THAMES VALLEY & WESSEX NEONATAL OPERATIONAL DELIVERY NETWORK

Developmental Care - Skin to Skin Guidelines

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Implications of race, equality & other diversity duties for this document	This guideline must be implemented fairly and without prejudice whether on the grounds of race, gender, sexual orientation or religion.

Developmental Care - Skin to Skin Guidelines

Contents

1.0 Introduction

Skin to skin or kangaroo care is a well-documented practice that provides many benefits to both infant and the parent whilst on the neonatal and in the months following discharge. It supports greater autonomic stability, growth, sleep, reduction in pain, breastmilk production and improved feeding outcomes and provides important opportunities for the parent and infant to bond and connect, mitigating stress and promoting co-regulation.

It is the responsibility of the neonatal team to ensure parents are aware of the benefits of skin to skin to both their baby and to themselves. Skin to skin should be offered to parents as early as possible following the infant's birth. Opportunities should be given to parents for skin to skin with their baby daily, with consideration to the assessment of the infant's clinical condition and in consultation with their medical team as necessary.

Staff should be offered training on the safety, benefits and procedures surrounding skin to skin. Junior staff members should be supported by senior staff if they are not confident - junior staff confidence should be mitigated and should not prevent families from engaging in skin to skin.

Parents should be coached and supported in the handling of their baby to build their confidence in caring for their baby. This includes principles of neuroprotective positioning and parent-led transfers with the baby. Use of different methods to provide this education should be available, inclusive of appropriate language translations as applicable. (eg. Written material, video examples, modelling).

Parents should be coached to provide positive touch and comfort holding for their infant if skin to skin is not possible.

2.0 Scope of guideline

This guideline has been produced to direct staff in their care of neonates in supporting skin to skin between infants and their parents on the neonatal unit. They are based on research findings and/or currently accepted best practice. For accessibility, the guidelines have been collated under distinct subheadings; however, the reader is advised to read the guidelines in full and to seek the advice and support of more senior or experienced colleagues, in the practice setting.

The guideline applies to all neonatal units covered by Thames Valley and Wessex Operational Delivery Neonatal Networks. This includes the following hospitals:

Thames Valley		
TRUST	**Hospital**	**Designation**
Oxford University Hospitals NHS Foundation Trust	- John Radcliffe Hospital, Oxford	NICU
Buckinghamshire Healthcare NHS Trust	- Stoke Mandeville Hospital, Aylesbury	LNU
Frimley Health NHS Foundation Trust	- Wexham Park Hospital, Slough	LNU
Milton Keynes University Hospital NHS Foundation Trust	- Milton Keynes General Hospital	LNU
Royal Berkshire NHS Foundation Trust	- Reading	LNU

Wessex		
TRUST	**Hospital**	**Designation**
University Hospital Southampton NHS Foundation Trust	- Princess Anne Hospital	NICU
Portsmouth Hospitals University NHS Trust	- Queen Alexandra Hospital	NICU
Dorset County Hospital NHS Foundation Trust	- Dorset County Hospital, Dorchester	SCU
Hampshire Hospitals NHS Foundation Trust	- Basingstoke and North Hampshire Hospital	LNU
Hampshire Hospitals NHS Foundation Trust	- Royal Hampshire County Hospital, Winchester	LNU
Isle of Wight NHS Trust	- St Mary's Hospital	SCU
University Hospitals Dorset NHS Foundation Trust	- Poole Hospital	LNU
Salisbury NHS Foundation Trust	- Salisbury District Hospital	LNU
University Hospitals Sussex NHS Foundation Trust	- St Richard's Hospital, Chichester	SCU

3.0 Definitions

- Neonate – Up until 44 weeks corrected
- NNU – Neonatal Unit
- NICU – Neonatal Intensive Care Unit
- Non-Pharmacological – therapies that do not involve drugs
- Preterm – An infant born before 37 weeks' gestation
- TVW – Thames Valley and Wessex
- ODN – Operational Delivery Network

4.0 Guideline

4.1 Background

Skin to skin, or *kangaroo care*, is when the baby (naked apart from nappy) is placed against the parent's bare chest. It has many benefits for the baby and the parent including improved autonomic stability, maintenance of thermoregulation, promotion of deep sleep and growth and co-regulation between the infant and parent. It is also supports milk production and parental emotional wellbeing.

The concept of Kangaroo Care (KC) was introduced in Columbia in 1979 after a shortage of incubators led to the practice of babies weighing less than 1.5kgs being nursed naked, except for a nappy, between their mothers' breasts or on their fathers naked chests and enclosed by their parents' clothes and/or a blanket. These babies were kept warm and soothed by their parents' heartbeat. As the practice grew, so did evidence of the beneficial effects to both parents and babies. These included improved lactation

and parental bonding for the parents, whilst improved oxygenation and deeper sleep states were recognised in some babies. These benefits are reported as increasing with duration of kangaroo care.

