



Mother's Own Milk (MOM) Initiative

April 2017 Learning Session:
Supporting Kangaroo Care
in your NICU

Partnering to Improve Health Care Quality
for Mothers and Babies



Welcome!

- **Please enter your Audio PIN on your phone or we will be unable to un-mute you for discussion.**
- If you have a question, please enter it in the Question box or Raise your hand to be un-muted.
- This webinar is being recorded.
- Please provide feedback on our post-webinar survey.

Agenda

4/6/2017

- 👶 Project Announcements
- 👶 Integrating Kangaroo Care in the NICU –
Winnie Palmer Hospital for Women & Babies
- 👶 Breastfeeding and Kangaroo Care Initiatives –
South Miami Hospital
- 👶 Q&A and Discussion

Early Bird Extended until April

10th

FPQC.org



Florida Perinatal Quality Collaborative

ANNUAL CONFERENCE

April 27-28, 2017

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ANNUAL CONFERENCE

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Tampa, FL

Challenges with the Periviable Infant

Supporting Vaginal Birth: Skills for Nurses

Neonatal Abstinence Syndrome

Zika: What We Know and What We Don't

Immediate Postpartum Long-Acting
Reversible Contraception

Antibiotic Stewardship

Donor and Mother's Own Milk Use for
Premature Infants

Reducing Racial & Ethnic Health
Disparities

Perinatal Quality Indicators and Improving
Data Quality

South Carolina's Birth Outcomes Initiative

Hypertension in Pregnancy

REGISTER NOW!

FPQC.org

1 Day Pre-Conference

Quality Improvement Methods Training for Perinatal Providers

Wednesday
April 26th

Tampa, FL

Holiday Inn Westshore

- *No Cost*
- *Must attend as a team*
- *More info at conference website*



Announcements

- 👶 Please Save the Date! Next MOM webinar on June 1st:
 - 👶 The Role of WIC in Supporting MOM for VLBWs – connect with regional staff and get your questions answered.
- 👶 Don't Forget: Free Personalized On-site Consultations for your unit!
 - 👶 Contact Ivonne ihernand@health.usf.edu to schedule!



Partnering to Improve Health Care Quality
for Mothers and Babies

Today's Topic:

SUPPORTING KANGAROO CARE IN YOUR NICU

Common Barriers you Identified

- 👶 Resistance: Nursing & Physician
- 👶 Lines or modes of ventilation
- 👶 Space in Unit / Furniture
- 👶 RN level of experience when kangarooing an "intubated" patient.
- 👶 Need for Review of current protocols

Poll Question

Has your NICU ever done a Kangaroo-a-thon or special focus on promoting skin-to-skin?

Yes

No

Alexander Center for Neonatology

Winnie Palmer Hospital for Women & Babies

Integrating Kangaroo Care in the NICU



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Integrating Kangaroo Care in the NICU

Susan M. Bowles, DNP, CNS, RNC-NIC,
CBC

Jennifer Francis, ASN, CLC, CBC

Kangaroo Care

- Was developed by Rey and Martínez (1983) in Bogotá, Columbia as an alternative to incubator care (WHO, 2003)
 - Its key features were described as:
 1. Early, continuous and prolonged skin-to-skin contact between the mother and the baby.
 2. Exclusive breastfeeding (ideally)
 3. Being initiated in hospital and continued at home
 4. Providing small babies with the opportunity to be discharged early. (WHO, 2003)



Definition of Kangaroo Care (KC):

- “A form of parental caregiving where the low birthweight newborn or premature infant is intermittently nursed skin-to-skin in a vertical position between the mother’s breasts or against the father’s chest for a non-specific period of time.” (Kenner & Lott, 2003)

NANN Definition of KC

- KC is a method of skin to skin contact between an infant and parent or designated support person.
- Providers of KC hold the infant facing them in an upright position against their bare chest. The infant should be diaper clad , covered with a blanket and wearing a hat.

