Skin-to-skin (Kangaroo) Care on the UHL Neonatal Units

University Hospitals of Leicester NHS Trust

Trust ref: C26/2014

1. Introduction and who this guideline applies to:

This Guideline is aimed at all health care professionals involved in the care of infants in the Neonatal Service.

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Aims

- To make the most effective use of Skin-to-skin care throughout a baby's stay on the neonatal unit and provide information on benefits.
- To allow consideration of contraindications.
- To provide guidance on the transfer of ventilated infants to Skin-to-skin care.

Key Points

- Kangaroo Care (KC) has been found to be of benefit for medically stable babies and their parents
- Parents are to be informed about the benefits and the process of Kangaroo Care so that they are able to make an informed decision about the use of this approach
- Sufficient staff should be available to carry out the safe transfer to and from the incubator.

Background:

Supporting families within the neonatal unit to build close and loving relationships with their baby is paramount. A big part of this is ensuring that every baby and family are given the opportunity to participate in regular skin to skin contact, this is also known as kangaroo care and will be referred to as such throughout this guideline. Kangaroo Care is a method of holding an infant dressed in just a nappy in skin-to-skin contact, prone and upright on the chest of the patient. The infant is enclosed in the parent clothing in order to maintain temperature stability. Kangaroo Care has been studied widely and found to have numerous benefits for medically stable babies and their parents, so regular use of skin-to-skin care is recommended. Parents are to be informed about the benefits and the process of Kangaroo Care so they are able to make an informed decision about the use of the approach. The essence of the guidelines is to find a way to provide skin to skin care for all babies.

Benefits for Baby:

- Thermoregulation – reduces cold stress.
- Stable heart rate – reduced incidence of bradycardia/tachycardia.
- Improves regular breathing – reduced incidence of apnoea.
- Improved oxygenation – lower oxygen requirements and reduced incidence of

desaturations.
- Releases oxytocin and decreases cortisol – reduces stress, crying and irritability.
- Improved sleep patterns - Increased time spent in quiet sleep.
- Longer alert states and less crying at six months of age.
- Improved brain development.
- Improved neurobehavioral and psychomotor development.
- More successful breastfeeding.
- Improved weight gain.
- Engages all five senses.
- Non-pharmalogical pain relief.
- Enhanced mother and infant attachment bonding.
- Early discharge from hospital.
- Reduced risk of infection and increased immunity.

Benefits for Parents:

- Improves parent-baby interaction.
- Increases psychological well-being and improves psychological adaptation and recovery after a preterm delivery.
- Promotes recovery from postpartum depression.
- Salivary cortisol decreases in mothers of babies born at 25-33weeks.
- Provides the family with the opportunity to recognize and respond to their baby's behavioral cues, becoming aware of their baby's individuality and promotes earlier attachment with an increased sense of confidence in caring for their baby.
- Increased parental satisfaction with care giving.
- Enhances sense of empowerment and reduction of feelings of inadequacy and anxiety.
- Promotes bonding and attachment.

Benefits for Breastfeeding:

- Facilitates access to the breast and increases the production of breast milk.
- Increases breastfeeding rates, the proportion of exclusive breastfeeding at discharge, and longer breastfeeding.
- Promotes breastfeeding by increasing milk volume and enhancing the duration of lactation.

Kangaroo Care is appropriate in:

The majority of babies on the unit are suitable and will benefit for having regular KC, day or night, for as long as possible. For babies receiving intensive care support it is important to have a **daily** discussion on ward round to establish the suitability and safety of KC in these patients. Babies identified as being appropriate for KC during ward round to have a KC cot card placed on the incubator as a clear identifier of KC.

For babies being cared for in special care, parents should be reminded that KC is important even when their baby is being dressed; the baby can be undressed and will continue to benefit from having KC regularly.

Contraindications:

- Unstable babies requiring ventilator support. (Stable infants on long term ventilation or for palliative care should continue to be offered KC).
- For surgical neonates and those with chest drains in place, these should be discussed and assessed for suitability and appropriateness with the surgical and medical team
- KC can be offered to babies with umbilical line present, however, the lines should be secured as per unit policy. Any concerns should be discussed with the medical team.
- KC should not be offered to babies immediately after an invasive procedure or treatment i.e extubation.
- Very low birth weight infant at risk of intraventricular hemorrhage for the first 72 hours.

When KC is not deemed possible, it is important to show parents how to minimise separation by encouraging gentle comfort touch, talking, reading, singing soothing lullabies and olfaction simulation.

Risks:

There are very few risks associated with KC. Some of the potential risks may include:

- Hyperthermia due to maternal heat transfer (although this is very rare).
- Hypoxia, this is often caused by poor positioning of the baby's head.
- Accidental extubation of endotracheal tube.
- Dislodgement of lines.

When KC is undertaken by experienced nursing staff with careful transfer from the incubator, these risks are significantly reduced.

