



<b>CLINICAL PRACTICE GUIDELINE</b>	 <b>Shared health Soins communs</b> Manitoba  Winnipeg Regional Health Authority Office régional de la santé de Winnipeg Caring for Health À l'écoute de notre santé		
	Policy Name: <b>Skin-to-Skin/Kangaroo Care</b>	Policy Number: <b>350.275.162</b>	Page
	Approval Signature: <b>Shared Health Executive/WRHA Executive</b>	Section: <b>350.275 Women's Health and Neonatal</b>	
Level: <b>SHARED HEALTH</b> - Applies to all Shared Health staff at the site indicated in the policy name.	Date: <b>09/Mar/2023</b>	Supersedes: <b>EIPT-035-010 2015</b>	

## 1.0 PURPOSE:

- 1.1 To provide infants with kangaroo care (KC)/skin-to-skin (STS) with their parent/guardian or designated support person (DSP).
- 1.2 To provide non-pharmacologic pain management for infants during potentially painful procedures.

**Note:** All recommendations are approximate guidelines only and practitioners must take into account individual patient characteristics and situation. Concerns regarding appropriate treatment must be discussed with the attending neonatologist.

## 2.0 PRACTICE OUTCOME/ BENEFITS:

- 2.1 Provides more consistent and appropriate thermoregulation to all infants, in the immediate and later postpartum period.
- 2.2 Improves neurodevelopment and accelerates brain maturation of the infants through stimulation of neuroprotective hormones, and provision of cycled sleep.
- 2.3 Promotes:
  - appropriate / normal blood glucose levels in infants in the immediate and later postpartum period
  - lower respiratory rates in the newborn in the immediate and later postpartum period
  - less infant crying, reduced infant stress
  - reversibility of early trauma
  - lowered risk of infection & colonization with beneficial bacteria
  - birthing person/ infant bonding/ attachment
  - earlier nutritive breastfeeding/chestfeeding in the immediate postpartum period
  - increased breastfeeding rates at day 3, 1 month, 3 months, and 1 year
  - improved birthing person homeostasis after cesarean section

## 3.0 DEFINITIONS:

- 3.1 **Kangaroo Care (KC)/Skin-to-Skin (STS):** Contact between an infant and an adult where the infant's chest is bare and is in direct contact with the adult's bare chest in an upright position (ventral surface to ventral surface). The adult may be the infant's parent/guardian or designated support

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person (DSP). KC is often a term used in the NICU whereas STS is a term more commonly used in the newborn areas.

3.2 **Respiratory Support:** Includes endotracheal intubation and ventilation, tracheostomy, nasal continuous positive airway pressure (NCPAP), high frequency nasal oscillator (HFNO), high flow nasal prongs (HFNP), and nasal prongs.

3.3 **Critical airways** are those that meet the following criteria:

- ENT had been consulted due to failed extubations and the patient is either awaiting assessment by their service or has been diagnosed with an etiology for upper airway obstruction.
- On a case-by-case basis, any infant who has no clear etiology or has a history of more than two failed extubations due to upper airway obstructive signs should be included as a patient with a “critical airway.”

#### 4.0 **CONSIDERATIONS: NORMAL NEWBORN**

4.1 Important **normal newborn** consideration before STS:

- Clinically stable:
  - Term, tone, breathing or crying?
  - Temperature
  - Respiratory rate
  - Heart rate

4.2 Important **parent/guardian or DSP consideration** before STS:

- Birthing person’s medical condition
- Cultural practices/ preferences and potential barriers
- Postpartum mental health

#### **CONTRAINDICATIONS / CONSIDERATIONS: NICU**

Assess whether the infant is appropriate for KC. Discuss with the attending neonatologist and team. (*Ensure all normal newborn considerations are followed, in addition to determining contraindications and considerations unique to a NICU newborn*).

4.3 Determine if there are any **contraindications** to the KC position such as:

- infant who is actively cooling,
- presence of chest tubes,
- first 72 hours for infants who are < 1000 grams birthweight and/or 27 weeks or less gestation,
- gastroschisis or omphalocele,
- meningomyelocele or other surgical conditions, unstable invasive lines.