Advantages of Kangaroo Care

- Thermoregulation
- Physiologic Stability
- Breastfeeding
- Growth
- Pain Management
- Mother-Infant Bonding
- Behavioral State

Evaluation of evidence

Researcher(s)	Type of Study	Sample group	Findings
Drosten-Brookes (1993)	case study	2	<ul style="list-style-type: none"> • Infants responded to Kangaroo care with increased quiet sleep and decreased Oxygen requirement. • Highlight possible benefits and need for further research.
Gale, Frank & Lund (1993)	Quantitative	25	<ul style="list-style-type: none"> • During KC period pulse, oxygen and respiratory rate remained within normal parameters for infants of $\geq 30/40$ or $> 1.2\text{kg}$. • Infants $< 30/40$ or $< 1.2\text{kg}$ showed signs of restlessness, tachycardia and decreased oxygenation during prolonged kangaroo care.
Ludington-Hoe, Ferreira & Goldstein (1998)	case study	1	<ul style="list-style-type: none"> • a 27-day old neonate weighing 894g received SIMV at a rate of 12 breaths per minute whilst receiving Kangaroo Care for 45minutes.
Ludington, Ferreira & Swinth (1999)	Quantitative	12	<ul style="list-style-type: none"> • The physiological observations of Infants $< 1\text{kg}$ remained stable during KC and decreased oxygen requirement.
Smith (2001)	Quantitative	14	<ul style="list-style-type: none"> • Infants oxygen requirements increased and body temperature dropped.

Should we use it in the High tech environment

- Cochrane Review
 - Emerging evidence that use could improve breastfeeding rates.



Why Kangaroo Care to enhance Breastfeeding?

- Admission to NICU and necessity for intubation affects decisions to breastfeed (Jaeger *et al*, 1997).
- Those who chose to breastfeed often have difficulty establishing expression and sufficient supply during period of intubation and tube feeding (Furman and Kennell, 2000).



Why Kangaroo Care to Enhance Breastfeeding?

- Infants who routinely have the opportunity to KC with their mothers have increased success with breastfeeding
 - These infants are more likely to exclusively breastfeed
- Mothers who are able to provide KC regularly
 - Produce larger quantities of Breast milk
 - Better able to produce a continuous supply of expressed breast milk

Advantages of Kangaroo Care to breastfeeding

- Stimulates endocrine pathway and enhances flow of milk (Bier, 1997; Whitlaw *et al*, 1998).
- Reduces harmful anxiety and stress emotions (Whitlaw *et al*, 1998).
- Promotes family centred care and breaks down barriers to expression of milk (Jaeger *et al*, 1999).

Parental benefits of Kangaroo Care

- Reduction in stress and anxiety improves parents perception of the infants' admission to NICU and subsequent ventilation
- Reduces feelings of inadequacy, anxiety and frustration experienced by fathers (
- Facilitates closeness and bonding

Kangaroo Care and the Intensive Care Infant

- Decision to 'Kangaroo' infants generally left to individual nurses clinical judgment (Cooper et al 2014)
- An educational program for parents and staff increases KC



Who Should KC

- Eligible Infants
 - Clinically stable infants
 - Intubated infants with stable respiratory status
 - Infants with CVLs &/or PICCs
- Excluded Infants
 - Unstable infants
 - Infants with chest tubes
 - Infants on vasopressors
 - Infants with radial art lines

Equipment

- A comfortable chair that if possible reclines and has arms
- Front opening shirt or patient gown
- Optional
 - Infant blanket and hat for thermoregulation
 - Footstool
 - Pillows
 - Privacy Screen
 - Viewing mirror



Procedure for KC

- If it is questionable if the infant should KC consult the health care team.
- Review any education with the parents or designated support person
- Discuss the length of a KC session before beginning.
 - 60 minutes is the minimum recommended
 - 2 hours is optimal

Procedure for KC (continued)

- Document the infant's baseline assessment
 - VS, respiratory support, neurobehavioral stability.
- Assemble any equipment needed
- Prepare the parents and infant
 - Diaper the infant, secure lines as needed
 - Keep monitors on at all time

Procedure for KC (continued)

- Have second and third person available to assist if needed
- Gently transfer the infant to parent bare chest, by sitting or standing technique.
 - Standing technique is preferred for intubated infant
 - I included a slide for the technique.
 - Sitting technique- if the infant is in a hybrid bed, lower the bed to chair height and transfer across

Procedure for KC (continued)

- Place the infant prone and upright on the parent's chest.
- Have the parent support the infant's back and buttocks with infant's extremities flexed.
- Cover the infant with a folded receiving blanket and then with parent's shirt or gown

Procedure for KC (continued)

- A staff member should remain near the bedside during KC especially during first few times.
- Ask a second nurse to assist with securing tubing, positioning footstool and mirror, and adjusting chair as needed.
- Continue to evaluate infant's vital signs and stability.