Kangaroo care is still used in the neonatal units in developing countries as a safe, cost-effective and successful method of keeping premature babies warm over many days or weeks. However, in neonatal units with funding and facilities to provide incubators to for babies to be nursed in, kangaroo care is used as therapeutic intervention for the baby and its parents/carers.

4.2 Parent education and support

It is a priority to provide parents with education about 'skin to skin' as soon as possible on admission to enable them to have skin to skin experiences with their baby as early as possible.

Parents can be supported to provide skin to skin by:

- Verbally explaining the benefits of skin to skin to parents/carers, both to themselves and their infant.
- Offer parents written material such as the Bliss booklet 'Skin to skin with your baby'.
- Direct parents to the posters or local displays on the unit with information outlining skin to skin and positive touch.
- Provide adequate seating for the parent next to the cot/incubator, preferably a reclining chair.
- Assisting parents in understanding the process of getting their baby out of the incubator or cot for skin to skin, including preparation, supporting their baby's positioning for containment and responding to cues for the transfer, settling time, potential additional requirements for babies who are ventilated as well as when to recognise or plan to place their baby back into the incubator/cot.
- Discussing with the parent/carer how to support their baby in skin to skin time through different means including talking gently to their infant, observing their behaviour and condition throughout, with attention by the nurse to ensure the environment around the parent/infant has lower levels of noise, light and privacy if the parent feels more comfortable.

4.3 Practice Guidelines

4.3.1 General Guidelines

a) Considerations and Contraindications

<u>Considerations:</u>

- Skin to skin should be supported as soon as possible following birth, even if brief.

- It should be included in the infant's daily care and offered to families daily for extended periods of time.

- The provision of skin to skin for the day should be included in ward round discussions by the whole team including parents, medical, nursing and AHPs. As always, families should be involved in individualised care planning.

- Skin to skin is beneficial to the infant as well as to both mother and father.

- Discussions with the infant's medical team are encouraged when planning for skin to skin for an infant with complex medical and respiratory needs. They *should not* be automatically excluded from skin to skin.

- It is important that there is adequate staffing prior to instigating skin to skin with families to ensure the infant's safety during the transfer.

- Specific considerations:

    - Ensure Neopuff and suction are within reach.
    - Consider staffing numbers before offering skin to skin for ventilated infants. One person must be dedicated to holding the ET tube for a safe transfer.
    - If staff are not familiar or confident to transfer an infant out for skin to skin, they should seek support from an experienced staff member.
    - Umbilical arterial or venous lines are not a contraindication but need to be firmly secured

Contraindications:

- Each unit should have a local unit guideline that is adhered to for skin-to-skin practices.
- Contradictions may vary between units, but may include:

    - Extremely preterm infant in first 72hours of life
    - Immediate post-operative states requiring ventilation and muscle relaxation
    - Significant breakdown of skin integrity/ extreme immaturity of skin
    - Significant temperature instability
    - Significant electrolyte imbalance- requiring the baby to remain within incubator and it's environmental humidity. (*A baby being in environmental Humidity is NOT a contraindication in itself)*
    - HFOV/ high PIP/ on NO/ FiO2 >0.75%
    - Baby deemed to be too unstable (e.g. multiple inotropes required).
    - Parents' unavailable or currently unsuitable (e.g recent alcohol/ drug intake.)

- In all these scenarios, discussion with the infant's medical team is recommended to assess the possibility of skin to skin.
- Contraindications should always be explained to parents should their baby not be able to have skin to skin and wherever possible offer an alternative (e.g. comfort hold, offering finger to grasp, cuddle in supportive nest). It is important to encourage early positive touch experiences for both baby and parent, and that the parents do not feel barred from contact with their baby.
- Staff inexperience *in itself* is not a reason for refusing skin to skin - support and supervision from more experienced staff should be sought.

b) Duration of Skin to Skin

UNICEF's Baby Friendly Health Initiative suggests a minimum of 1 hour to account for the infant settling after the transfer to the parent's chest and the opportunity for the infant to move through one or more sleep cycles. Parents should not be limited in the amount of time they can be with their baby in skin-to-skin.

All babies should be routinely monitored whilst in skin-to-skin contact with mother or father. The following observations should be included.

1. Checking that the baby's position is such that a clear airway is maintained – observe respiratory rate and chest movement. Listen for unusual breathing sounds or absence of noise from the baby.
2. Colour – the baby should be assessed by looking at the whole of the baby's body, as the limbs can often be discoloured first. Subtle changes to colour indicate changes in the baby's condition.
3. Tone – the baby should have a good tone and not be limp or unresponsive.
4. Temperature – ensure the baby is kept warm during skin contact.

The Baby should remain in skin-to-skin position unless:

- the baby has repeated or profound desaturation, bradycardia or apnoea
- there is dislodgment or concern about dislodgement of ET tube
- there is dislodgement or concern about dislodgement of venous access

- the baby's behavioural cues indicate that they are stressed AND attempts to make the baby more comfortable have failed
- the parents request that session ends.

Should the baby show signs of distress (e.g. crying, unsettled, mottled/pale skin, floppy, physiological instability), the following actions could be taken:

- reposition baby, and assess their chin position to ensure clear airway
- ensure all lines and tubes are not pulling on baby's skin or limbs
- check if baby has 'slid down' parent's chest and become squashed or twisted
- encourage the parent to talk / sing / read soothingly to baby
- encourage the parent to provide containment of baby's body and head, using their hands
    - feel if baby may be too hot or cold - add or remove a blanket accordingly

c) Skin to skin as a non-pharmacological strategy for pain reduction:

- Skin to skin is an easy, low-cost method for reducing infant's pain in minor to moderate painful /stressful procedures such as taking temperatures, heel pricks and ROP screening.

- Skin to skin followed by breastfeeding (if the baby is developmentally able) reduces pain experiences even more.

- Skin to skin both before, during and after painful invasive procedures is recommended to contribute to pain control.

- Parents should have information as to how they can be involved in managing their baby's stress/pain, and the benefit of using skin to skin as one such method.

- Parents should be informed that their baby will not adversely associate the painful procedure with skin to skin contact.

- The mechanisms thought to contribute to pain reduction include:

    - behavioural changes in deep sleep and thermoregulation provided by parent' skin
    - the activation of the autonomic system (e.g. reduced heart rate) mediating the physiological response during painful procedures.
    - A blockade of the transmission of nociceptive stimuli via afferent fibers or the inhibition of descending fibers - the activation of the pain inhibition system via endogenous system modulation (changes the baby's blood cortisol levels and allows for the release of beta-endorphins, which reduce stress)
    - Perception of the mother's scent provides comfort with recognisable tactile and olfactory inputs from mother's skin.

d) Skin to skin Procedure:

<u>Lines</u>

- Ensure all lines and tubes are secure. Identify the most vulnerable lines/tubes (i.e. ET tube/ central line) for particular protection during transfer.
- Ensure that all lines/cables are not caught behind equipment and have enough length to enable the baby to be moved to the parent's chair.
- It is often safer and easier to disconnect nasal continuous positive airway pressure (CPAP) or endotracheal (ET) tubes from the ventilator tubing during transfer-to stop pulling on or dislodgement of these tubes.

Transfers to parent

Refer to handout in appendix to this guideline for detailed explanation of the process and video referencing.

- Transfers from the incubator / cot can be either nurse led or parent-led, dependent on the parent's level of confidence and the baby's medical needs. Supporting a parent to build this confidence is important in building their efficacy as their baby's primary caregiver.

- It is important that the infant is well supported for containment and slow movement during the transfer to and from the incubator to reduce physiological stress.

- The more fragile and younger infant may present with signs of autonomic instability (changes to HR, O_2 saturations) with the introduction of movement from the transfer from the incubator. With increased parental confidence, slow movements, positional containment and the infant's increased autonomic and medical stability as they become older, tolerance of movement should improve.

- Parents should also be supported by staff to gain the confidence to be increasingly independent in the skin-to-skin procedure as their baby becomes older and is more medically stable. This includes coaching in the preparation (e.g. managing leads) as well as in handling/positioning their baby in the transfer.

Support for positioning

- Twins can be positioned in skin to skin together on the parent's chest. The provision of a stretchy wrap around both babies and parent will provide support for positioning - as will support under the parents arms by pillows/armrests. The babies can face each other and be in contact with both parent and twin.

- Special slings or 'skin to skin clothing' are available, which parents may choose to use. These products are generally designed to be opened up for direct transfer onto the parent's chest, then secured closed over the baby's body. See some examples below:

Fig 4 Prema Wrap

Fig 5 Bondaroo

Fig 6 Vija designs

Fig 7 Zachy support shirt

Fig 4,5 6 and 7 Showing manufactured skin to skin slings or clothing.

4.3.2 Documentation

- All episodes of skin to skin, including the infant's response to the experience, should be documented in the nursing record as per the *Bliss Baby Charter* recommendations.
- Any concerns arising from skin to skin should be clearly documented, including any action taken.
- Individual unit's may be gathering data around skin-to-skin episodes. This information should be documented in accordance with local unit requirements.

Version Control:

Version	Date	Details	Author(s)	Comments
0.1	19/10/2022	New Guideline - moved from Positive Touch Guideline	A.Clifford & Z.Gordon	V Payne E Johnston
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