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4.4 Important **infant considerations** before KC:

- All ventilated infants require a Registered Respiratory Therapist [RRT] to be present during transfer for KC. (*Refer to SOP/ Standard Work on KC- Appendix E* ).
- In patients with a “critical airway” KC should be avoided until the airway is no longer deemed critical or an alternative airway (tracheostomy) has been placed.
- Hypotension requiring inotropic support-if blood pressure continues to be labile, infant may not tolerate the transfer.
- Clinical deterioration within the past 12 hour period.
- Early post-operative or post-procedure period.

## 5.0 **GUIDELINES:**

- 5.1 It is essential to prepare parent, guardian and/or DSP for KC/STS contact before birth. Since some cultures may not practice this contact; information, encouragement and support should be offered.
- 5.2 KC/STS contact between parent, guardian and/or DSP and infant is encouraged by all health care providers. Refer to:
- **Appendix A for STS for babies in the Labour & Delivery Unit & Mother Baby Unit, (Pg. 5)**
  - **Appendix B for STS in Birthing Area During / After Cesarean Section, (Pg. 6)**
  - **Appendix C for Components of Safe Position for Newborn While KC/ STS, (Pg.9)**
  - **Appendix D for KC practice in the NICU, (Pg.10)**
  - **Appendix E for Standard Work/ SOP related to Transfer of fragile or intubated neonates to Kangaroo Care (KC), (Pg.12) and**
  - **Appendix F for Signs of Over-stimulation (Pg.17)**
- 5.3 KC/STS contact should occur as soon as possible after birth, regardless of choice of feeding method and delivery mode.
- 5.4 Since KC/STS contact reduces pain responses in preterm and term babies, KC/STS contact should be started approximately 10 to 15 minutes prior to the procedure.
- 5.5 Ensure that the 4 moments of hand hygiene are followed by parent, guardian and/or DSP and healthcare providers for KC/STS contact.

## 6.0 **PRIMARY AUTHOR**

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## 8.0 **REFERENCES:**

- AWHONN Practice Brief. (2021). Immediate and Sustained Skin-to-Skin Contact for Healthy Late Preterm and Term Newborns After Birth. *Nursing for Women's Health*, 25 (5), e9-e11, doi: 10.1016/j.nwh.2021.07.003
- Chan, G., Bergelson, I., Smith, E.R., Skotnes, T., Wall, S.(2017). Barriers and enablers of kangaroo mother care implementation from a health systems perspective: a systematic review. *Health Policy and Planning*, 32, 1466–75, doi: 10.1093/heapol/czx098
- Cleveland, L., Hill, C.M., Pulse, W.S., DiCioccio, H.C., Field, T., White-Traut, R.(2017) Systematic Review of Skin-to-Skin Care for Full-Term, Healthy Newborns. *Journal of Obstetric, Gynecologic & Neonatal Nursing* 46(6),857–69, <https://doi.org/10.1016/j.jogn.2017.08.005>
- Coutts, S., Woldring, A., Pederson, A., De Salaberry, J., Osiovič, H., Brotto, L.A.(2021). What is stopping us? An implementation science study of kangaroo care in British Columbia's neonatal

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intensive care units. *BMC Pregnancy and Childbirth*, 21(52), 1-15, <https://doi.org/10.1186/s12884-020-03488-5>

Cunningham, C., Patton, D., Moore, Z., O'Connor, T., Bux, D., Nugent, L. (2021). Neonatal kangaroo care - What we know and how we can improve its practice: An evidence review. *Journal of Neonatal Nursing*. <https://doi.org/10.1016/j.jnn.2021.10.004>

Eliades, C. (2018). Mitigating Infant Medical Trauma in the NICU: Skin-to-Skin Contact as a Trauma-Informed, Age-Appropriate Best Practice. *Neonatal Network*, 37 (6),343–50. DOI: 10.1891/0730-0832.37.6.343

Feldman-Winter, L., Goldsmith, J.P., Committee on Fetus & Newborn, Task Force on Sudden Infant Death Syndrome. Safe Sleep and Skin-to-Skin Care in the Neonatal Period for Healthy Term Newborns. *Pediatrics*, 138 (3). DOI: 10.1542/peds.2016-1889

Hubbard,J.M., Gattman, K.R.(2017) Parent–Infant Skin-to-Skin Contact Following Birth: History, Benefits, and Challenges. *Neonatal Network*, 36(2), 89–97, DOI: 10.1891/0730-0832.36.2.89

Ionio, C., Ciuffo, G., Landoni, M.(2021). Parent-Infant Skin-to-Skin Contact and Stress Regulation: A Systematic Review of the Literature. *Int. J. Environ. Res. Public Health*, 18,4695. <https://doi.org/10.3390/ijerph18094695>

Kangaroo Care in the Neonatal Intensive Care Unit. St. Boniface Hospital  
<https://youtu.be/yzMeRxIIfD4>

Kirca, N., Adibelli, D. (2021). Effects of mother-infant skin-to-skin contact on postpartum depression: A systematic review. *Perspectives in Psychiatric Care*, 57 (4),2014–23.

Stadd, K., Diehl, B., Yenokyan, G., Aucott, SW.(2020). A Kangaroo Care Pathway for NICU Staff and Families: The Proof Is in the Pouch. *Advances in Neonatal Care*, 20 (1),14–24.

Stevens, J., Schmied, V., Burns, E., Dahlen, H-G.(2019). Skin-to-skin contact and what women want in the first hours after a caesarean section. *Midwifery*, 74, 140–6. <https://doi.org/10.1016/j.midw.2019.03.020>

Widström, A-M., Brimdyr, K., Svensson, K., Cadwell, K., Nissen, E.(2019). Skin-to-skin contact the first hour after birth, underlying implications and clinical practice. *Acta Paediatrica*, 108,1192–204. DOI:10.1111/apa.14754

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### Appendix A: STS for babies in the Labour & Delivery Unit & Postpartum Unit

1.	Warm, Dry and Stimulate infant while on birthing person's abdomen. Once umbilical cord is cut, the infant is placed prone (ventral surface to ventral surface) on a parent/ guardian/ DSP's chest. Ensure that the head is in a neutral position. Observe maintenance of optimal airway, breathing and circulation.
2.	Cover the infant's head with a hat for the first 3 hours post birth to decrease heat loss by evaporation. Cover the infant's back and body with 2 warm dry blankets folded in half to promote thermoregulation. A diaper is optional in the immediate post-birth period.
3.	Observe as an infant transitions through pre-feeding behaviors in readiness to breastfeed/chestfeed; these include hand to mouth movements, licking, drooling, rooting and moving toward the nipple. Offer formula fed infants their feed while remaining STS.
4.	Birthing person/guardian or DSP and infants remain STS without interruption for at least one hour, or until the completion of the first feed, unless there are documented medically justifiable reasons. This permits the infant to cycle through one full sleep cycle and optimizes the benefits of STS contact.
5.	Early newborn assessment (e.g., initial vital signs), eye prophylaxis (as required) and Phytonadione (Vitamin K) injection may be done during STS contact. Other routine assessments (e.g., weight & length) may occur later in the postpartum period.
6.	STS contact is encouraged during transfer by wheelchair or stretcher to the post-partum unit if appropriate.
7.	Birthing person/guardian or DSP are encouraged to engage in frequent STS contact throughout the postpartum period. This minimizes over-stimulation of the infant ( <i>Refer to Appendix F: Signs of over-stimulation</i> ), decreases infant stress, and promotes cue-based breastfeeding/chestfeeding.
8.	STS is encouraged before painful procedures (e.g. heel sticks, laboratory tests and injections).
9.	Educate birthing person/guardian or DSP about the benefits of ongoing STS contact upon discharge. Encourage STS contact to be continued as much as possible once home. Suggest ways birthing person/guardian or DSP can interact with their baby (while infant is awake) such as giving finger to grasp, reading to their baby or humming/singing softly to their baby.
10.	<p>Document initial STS and ongoing contact on patient record:</p> <p>Newborn Flowsheet in the patients' electronic patient record (EPR).</p> <p><i>Ensure to:</i></p> <ul style="list-style-type: none"> <li>• Chart STS as "delayed" if it begins more than 5 minutes after birth</li> <li>• Chart medical reasons to delay if birthing person or newborn is unstable.</li> <li>• Indicate STS declined if birthing person/guardian or DSP has made an informed choice.</li> </ul>

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## Appendix B: STS in Birthing Area

### STS Care During/ After Caesarean Section

1.	<p><b>Planning: Preparation for STS (Team Planning):</b></p> <p><b>Newborn RN or Midwife:</b></p> <ul style="list-style-type: none"> <li>- Discuss STS with Anesthesiologist &amp; Obstetrician PRIOR to planning with birthing person/guardian or DSP.</li> <li>- Include plan to do STS during briefing PRIOR to commencement of surgery.</li> <li>- Teach birthing person/guardian or DSP principles of safe STS.</li> </ul>
2.	<p><b>Planning: Preparation for birthing person:</b></p> <ul style="list-style-type: none"> <li>• Consider placing EKG electrodes on back or side, to clear chest area. Use arm without B.P. cuff on it for STS.</li> </ul> <p><b>Newborn RN or Midwife:</b></p> <ul style="list-style-type: none"> <li>- Obtain birthing person's/guardian's or DSP's consent for STS AFTER discussion related to safety and medical issues with Anesthesiologist + Obstetrician.</li> </ul>
3a.	<p><b>Option 1: Birthing person STS</b></p> <ul style="list-style-type: none"> <li>a. The obstetrician/resident will hand the newborn infant directly to the newborn nurse or midwife who is supporting STS. The newborn nurse or midwife supporting STS will receive the infant in a sterile drape for the purposes of maintaining the sterile surgical field.</li> <li>b. Having received the infant, the newborn nurse or midwife supporting STS will confirm that the infant is vigorous [Dry, Warm, Stimulate &amp; Clear airway (as needed)] and the situation remains appropriate for immediate STS by confirming the birthing person's status with the anesthesiologist.</li> <li>c. Assessment of the infant status to determine appropriateness of immediate STS is conducted in front of the birthing person/guardian and DSP maintaining clear verbal communication with them throughout the assessment.</li> <li>d. Newborn nurse or midwife supporting STS then places the infant on the bare chest of the birthing person with a warm blanket over top. One hand is kept on the newborn at all times.</li> <li>e. The newborn nurse or midwife supporting STS communicates to the surgical team that STS on the birthing person's chest is initiated so that they can adapt their operative position accordingly (e.g., no instruments placed over infant, etc.).</li> <li>f. The newborn nurse or midwife supporting STS will remain at the head of the bed to maintain the safety of the infant. A hand is kept on the newborn at all times. Where appropriate, the guardian/DSP may be coached to keep their hand on the newborn in lieu of the healthcare provider.</li> <li>g. Newborn status is monitored during STS: term, tone, breathing or crying? <ul style="list-style-type: none"> <li>i. Temperature</li> </ul> </li> </ul>

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	<ul style="list-style-type: none"> <li>ii. Respiratory rate</li> <li>iii. Heart rate</li> </ul> <p>h. Medication administration as per orders [Phytonadione (Vitamin K) and Erythromycin 0.5%] and assessment of weight will be delayed until the newborn has had one hour of un-interrupted STS or until the newborn is ready to be transferred.</p> <p>i. In the following instances, birthing person STS must be interrupted, and STS moved to chest of guardian/DSP:</p> <ul style="list-style-type: none"> <li>i. The obstetrical provider has finished surgery, to facilitate safe transfer of birthing person from the operating table to the stretcher.</li> <li>ii. The birthing person wishes to stop.</li> <li>iii. The surgical procedure, newborn status or birthing person's status is no longer conducive to safe STS.</li> <li>iv. There is a change in staffing such that safe STS cannot be supported.</li> </ul> <p>j. In the following instances, birthing person's STS must be interrupted, and the infant placed in the warmer:</p> <ul style="list-style-type: none"> <li>i. Change in infant status requiring resuscitation.</li> <li>ii. Birthing person's condition requires interruption, and the guardian/DSP is not present or is declining STS.</li> </ul>
3b.	<p><b>Option 2: Immediate Guardian/ DSP STS:</b></p> <p>a. If STS with birthing person is not deemed safe or has been declined, the newborn nurse or midwife supporting STS will receive the infant in a sterile drape for the purposes of maintaining the sterile surgical field.</p> <p>b. The guardian/ DSP will be offered to do STS while sitting at the head of the bed of the birthing person.</p> <p>c. This will be achieved by placing the newborn directly on the chest of the guardian/ DSP through the front-opening hospital gown. Newborn status is monitored during STS: term, tone, breathing or crying?</p> <ul style="list-style-type: none"> <li>i. Temperature</li> <li>ii. Respiratory rate</li> <li>iii. Heart rate</li> </ul> <p>d. Medication administration [Phytonadione (Vitamin K) and Erythromycin 0.5%] and assessment of weight will be delayed until the newborn has had one hour of un-interrupted STS or until the newborn is ready to be transferred.</p> <p>e. In the following instances, guardian/DSP STS must be interrupted, and the infant placed in the warmer:</p> <ul style="list-style-type: none"> <li>i. Change in infant status requiring resuscitation.</li> <li>ii. Guardian/DSP requests to stop and STS on the birthing person's chest is not a viable alternative.</li> </ul>
3c.	<p><b>Option 3: Deferred STS</b></p> <p>a. If newborn status is not appropriate for STS at birth.</p>



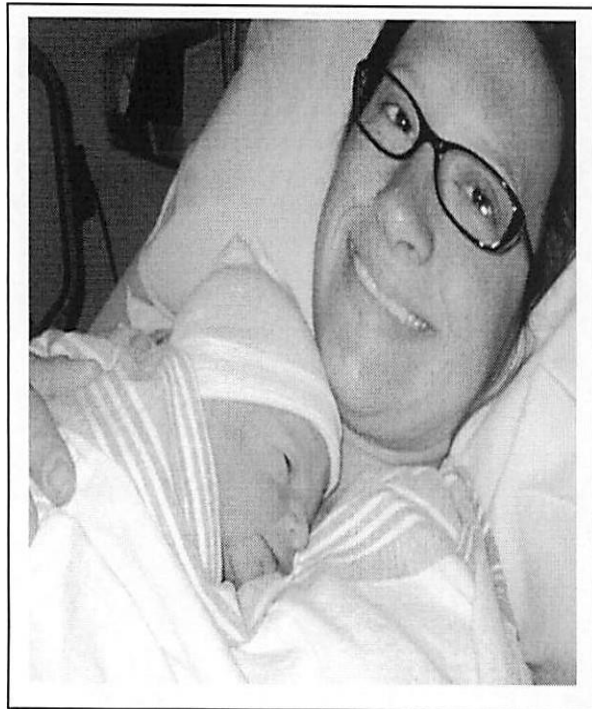
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	<p>b. The obstetrician/resident will place the newborn infant in the sterile warmer, following delayed cord clamping.</p> <p>c. The staff supporting STS will warm, dry and stimulate newborn and ensure stability and vigorousness. A hat and diaper will be placed on the newborn infant.</p> <p>d. When safe to do so (per anesthesia and the newborn nurse or midwife) and agreeable to the birthing person/guardian or DSP, the newborn nurse or midwife supporting STS may bring the newborn infant to the parent/guardian or DSP. The newborn nurse or midwife places one hand on infant front, midline with the sternum and one hand on the back, midline with the spine. Ensuring hands are supportive of infant's head and neck in a "sandwich position". Infant is placed with head up, on birthing person/guardian or DSP's chest. Cover infant with blanket.</p> <p>e. If preferable to the birthing person/guardian or DSP, the infant may be bundled in a clean and warm blanket and placed in the guardian or DSP's arms.</p> <p>Please refer to Option 1 and Option 2 for instructions on how to proceed: <b>Option 1: Birthing person STS; Option 2: Immediate Guardian/ DSP STS.</b></p>
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### Appendix C: Components of Safe Positioning for Newborn during KC/ STS



- Infant's face can be seen
- Infant's head is in "sniffing" position
- Infant's nose and mouth are not covered
- Infant's head is turned to one side
- Infant's neck is straight, not bent
- Infant's shoulders and chest face birthing person/ guardian or DSP
- Infant's legs are flexed
- Infant's back is covered with blankets
- Birthing person/ guardian or DSP and infant are monitored continuously by staff

#### **Labour & Delivery Unit & Postpartum Unit:**

Infant should not be on STS if birthing person/ guardian/DSP falls asleep and no additional support person is present to ensure safety of infant.

#### **NICU:**

If the birthing person/guardian/ DSP falls asleep, assess the safety of the infant. Wake birthing person/guardian/DSP if the baby is not safely secured. If partner/DSP is present, ask for their support and vigilance during KC.

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#### Appendix D: KC practice in the NICU

1.	Decision made by bedside care team. Consult Clinical Resource Nurse / Charge Nurse or physician for assistance in decision-making as needed. For infants <1000 gms, have discussion for approval from Attending Neonatologist.
2.	Bedside nurse to discuss concerns/questions & convey plan for KC as needed during daily rounds. If infant has recently been fed, plan to move them slowly to the KC position. Once in KC position, they will be less likely to reflux than in the bed. If infant is asleep, move them with minimal stimulation to avoid startling them. They will return to a better sleep shortly after moving into the KC position.
3.	If an infant is experiencing discomfort or is unable to settle, consider KC as a means to provide pain relief and to encourage them to settle into a more productive sleep. For infants experiencing substance withdrawal, consider KC as a means to decrease signs and symptoms of abstinence and provide containment for them.
4.	Assess ability of the parent to safely provide KC, particularly for recently delivered postpartum person. Encourage parent/guardian or DSP to spend at least 2-4 hours per day providing KC for their infant to promote optimal brain growth.
5.	Record heart rate, respiratory rate, oxygen saturation and FiO2 (if applicable) before beginning and as needed during KC. If infant is receiving cardiorespiratory and oximeter monitoring, continue these during KC.
6.	Remove infant's clothing and have infant in clean diaper only. A hat is recommended for all infants <1000 gms.
7.	Discuss with parent/guardian or DSP about cultural preferences and previous trauma that may impact their KC experience. Provide privacy and encourage parent/guardian or DSP to place their infant in head up position on their bare chest.
8.	If the infant has nasal prongs or any venous or arterial lines, ensure that all tubing and lines are secure on one side of the infant and supported during the transfer to the parent/guardian or DSP.
9.	<b>For non-intubated infants (parent lifting method):</b> Facilitate a transfer of infant to parent/guardian or DSP that causes the least amount of stress to the baby. If the parent/guardian or DSP is physically able, they will stand up facing the bed/incubator and place hands, palm up under the infant. Using one hand to support infant's head and the other to hold infant's hips. The bedside nurse supports lines/ tubing if present. Parent/guardian or DSP lowers their chest to their infant's, establishing STS with the infant (ventral surface to ventral surface) and lifting their infant in one movement, supporting their infant's body and head as they straighten up to a standing position. The parent/guardian or DSP slowly sits down in the chair while maintaining the infant in KC position. The bedside nurse continues to manage the lines and wires to ensure a smooth transfer. Cover the infant and parent/guardian or DSP with a blanket.
10.	<b>For non-intubated infants (nurse/ infant transfer method):</b> For parents/ guardians or DSPs who are unable to transfer their infant independently, the nurse may bring the infant to the parent/guardian or DSP. The bedside nurse places one hand on infant front, midline with the sternum and one hand on the back, midline with the spine. Ensure hands are supportive of infant's head and neck in a "sandwich position". A second person may help to support lines or tubing (if present). Place infant with head up, for KC on parent's/guardian's or DSP's chest. Cover infant and parent/guardian or DSP with a blanket.

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11.	<b>For intubated infants:</b> Record infant's baseline vital signs and ventilator parameters and auscultate chest to assess quality of respirations. <i>[Refer to Appendix E: Standard Work/ SOP: Transfer of fragile or intubated neonates to KC].</i>
12.	Encourage KC ideally for a minimum of 90 minutes if infant's condition remains stable. More time is better, there is no recommended maximum time for KC (ensure to modify time duration according to what parent/guardian or DSP is able to offer).
13	Provide KC for as long as tolerated by the infant and parent/guardian or DSP. KC shall be discontinued if the infant shows signs of persistent distress or physiological compromise and over-stimulation ( <i>Refer to Appendix F: Signs of over-stimulation</i> ) despite optimization of the environment and infant position more than 10 minutes after commencing KC. KC should be encouraged during procedures that may cause pain such as heel sticks or injections.
14.	If the parent/guardian/DSP falls asleep, assess the safety of the infant. Wake parent/guardian/ DSP if the baby is not safely secured. If partner/ DSP is present, ask for their support and vigilance during KC.
15.	Use same transfer method to return baby to bed/ incubator as mentioned above.
16.	Once transferred back safely to bed/incubator or open bed, document: <ul style="list-style-type: none"> <li>• Tolerance of transfer</li> <li>• Time in KC, include infant and parent/guardian or DSP tolerance and response.</li> <li>• Time of transfer back to bed/incubator or open bed.</li> <li>• Any events that occurred during transfer or KC (apnea, bradycardia, desaturations etc.) if applicable.</li> <li>• Any interventions required and effectiveness (if applicable).</li> </ul>

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## Appendix E: Standard Work/ SOP: Transfer of fragile or intubated neonates to Kangaroo Care (KC)

**Transformation Desired Goal or Outcome:** To provide a framework (four hands on) for the process of safe transfer of a fragile or intubated neonate from the bedside to the parent/guardian or DSP for KC.