Procedure for KC (continued)

- Duration of KC should be individualized to the infant and family needs.
- Once returned to bed document vital signs and tolerance to KC.
- Encourage lactating moms to pump after KC.

Procedure for Standing Transfer as Published in Advances for Neonatal Care

Safe protocol for kangaroo care with mechanically ventilated infants (KC-Vent)

Kangaroo care is skin-to-skin contact between a preterm infant and a parent, usually mother, chest-to-chest in an upright prone position. The infant is clad in a diaper and has a receiving blanket covering the infant's back. The optimal chair for experiencing kangaroo care is a recliner. Mechanically ventilated infants are intubated or receiving nasal CPAP or oropharyngeal CPAP via a ventilator. The physician will be contacted for approval to kangaroo the infant and confirmation of infant's haemodynamic stability.

Prior to transfer

1. Record infant's baseline ventilator parameters (SDMV/IMV, PIP, PEEP, FiO₂) and haemodynamic (HR, RR, SaO₂) and thermal values (axillary temperature). These measures should be carefully monitored during KC-Vent to ascertain the infant's tolerance of this intervention.
2. With support of a second person, place the infant in supine position. Note any significant changes in the infant or mechanical ventilator requirements.
3. Auscultate the infant's chest for quality of breath sounds, suction the endotracheal tube, and change the infant's diaper as necessary.
4. Suction infant if necessary and drain the vent circuit of condensation. The water condensed in the ventilator tubing will be drained to decrease resistance and maintain flow (Blutani & Abou, 1992).
5. Assess infant's response to the above actions. Wait up to 15 minutes to allow for physiological adaptation to the above ministrations. Adaptation is defined as all physiological parameters returning to baseline and staying there for three minutes. If adaptation has not occurred in 15 minutes, the infant is probably not stable enough to receive KC-Vent on that day.
6. Place a receiving blanket, folded in fourths, underneath the infant (or in the bed but easily accessible to the mother) so mother picks up her infant by placing her hands underneath the blanket and moving infant and blanket simultaneously.
7. Position and prepare the chair to be used.

Transfer from incubator to KC-Vent

1. Have two or three staff members assist the mother in the transfer of the infant.
2. Have mother stand at the side of the incubator/warmer while one staff member gathers all the infant's lines on one side of the infant.
3. A second staff member is responsible for transferring and securing the ventilator tubing. (A third staff member may be needed to assist the mother.)
4. Disconnect the ventilator tubing from the ETT and have mother lift her infant and place prone on her chest in one movement.
5. Reconnect the ventilator tubing and have mother or staff member quickly secure the receiving blanket across the infant's back (if not already placed when mother picks up her infant as instructed in step 6 above).
6. Disconnect the ventilator tubing and move mother backwards to recliner/chair, assisting her in sitting once she feels the recliner against her calf. Reconnect ventilator tubing to ETT.
7. Raise the footrest and reposition the infant, as needed, and make sure the infant is tucked in a slightly flexed or comfortable position underneath the blanket. If infant is in fully flexed position, monitor for respiratory compromise and reflux.
8. Drape the ETT circuit securely over the mother's shoulder (be sure adequate circuit tubing length has been provided).
9. Change the setting on the incubator/warmer to air control and set it at 33.0°C for duration of KC-Vent.
10. Monitor the infant's condition every 10 minutes during KC-Vent. Allow KC-Vent for a minimum of one full hour if infant's condition remains stable.

Transfer from KC-Vent back to the incubator

1. Have one staff member assist the mother in moving to the front edge of the chair, a second staff member bundle the lines, and a third staff member disconnect the ventilator tubing.
2. Assist the mother to a standing position, reconnect the ventilator tubing, and give the infant several ventilator breaths.
3. Disconnect the ventilator tubing and replace the infant in the incubator/warming table in one movement.
4. Reconnect the ventilator tubing and make sure all ventilator tubing is stabilized and all lines are placed securely within the incubator/warming table.
5. Document infant's participation in and tolerance of KC-Vent.

