Creating a Culture of Consistency
for Skin to Skin Holding

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Learning Objectives

• Describe how to support a parent and intubated infant during a skin to skin transfer.
• List two techniques to increase consistent practices for skin to skin holding in the NICU.
Our Patients:
Sons and Daughters
Their Family

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Skin to Skin Practices

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Let’s Do Skin to Skin!
Culture

- Knowledge
- Values
- Beliefs
  - Attitudes
  - Goals
  - Actions …Practices

What is your nursery’s culture?

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Knowledge

• > 260 research studies
• Improved gastro-intestinal function
  – Production and release of hormones
  – Utilization of nutrients
• Improved Weight gain
  – Blood glucose levels stabilized
• Physiological stability
  – Normalized HR and RR, increased oxygen saturation, decreased apnea and periodic breathing

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Knowledge

- Reduces mortality
  - Developing countries
  - 24 hrs day/7 days week, after birth

- Decrease LOS
  - Financial benefits

- Decreased cortisol levels

- Reduces risk of infection
  - Boosts immune system

- Improved temperature regulation
Knowledge

• Promotes brain maturation
  – Higher Bayley Mental and Motor scores
  – Higher IQ’s
  – Lags often seen in other premature infants once discharged not present.
  – better brain maturation,
  – better brain complexity (more synapses),
  – 5 distinct cortical areas of higher brain development than full term infants
  – 2-4 weeks more maturity than non-KC preterm infants
  – Improved sleep
  – Increase in quiet sleep
    • Study of 32-40 weeks PMA
    • 1 ½ hour STS /day for 4 days/week
    • Improved state regulation
    • Minimized crying during painful procedures
  – Scher MS et al. (2009)
Beliefs

- Improves attachment
- Decreases parental anxiety
- Enhances competence and confidence with care
- Shifts role of primary care to parent
- Increase milk production
Values

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Miami Valley Hospital
Dayton, OH

- Skin to Skin Support Team (SSST)
- Literature review
- Chart audit
- Parent audit
- Staff audit
- Updated policy
Miami Valley Hospital
Dayton, OH

• Wrote transfer guidelines
  – sitting, standing, with and without respiratory support
• Educational presentation- Webinar
• Educational written packet
• New smart text for staff
• Skin to skin kit with wrap
• Competency check off
Teamwork
Skin to Skin

- Vagal nerve stimulation
  - Cortisol
  - Hormonal cascades
  - Antibodies transferred

- Entero-mammary Pathway
  - NICU pathogens
  - Antigens transferred
  - Mom makes antibodies
  - Improved immune system
Standing Transfer
Standing Transfer - Intubated Infant
Teamwork - Role Delineation
Sitting Transfer - Back to Bed

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Standing Transfer - Lessons Learned
Training Tidbits: Positioning

- Transfer infant prone or sidelying while flexed, contained/covered, aligned, and comfortable with medical equipment fully supported
- Position infant prone, at 20-30 degree incline flexed, contained, aligned, and comfortable with tubes, wires, medical equipment fully supported
  - Colson et al., 2008
- Position infant's head in slight extension to prevent airway occlusion
- Chest to chest, between breasts, entire ventral surface, diaper below umbilicus, mom no bra
Training Tidbits: Autonomic

• Assure lead placement is in auxiliary to prevent picking up of parental vital signs
  – Barnes & Roberts, 2005, Sontheimer 1995

• Monitor vitals 5-15 minutes after transfer to return to baseline

• Peripheral and cerebral oxygen saturation recovery takes approximately 3 minutes
  – Bergum et al 2008, Schrod & Walter, 2002
Training Tidbits: Infection

- No skin to skin if febrile or active sepsis
- Consider 1-3 minute chest scrub if parent exposed to farming chemicals, industrial chemicals, road work
- Meta-analysis
  - No increased risk of infection
  - Anderson, et al., 2003; Conde-Agudelo et al., 2003
Training Tidbits: Humidity

- Skin to skin humidity is greater than 50%
  - Saucer et al., 1984
- Reduce trans-epidermal water loss
  - More sleep time
  - Loss is higher in awake states than sleep
  - Retention of water in stratum corneum, for better integrity
Training Tidbits: Breastmilk

• Encourage pumping mom’s to provide skin to skin every day
  – Replaces foremilk with hind milk in 20 minutes (Johnson, 2007)
  – Independently predicts breastfeeding initiation in preterm infants (Furman 2002)
  – Increases duration of breastfeeding (Moore 2009)
Training Tidbits: Transfer

• Standing transfer preferable to sitting transfer
  – Maternal condition
  – Medical condition
  – < 27 weeks place sideways with head near or at breast above nipple line
    • Decreased cerebral oxygenation when upright
• Return to bed transfer
  – Maternal Condition
  – Medical Condition
Training Tidbits: Timing

• One Hour or more
  – Complete sleep cycle
  – Sleep fosters brain maturation
  – Needed for state and brain benefits
  • (Ludington-Hoe, Johnson 2006, Scher et al., 2009)

• If <32 weeks
  – Physiological and developmental benefits may not exist if only 20-30 minutes of skin to skin at a time (Miles, et al., 2006)
Training Tidbits: Maternal Feelings

• Less than one hour skin to skin increased
  – Competence
    • (Johnson, 2007)
  – Attachment
    • (Feldman 1999, Tessier, 1998)
  – Confidence
    • (Johnson 2007)
Training Tidbits: Temperature

• If <28 weeks need additional heat source
  – Bauer, 1996, 1998; van Zanten et al., 2007 to prevent cold stress
• If <1,000 wear hat or assure blanket over head
• Temperature Monitoring
  – Skin probe < 1500 grams
    • Assure correlation with axillary temp prior to transfer
    • Probe on ball of foot
  – < 1000 grams and < 28 weeks
    • Giraffe bed manual temperature 0.5 temp
    • Additional heat source – Consider ThermaCare®
  – Document temp @ 15 minutes and every hour after
Training Tidbits: Temperature

- Temperature of bed
  - Transfer back to bed covered/contained
  - Keep infant naked/diapered but covered
  - Warm blanket
  - Air temperature, skin temperature, manual temp off
Skin to Skin Kit

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Documentation

• Smart Text
  – Ease
  – Consistency
  – Respiratory support
  – Temperature
  – Parent
  – Reason for return to bed
Recommendation

- MOD (2001)
- AAP (2005)
- ABM (2007)
- NANN (2008)
- CDC (2010)
- NRP (2011)
Contributors to Skin to Skin

- Dr. Rey
- Dr. Martinez
- Dr. Susan Ludington-Hoe
- Dr. Gene Anderson
- Dr. Hadeed
- Dr. Nils Bergman
Right Knowledge, Beliefs, Values

- Right Baby
- Right Parent
- Right Time
- Right Equipment
- Right Process
- Right Staff Availability and Teamwork
- Right Monitoring

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References

- www.kangaroomothercare.com
- WHO National Intensive Kangaroo Care Certification Course