**Fragile Infant:** An infant who readily decompensates physiologically and/or behaviorally with handling or with changes in medical treatment. Fragile infants require medical intervention to recover to physiological baseline when decompensation occurs.

**Intubated Infant:** An infant who has had an endotracheal tube inserted into their trachea and is receiving mechanical respiratory ventilation.

Step#	Description	Key Points / Images	Who
1.	Prepare the team	<ul style="list-style-type: none"> <li>Discuss KC for this particular infant during rounds with interdisciplinary team.</li> <li>Schedule time for transfer to ensure all necessary NICU staff are available at the bedside for transfer at the designated time.</li> </ul>	Bedside Nurse  Bedside RRT (Registered Respiratory Therapist)  Nurse 2  RRT 2/Nurse 3 (as needed)  Physician
2.	Ensure physician is available in NICU during scheduled transfer	<ul style="list-style-type: none"> <li>Physician must be present in unit to respond should extubation occur during the transfer process.</li> </ul>	Bedside Nurse  Physician
3.	Prepare parent/guardian or DSP for KC	<ul style="list-style-type: none"> <li>Describe procedure to parent/guardian or DSP.</li> <li>Considerations for parent/guardian or DSP's comfort prior to KC:               <ul style="list-style-type: none"> <li>Use restroom</li> <li>Have adequate nourishment and hydration</li> <li>Pump breast/chest milk</li> <li>Take prescribed or PRN medication</li> </ul> </li> <li>Discuss with parent/guardian or DSP about cultural preferences and/or previous trauma that may impact their STS experience. Provide privacy.</li> <li>Assist parent/guardian or DSP into comfortable seated position in zero-gravity chair. Ensure parent is prepared to receive infant for KC.</li> </ul>	Bedside Nurse  Parent/Guardian/DSP



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Step#	Description	Key Points / Images	Who
8.	Place infant on parent/guardian or DSP's chest	<ul style="list-style-type: none"> <li>Keeping 'sandwich' technique, place infant prone on parent's/guardian's or DSP's bare chest.</li> <li>Parent/ guardian or DSP places two hands on top of the nurse's top hand.</li> <li>Nurse carefully removes hands from infant once parent/guardian or DSP's hands are directly on infant skin supporting their head, neck, and back.</li> <li>If possible, position the face of the infant so that the parent/guardian or DSP can see the infant's facial expression or give the parent/guardian or DSP a hand mirror to look at the infant.</li> <li>Cover parent/guardian or DSP hands and infant with blanket.</li> <li>Suggest ways parent/guardian or DSP can interact with their baby (while infant is awake) such as giving finger to grasp, reading to their baby or humming/singing softly to their baby.</li> </ul> <p>If infant intubated, RRT continues maintaining placement of ETT and manages ventilator tubing.</p>	Bedside Nurse  Parent  Bedside Nurse  RRT
9.	Assist parent/guardian or DSP into comfortable position	<ul style="list-style-type: none"> <li>Place blankets under both elbows to support weight of arms.</li> <li>Chair is angled back to 30-40 degrees off midline and locked in place.</li> <li>Offer warm blankets for parent/guardian or DSP comfort.</li> </ul>	Bedside Nurse
10.	Secure equipment	<ul style="list-style-type: none"> <li>Reconnect monitor lines if disconnected. Equipment may need to be moved closer or have their position adjusted to accommodate safe patient care i.e. reconnect/ restart continuous feeds, move position of ventilator closer.</li> <li>Once parent settled in chair, RRT reinforces securement of ETT and ventilator tubing to parent/guardian or DSP and chair (tape, clamps, or self-adhesive straps).</li> <li>Ensure chair angle is in place prior to securing devices and tubing, <b>do not</b> change chair angle once secured.</li> </ul>	Bedside Nurse or Nurse 2  Bedside Nurse or RRT
11.	Perform safety check and secure lines and monitoring devices	<p><b>For intubated infants:</b></p> <ul style="list-style-type: none"> <li>Confirm correct ETT depth and placement with penlight (document confirmation on RRT flowsheet).</li> <li>ETT tubing secured appropriately to chair with no kinks or tension.</li> <li>Ensure infant facing ventilator.</li> </ul> <p><b>For fragile infants:</b></p> <ul style="list-style-type: none"> <li>Confirm IV and monitor line securement.</li> <li>Ensure appropriate and safe placement of monitors, pumps, and ventilator.</li> </ul>	RRT         Bedside Nurse

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Step#	Description	Key Points / Images	Who
12.	Assess infant for tolerance of transfer	<ul style="list-style-type: none"> <li>Assess the infant after the move to KC and then continue monitoring and assessment as per routine for that infant and as required.</li> <li>If the infant's condition and oxygen requirements stabilize within 10 minutes, continue KC. If the infant's oxygen requirements increase by more than 20% for longer than 10 minutes, return the infant to the bed.</li> <li>Assess and drain ventilator tubing periodically.</li> </ul>	Bedside Nurse & RRT
13.	Transfer infant back to incubator or open bed	<ul style="list-style-type: none"> <li>Transfer back occurs when KC is complete or if infant did not tolerate transfer.</li> <li>Disconnect lines and monitors.</li> <li>Manually secure the ETT.</li> <li>Remove all securing tape and clamps.</li> <li>Hold infant in "sandwich" position while on parent/guardian or DSP's chest.</li> </ul> <p><b>Return infant to incubator/open bed</b></p> <ul style="list-style-type: none"> <li><i>If incubator:</i> Clear all equipment from lid prior to lifting. Lift lid of incubator.</li> <li>Lift infant from parent/guardian or DSP's chest.</li> <li>Maintain "sandwich" hold.</li> <li>Infant remains in prone position (facing ground).</li> <li>Infant's body should be parallel to ground i.e., do not bring to a vertical position.</li> <li>Move infant laterally toward incubator.</li> <li>All movements are slow and controlled.</li> <li>Manage intravenous lines and communicate with team if there is tension on lines.</li> <li>Manage and maintain placement of ETT and ventilator tubing and communicate with team if adjustments are required.</li> <li>Perform safety check of lines and monitors; reconnect monitor lines as required.</li> <li>Reposition infant as needed.</li> <li><i>If incubator:</i> Close incubator lid.</li> </ul>	Nurse 2  RRT Nurse 2 Bedside Nurse Nurse 2  RRT Bedside Nurse or Nurse 2
14.	Debrief	<ul style="list-style-type: none"> <li>Was the transfer process successful?</li> <li>What went well and what improvements can be made during a subsequent transfer?</li> <li>Address any questions or concerns the parent/ guardian or DSP or staff members have.</li> </ul>	All staff involved in transfer.  Parent(s)/ guardian/ DSP



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Step#	Description	Key Points / Images	Who
15.	Document	Document in site specific record: <ul style="list-style-type: none"> <li>• Time of transfer to KC</li> <li>• Tolerance of transfer</li> <li>• Time in KC, include infant and parent/guardian or DSP tolerance and response</li> <li>• Time of transfer back to incubator or open bed</li> <li>• Any events that occurred during transfer or KC (apnea, bradycardia, desaturations etc.)</li> <li>• Any intervention required and effectiveness of same</li> <li>• Effectiveness of KC</li> </ul>	Bedside Nurse
16.	Kangaroo Care Milestone	<ul style="list-style-type: none"> <li>• Ensure to provide family with KC Milestone Card</li> </ul>	Bedside Nurse

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### Appendix F: Signs of over-stimulation

- Hiccups, gagging, grunting or spitting up
- Coughing, sneezing, yawning, sighing, squirming, straining
- Startling, stiffening, tremors, twitching of body, limbs, and or face
- Arching of back or neck, frantic movements
- Restless sleep with jerky movements
- When awake: tired, glassy eyed, fussy, staring, looking away
- Looking panicked or worried or dull
- Crying weakly or becoming irritable
- Sudden sleep
- Overheated