Research has shown that some parents feel discouraged to engage with KC due to lack of information or support, it is vital that parents are fully informed of the extensive benefits of KC and are aware of what to expect before they begin.

Precautions:

- It is important to ensure that the units staffing levels are adequate prior to offering KC for ventilated babies. It should only be offered if there are sufficient members of staff to ensure a safe transfer both to and from the incubator. Ensuring a senior nurse or nurse familiar and confident with transferring babies is available to assist.
- The nurse caring for the baby should remain within close proximity in order to monitor the baby during KC, assisting parents if required.

Transferring from the Incubator:

Transferring out of the incubator can be a stressful event for the preterm neonate. This stress can be reduced by the nursing staff if the procedure is completed in a controlled slow and steady manner.

Infant Preparation:

- Ensure that the baby is ready for KC by completing cares and performing any necessary procedures that may interrupt KC later if possible such as blood sampling or passing of a feeding tube.
- Avoid transferring the baby straight after a bolus feed.
- Think temperature control - babies under 1000g or within 1 hours of birth will require a hat to be worn to start KC. Hats are optional for other babies but important to monitor temperature for risk of over warming.
- **Preparation of all wires and lines before transfer** - ensuring that all lines and breathing tubes are all at the same side as the chair or have enough length to reach without pulling.
- Changes of the babies position should be slow and steady. Do not flip the baby quickly and suddenly as this can be very distressing - doing this before KC can increase the chances of not tolerating the transfer.
- If ventilated, auscultate the chest for quality of breath sounds and suction if required
- If UVC/UAC in situ coil and tape lines to the nappy to secure.

Parent Preparation:

- It is important to choose a convenient time for the parents, explaining the benefits of KC if the baby is out for a minimum of one hour. Advising parents to bring a drink and visit the toilet before KC begins.
- Provide privacy for parents to prepare clothing - suggest clothing that allows easy access to the chest.
- In order to prevent accidental injury, jewellery should be removed.
- In order to reduce the risk of irritation to the babies skin and overstimulation of the sensory organs the use of aftershave or perfume should be kept to a minimum.
- Parents should be discouraged from smoking at all times, but especially before any skin to skin contact.
- It is important to provide a calm environment with a comfortable chair. The optimal chair for KC is a recliner, as this reduces the risk of poor head positioning.
- Fully explain to parents what you plan to do and also what you require them to do.

Nursing Considerations:

- KC should be provided as soon as possible after birth in order to provide comfort whilst also promoting bonding for both parent and baby. If medically appropriate, cuddles should be a priority in the delivery room.
- Ensure that access to the emergency equipment is nearby and that all of teh equipment has been checked prior to commencing KC.
- KC should be offered daily at least unless clinically indicated - if not offered then reason why should be clearly documented.
- If the baby does not appear to tolerate KC, allow time for the baby to settle as the move from the incubator can cause a stress result, given time this may settle. Allowing up to 15-30 minutes for vitals to stabilise if clinically appropriate.
- All routine cardiorespiratory monitoring should continue on the baby. Oxygen requirement may increase following transfer, this usually settles to a level lower than

'normal' once the baby settles.

- For babies that require breathing support or have central lines in, it is best practice to have two nurses present to perform the transfer ensuring that the breathing support and lines are fully supported throughout. **Ventilated babies require a minimum of two nurses to transfer, in some cases more nurses may be required. This should be assessed on an individual basis.**
- Communication between the nurses is key to ensure that everyone is aware of their role throughout the transfer.
- Once the baby is on the parents chest, make sure that the baby is not lying on any lines, wiring or tubing that would be uncomfortable and may cause bruising, indentations or pressure damage to the babies skin. Making sure to leave the feeding tube out in order to continue with feeds whilst having KC.
- When transferring the baby from the incubator, bring them in close to your body in order to provide support and comfort whilst also maintaining heat. Lean close to the parent and place the baby slowly onto their chest in an upright prone position.
- Documentation is an integral part of KC as it allows the nurses to see how often the baby has been out of the incubator for KC, the duration and how well it has been tolerated.

Steps for Safe Transfer of Ventilated Babies:

- Have the neopuff set up as per ventilator pressure settings.
- Have a second member of staff secure the ventilator tubing.
- Adjust the height of the incubator to ease transfer.
- Have the parent sat comfortably in the reclining chair.
- Use neopuff set up as per ventilator settings for pressure.
- Disconnect the ventilator tubing from the endotracheal tube (ET) and the nurse places the baby prone to their chest.
- Reconnect the ventilator tubing ensuring babies head is to one side and the airway is not obstructed. Make sure the infant's back is not exposed. Pause while normal saturations resume.
- Offer the parent a footstool and reposition the baby as needed making sure that the infant is tucked in a slightly flexed comfortable position and not respiratory compromised.
- Drape the ventilator tubing over the parents shoulder and secure it in place with tape or clip.
- Observe the temperature control during Kangaroo Care and adjust accordingly.
- Kangaroo Care should take place for a minimum of an hour and the baby should be monitored continuously.
- Transfer back to the ventilator.
- Document – positioning, tolerance of Kangaroo Care.
- Document –parental perception, feedback.

Duration of Kangaroo Care:

UNICEFs Baby Friendly Initiative suggests KC should be done for a minimum of one hour to allow the baby to experience an entire sleep cycle whilst being held skin-to-skin.

If a KC session cannot be longer than an hour, any amount of skin to skin is better than none. It usually takes about 30 minutes for a baby to stabilise following the transfer. Providing the baby is stable, no time limit should be imposed. Babies who are deeply asleep should be undisturbed for as long as possible. Termination of KC should be at parental request, or if the baby exhibits any of the following:

- Repeated or profound desaturations
- Repeated or profound bradycardia.
- Repeated or profound apnoea.
- Dislodgement or concern about dislodgement of ET tube.
- Dislodgement or concern about dislodgement of venous access.
- Unrelenting irritability **AND** attempts to make the infant more comfortable have failed.

Feeding during Kangaroo Care:

Babies that need a breast/cup or bottle feed during KC will need to change their position during the feed but can continue with KC after completing the feed.

Babies that are tube feeding can continue to be fed as usual. Observe and document any concerns.

Following Discharge:

Following discharge from the neonatal unit KC should be encouraged to be part of the daily routine to continue the bonding process further. In addition, before discharge, parents should be made aware of the Lullaby Trust guidance regarding safe sleeping to ensure that the practice is carried out safely.

3. Education and Training

None

4. Supporting References

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5. Key Words

Feeding, KC, Transfer from Incubator

The Trust recognises the diversity of the local community it serves. Our aim therefore is to provide a safe environment free from discrimination and treat all individuals fairly with dignity and appropriately according to their needs.
As part of its development, this policy and its impact on equality have been reviewed and no detriment was identified.

CONTACT AND REVIEW DETAILS			
Guideline Lead (Name and Title) **Author: V C** Louise Davies , Hema Parmar S Mittal – Consultant Clinical Guidelines Lead		**Executive Lead** Chief Nurse	
Details of Changes made during review:			
Date	**Issue Number**	**Reviewed By**	**Description Of Changes (If Any)**

2013	**1**		
5/8/2014	**2**		minor editorial changes – REM
Sept 2017	**3**	Reviewed by Author (VC) Neonatal Guidelines group Neonatal Governance group	no amendments required
Nov 2020	**4**	Neonatal Guidelines group Neonatal Governance group	
May 2024	**5**	Louise Davies – Deputy Sister Hema Parmar – Trainee ANNP Neonatal Guidelines group Neonatal Governance group	**Updated benefits of skin to skin kangaroo care** **Added contraindications, duration, feeding and discharge guidance**

Appendix : Prevention of Accidental Extubation while transferring the baby out for skin to skin

Focused Learning – "Prevention of Accidental Extubation During Handling"

Safe Transfer of Ventilated Babies

1. Check the position of the tube before transfer
2. Use the 2nd member of staff to ensure the ETT does not move, e.g by gently holding the ETT at the level of the lips, by supporting the tubing close to the baby or by disconnecting briefly as the baby is moved across
3. Drape the tubing over the parent's shoulder and secure with a clip
4. Repeat step 2 as the baby is returned to the incubator
5. Recheck the ETT position after the baby is returned to the incubator

Ventilator tubing has been clipped to the clothing of the mother during kangaroo care

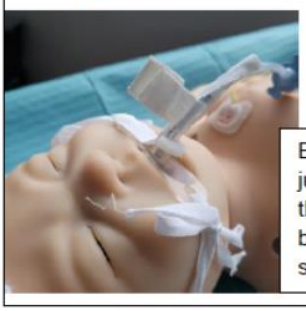
Acute Deterioration in a Ventilated Baby - DOPE

DISPLACEMENT	OBSTRUCTION	PNEUMOTHORAX	EQUIPMENT FAILURE
Check ETT position Listen for air entry Check Pedicap	Suction Lavage Consider removing ETT if blocked	Cold light Chest x-ray (if appropriate)	Switch to Neopuff Check ventilator Check tubing

Picture of Emily and Owen in Penn State Children's Hospital NICU https://www.sentec.com/kangaroo-care/

Adaptedffrom: V Clancy, H Parmar 2020 UHL Neonatal Guideline: Skin to Skin (Kangaroo Care)

Securing and Flagging an ETT to prevent slippage and to allow accurate position checks during skin to skin.



ETT flag positioned just above the top of the holder. This may be narrower on smaller ETT.

Securing strip along ETT and onto flange. Numbers on the ETT should remain visible. This securing strip may not be feasible in small ETTs.