Blutani, V., Abou, S. Evaluation of pulmonary function in the neonate. In: Pólv & Fox (Eds.), *Fetal and Neonatal Physiology* 1992; 2: 453-71. Philadelphia: W B Saunders.

FIGURE 2 Proposed protocol reproduced with permission from Cudington-Hoe, et al. Safe criteria and procedure for kangaroo care with intubated preterm infants. *JOGNW* 2003; 32(5): 579-86.

THE KANGAROO-A-THON

- Hosted by the NICU Developmental Committee
- Held for 7 days to include National Kangaroo day

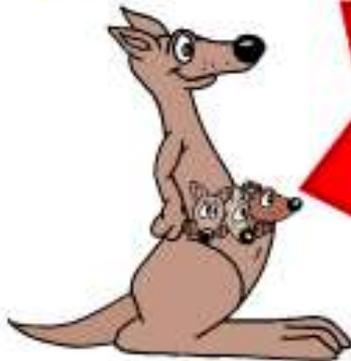
Inform/Educate staff



Kangaroo-a-Thon:

Celebrating the Power of Parents
Closeness
& Touch

June 6th ~15th



Kickoff event:

Tues: May 27th

2-4pm

Fri: May 30th

8-11pm

Lg conf room

Come and learn
about specifics
of kangaroo-a-
thon and how
you can win a
prize basket
while having a
light snack and
refreshment!!

Help parents to
provide
meaningful/
healing touch
as often as
possible. Prize
baskets for
families and
staff!

Inform/Educate Parents

1st annual Kangaroo-a-Thon



Benefits of Kangaroo holding for Parents:

- ◆ Decrease stress & anxiety
- ◆ Increase attachment
- ◆ Increase confidence of parents to care for their baby
- ◆ Increase milk supply

Kick off:
Tonight 8-11pm
Lg conf room
Parents invited to
come and learn
about this event
and enjoy a light
snack

Benefits of Kangaroo holding for Infants:

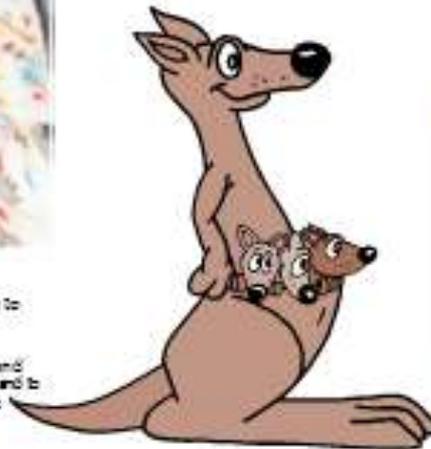
- ◆ Stabilizes heart rate
- ◆ Increases oxygen absorption
- ◆ Allows for deeper, uninterrupted sleep
- ◆ Decreases Stress
- ◆ Decreases Infection

What is Kangaroo Holding?

- > Holding your baby clad only in a diaper, skin to skin on your bare chest.

Why should I do this?

- > To help your baby regulate their breathing and heart rate, to increase your baby's comfort and to provide him with smells and sounds that are familiar to him.



Advertise!



Kangaroo-a-Thon 2016: Celebrating the *Power* of the Parent

Prize baskets:
1-most hours kangaroo'd
1-random draw



❖ All families are encouraged to participate. If your baby can not be held skin to skin, please talk to the nurse about hand swaddling

❖ Your presence and loving touch is vital to your baby

Keep track & show progress!

Name: _____

Date: _____ Pod# _____ Nuzzle _____

Start time _____ End time _____

Nurse _____ RT _____



Celebrate!

Total # of babies kangaroo'd:
L3-19
L2-18

The Kangaroo-a-thon is officially over and the numbers are in!

Total # of nurses that participated:
L3-48
L2-19

Total # of RT's that participated:
19

TOTAL # OF KANGAROO hours:
L3-250.75
L2-90.25



Total # of kangaroo episodes:
L3-108
L2-50

Recognition!



Family Basket Contents:

- Signed copy of: In Search of the Hidden Clover-Kangaroo Island
- 30 min chair massage voucher
- Free appetizer at Brio
- Hand sanitizer
- TY Kangaroo
- \$10 Maggiano's gift certificate
- 2 Regal Cinema Tickets
- Refillable mug
- