from Cambridge University Hospital and Emily Gorrod for all of their help with our Parent Passport.

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Taking part in ward rounds

Aim

Parents are able to participate fully in ward rounds

Resources

Parents ‘guide to ward round’ leaflet

Learning points

- Ensure parents know they do not have to participate in the ward round if they don’t want to
- Parents can gradually increase their contribution as they feel more comfortable in the unit environment
- The time of the ward round in this unit is……
- Discuss the purpose of the ward round-ensure that the team are up-to-date, plan of care made, parents updated, teaching of staff
- This might change depending on babies condition and age
- When parents are happy to start presenting their baby they should tell the nurse looking after them so the person leading the ward round is made aware

Principles of Developmental Care

Aim

To provide information so parents understand and can assist with the developmental care of their baby

Resources

Nil

Learning points

The neonatal unit can be a loud a bright place which makes it difficult for babies to rest, grow and get better-developmental care helps the neonatal unit be more 'baby friendly'

- A preterm infant's brain continues to develop after birth in suboptimal environment and this process can be impacted by all aspects of the baby's NICU hospitalisation
- Providing developmental care is essential for infant neuroprotection and optimal neurodevelopment/musculoskeletal outcomes
- Even if baby term/post term, the NICU environment is not best suited to normal development
- To understand the impact of preterm birth on brain development on infant outcomes
- To identify aspects of the NICU environment and day to day procedures that impact brain development and infant outcomes

Developmental care includes:

- Environment-light/noise
- Positioning
- Skin to skin cuddles
- Understanding baby cues
- Managing pain and discomfort
- Olfactory
- Encourage parents to read to their baby
- Having at least 2 hours in the day of 'quiet time' for parents to be with their baby without bright light, noise and procedures

Understanding your babies cues

Aim

Parents will be able to understand the cues that their baby is giving

Resources

Pictures

Learning points

Your baby is very good at communicating in their own way how they are feeling; it is good to know if they are feeling calm or stressed. Babies use behavioural cues to communicate.

Signs of being calm

- Steady heart rate
- Steady breathing
- Uniform pink colour
- Feeding well
- Resting comfortably in bed or in arms
- Arms and legs flexed, relaxed position
- Hands on face or around mouth
- Sleeping or quietly alert

Positioning at-

Latching on to breast

Aim

Mums to have an understanding of when their baby is correctly positioned at the breast

Resources

Nil

Learning points

- Reiterate importance of skin to skin
- Principles of positioning
  - Baby held close
  - Baby held/supported with head and body in line
  - Baby held with nose opposite nipple
- The process of attachment
  - Watch for baby to have a wide open mouth
  - Mother moves her baby to her breast, with baby's head tilted back and chin leading
  - Bottom lip touches breast well away from the base of the nipple and nipple aimed towards the rear of the roof of baby's mouth
- During feeding check;
  - Mother's comfortable during feed-suckling does not cause pain
  - Baby's mouth is wide open
  - Baby's chin indents the breast
  - Baby's cheeks are full and round
  - Areola-if any is visible then more will be visible above the baby's top lip

Assessing feeding readiness and Infant led feeding

Aim

Parents are able to assess baby's readiness at each feed and understand the importance of cue based (responsive/infant led) feeding.

Resources

Unit based 'readiness to feed' documentation

Learning points

- The transition to oral feeding is a complex developmental process that might take time
- There is the potential for feeding to become a distressing and stressful process for premature babies
- A high proportion of premature babies are referred for feeding difficulties at a later stage of feeding development (i.e. at weaning age) due to food aversion etc.
- It is important that feeding on the neonatal unit is a positive and stress free experience for both babies and parents so that future difficulties can be lessened or avoided
- Infant led feeding can help to make feeding a pleasurable experience for babies
- Babies are not usually ready to feed orally until 34 weeks gestation (for bottle fed babies; breast fed babies may be ready earlier than this), some babies will benefit from introducing non-nutritive sucking (on a dummy or gloved finger) earlier than this.
- Talk to parents about the ways a baby will communicate they are hungry (feeding readiness cues, please see separate document) and that crying is often the last way a baby will communicate they are hungry:

* Alert
* Rooting
* Hands to mouth

Assessing feeding readiness and Infant led feeding

- Demonstrate the best way to position baby for feeding (elevated side-lying) is recommended as best practice for bottle fed babies
- Talk about quality of baby's feeding and whether they are sustaining an effective suck-swallow-breath pattern
- Discuss continuing to read baby's cues throughout the feed and how to identify whether baby needs a break or needs to stop completely. Signs that baby has had enough may include;

* Falling asleep
* Slowing of pace
* Facial expression
* Pushing teat out
* Turning away
* Fussing/crying

- Emphasise QUALITY NOT QUANTITY. Discuss how baby;

* Can have a top-up via tube
* May take more in next feed

- Discuss feeding techniques such as;

* Positioning
* Pacing
* Cheek/chin support

Expressing using breast pump and Storage of breast milk

Aim

Mothers able to use breast pump effectively and maximise breast milk production

Resources

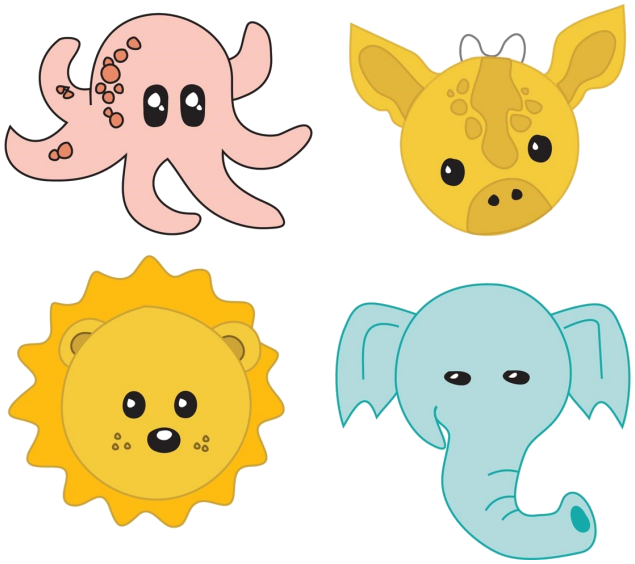
- Breast pump
- Storage bottles
- Expressing log

Learning points

- Demonstrate how expressing kit attaches to pump-use of double pumping
- Talk through process of using pump on different settings-use guides attached to pump
- Reinforce frequency of expression-at least 8-10 x every 24 hrs including once between 2-4am
- Can pump in expressing room or at cot-side
- Things that help milk supply include skin to skin care, contact with baby, photographs, shared squares and relaxation
- Breasts should be full before pumping and feel empty afterwards
- Check breasts for lumps, pain, heat, trauma-ask midwife or nurse to assess if concerned
- Volume should increase from initial drops of colostrum to a steady increase every 24 hours and reach 700-900mls by day 10-14

Expressing using breast pump and Storage of breast milk

- Expressing logs are available if mum's feel this will help and encouraged if milk supply is low
- Advise mum how much milk to put in each container depending on condition of baby
- Discuss importance of labelling milk with name, unit number, date and time of expression
- Before freezing milk ask parent/carer to always check with a nurse if fresh milk is needed to be left out
- Demonstrate cleaning and storage kit according to unit policy



Hand expression of Breast milk

Aim

That all babies on NNU will have breast milk available once they are ready to commence feeds and parents understand the process of hand expression

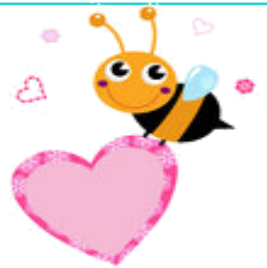
Resources

- Colostrum kit
- Collection bottles
- Labels
- Knitted breast

Learning points

- Show the mother the syringes and kit to collect milk
- Ensure she knows colostrum is only a small amount of fluid but the most important thing that she can give her baby
- Explain the importance of stimulating oxytocin to help milk flow and suggest things that will help this process e.g. Having baby near/ gentle breast massage/use of something to remind mother of baby
- Explain to a mother how she will find the right spot for her to put her fingers and express milk by placing fingers 2-3 cm back from the base of the nipple using the knitted breast describe where the milk ducts are positioned.
- Place finger(s) and thumb in a C shape, opposite each other
- Compress and release in a steady rhythm without sliding fingers on skin
- Move round breast once flow slows, ensure she knows to move around whole of breast
- Once flow slows/ceases move to other breast
- Explain that she will be shown how to use the breast pump as well

Monitoring your baby in hospital



Aim

Parents can ensure baby is having basic monitoring

Resources

- Doll
- Thermometer and cover/fixation material for temp probe
- ECG leads
- Saturation probe
- Posey wrap
- Apnoea alarm lead
- Cleaning materials temperature probe and cover.

Learning points

Most babies on the unit require some type of monitoring, the amount will be reduced as your baby moves through the unit and all monitoring is removed before your baby goes home The alarm limits on all the monitors are set at different levels for each baby depending on their age, gestation and underlying conditions.

- Heart rate
- The heart rate is recorded through 3 leads which are attached to either side of the chest and on the upper part of 1 leg by a gel pad (or by the saturation monitor as shown on the doll.) These leads are attached to a wire which goes to the monitor – at the connection point there are 3 colours – red, black and yellow
- The lead attached to the yellow port goes on left side of the chest, the one attached to red goes to right side of the chest and the one attached to black goes on the leg
- If one of the leads falls off the monitor may alarm. When you are changing your baby check the leads are still in place and if they fall off let your nurse know and she will give you a replacement. It is common for the leads to fall off as the gel degrades with time.

Monitoring your baby in hospital

Oxygen saturation

- The oxygen saturation is measured through a probe that is attached to the foot or hand
- Each time you do your baby's cares remove the probe to another foot or hand
- Make sure the 2 sides of the probe are flat against the baby's foot / wrist or hand and secure firmly but not too tightly ensuring the light is opposite each other.

Temperature

- The temperature is taken at least every 6 hours (usually with cares) with a thermometer that is placed under the arm
- Pull probe from machine, put new cover on, check thermometer is ready to use
- Probe should be placed right under the arm and the arm placed back over probe, you need to hold in this position until the temperature is recorded
- Clean the probe machine with a wipe when you have finished with it.
- Tell the nurse what the reading is so they can take any appropriate action
- If your baby is on continuous temperature monitoring check the probe is in place each time you go to your baby. The site will be changed every 48hrs.

Apnoea monitor

- As monitoring is reduced your baby may be put on an apnoea monitor, this will alarm when the baby is picked up so turn the alarm off when you take baby out of cot and turn it back on when you put your baby back. This just shows a flashing light when the baby takes a breath. The nurses will immediately respond if they here this alarm go off.
- If your baby is on an apnoea monitor with a lead .The lead is attached with tape to the lower abdomen which is changed every 7 days. The lead can be unplugged from the monitor when baby is out for cuddles and feeds.

You ***must never*** alter the limits on the monitor or cancel the alarms (except for apnoea monitor); it is really important that the nurses know what the monitors are reading the alarms may go off for many reasons varying from change in babies condition to baby moving or leads become disconnected. Even if they don't respond straight away they will be looking to see how your baby is responding.

Managing your baby's pain and discomfort

Aim

For parents to understand and learn the signs of pain/stress in their infant and understand how to help their baby.

Resources

- Pictures of facial expressions
- Positioning doll
- Pain Tool

Learning points

◊ Explain pain and stress in babies and how they may react

- Facial grimaces
- Observational changes
- Guarding/baby cues

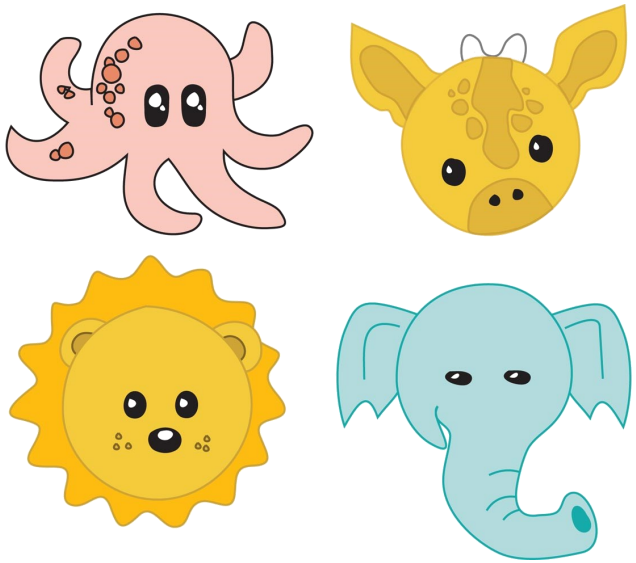
◊ Discuss the use of pain assessment tools

◊ Pain medications on NICU– their uses and limitations

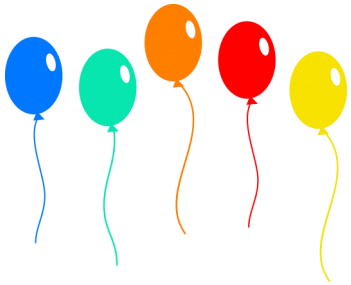
- Sucrose
- Morphine
- Paracetamol

Managing your baby's pain and discomfort

- ◊ Comfort measures for reducing pain/stress
- Non-nutritive sucking (NNS)
- Containment holding
- Skin-to-skin
- Good positioning
- Reducing environmental stresses (i.e. noise, light, handling)
- ◊ Discuss how parents can advocate for their baby



Taking your baby out of an incubator



Aim

Parents will be able to take their baby out safely

Equipment

Blanket

Comfortable chair

Incubator

Learning Points

Ask for help to take baby out if in Intensive Care or High Dependency

Following discussions with staff if your baby is stable enough for you to take out of an incubator:

- Make sure chair is nearby and has brakes on
- Open side of the incubator
- Ensure lines are free-check no snagging and there is enough length to reach the chair
- Place one hand under the baby's head and one hand under the baby's bottom and lift baby up to your chest
- Then sit down, ensuring you and they are comfortable
- Hold in position that is comfortable/in skin to skin

Positioning your baby

Aim

That parents will be able to position their baby according to condition and to promote good development

Resources/equipment

Clean nest/blankets/ positioning aids, doll

Learning points

- Ideal positioning is head is aligned with ears, shoulder and hip straight line (NB: with exception of prone when head is rotated to left or right)
- Sometimes babies will be put prone or supine for respiratory or observational reasons
- Ensure position supports the baby bringing hands to midline and close to mouth
- Need high and supportive boundaries to allow extension and flexion
- Once preparing for home (usually around 36 weeks) back to sleep guidelines should be followed
- On the unit we sometimes swaddle babies but this isn't something you should do at home
- Position should be changed 6-8 hourly or more often if your baby seems uncomfortable or in pain
- Some babies will have a gel pillow to prevent head moulding
- Avoid rapid movement, move your baby gently

Weighing your baby

Aim

To have an accurate record of growth; that baby feels secure during process

Equipment

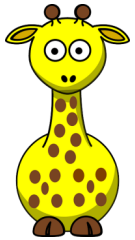
- Scales
- Doll
- Muslin square or thin sheet
- Sheet or towel

Learning points

- Make sure scales are plugged in
- Place sheet or towel onto scales and zero
- Weigh muslin square or sheet, write down what it weighs then remove
- Undress baby completely and wrap in muslin square or sheet that has been weighed
- Check with nurse that it is ok to remove saturation probe and disconnect ECG leads; if there are IV fluids up a nurse will help you
- Re zero scales
- Lift baby out of cot or incubator onto scales, when weight has registered write it down

Weighing your baby

- Never leave baby in scales unattended even for a few seconds
- Place baby back into cot or incubator
- Tell the nurse what the weight is before redressing your baby so weight can be rechecked if a large weight loss or gain
- Babies should gain 15-20gms/kg/day



Swaddled bathing

Aim

For it to be a pleasurable experience for the baby and that parents feel confident in the process

Resources/Equipment

- Bath
- Doll
- Towel
- Muslin square or thin sheet

Learning points

- Bath times need to be planned to suit both the family and the workload of the staff in the room
- Before starting bath observe baby and check they are awake and responsive
- Collect all equipment needed
- Fill the bath with warm water (wrist test)
- Undress the baby and wrap in muslin square or thin sheet, if dirty nappy, clean bottom
- Wash face, neck, ears and hair-bath products are not recommended under 1 month of age
- Still wrapped in muslin sheet, lower baby gently into bath and allow them to adjust before slowly unwrapping sheet-practice holding position with a doll
- Gently wash the rest of the baby with soft cloth; observe baby's cues and if they become distressed lift out of bath at any time
- Leaving muslin square in bath and with a towel over your chest lift baby onto the towel and wrap
- Dry baby thoroughly and maybe have skin to skin time before dressing

Positive touch

Aim

Objective: For parents to understand how to provide the best possible touch or containment holds

Equipment/resources

Doll

Learning points

Positive Touch:

* Firm/still touch – holding a hand or a foot and talk gently to the infant, offering reassurance. This offers a minimal amount of touch, so is not too invasive and allows the baby to get used to being touched and to learn that touch can be a positive experience
* Stroking can be irritating/over stimulating to a baby and may result in physiological instability (i.e. desaturations)

Containment/Comfort holding:

* One of ways for parents and baby's to get to know each other
* Comfort holding is a way to experience loving touch when the baby is not ready to be held
* This is another form of 'still touch'
* Containment holds are resting holds and are best offered to the infant when the carer has warmed their hands
* The carers two hands can be used to gently 'contain' the infant, making them feel enclosed and secure
* The infant's head can be cupped with one hand and the other hand placed on or over the infant's tummy, trunk or bottom
* The hold is continued for as long as the infant's condition allows, closely observing the infant's behavioural cues and physiological condition throughout

Sense of taste and smell

Aim

For parents to understand how and why their baby can be affected positively/negatively by smells

Resources

NIL

Learning points

- Preterm baby's olfactory system underdeveloped-effects at birth and onwards
- Providing positive smell experiences
- Protecting baby from negative smell experiences

In-Utero development of smell

- Babies develop sense of smell between 5-29 weeks gestation
- Babies can recognise their mum's pheromones whilst in the womb
- Pheromones are exchanged in utero which begin with mum-infant connection even before baby is born

The preterm baby and smell

- Sense of smell is still developing when born between 23-29 weeks gestation–can recognise and respond to smells at this gestation
- Very sensitive to strong environmental smells
- Over stimulation can lead to disinterest in feeding

Sense of taste and smell

Positive olfactory stimulation

- Mums smell helps to calm and comfort baby-provides a familiar smell for baby
- Some evidence to show breast-milk odours can be calming for babies during and after painful procedures such as cannulation
- Baby's smell helps mum with lactation-pheromone triggers release of oxytocin

Negative olfactory stimulation

- Respiratory equipment such as NCPAP/High Flow O2 devices
- Passing of NG tubes
- Strong perfume/aftershaves/scents
- Alcohol gel 'fumes'
- Smell from rubber gloves

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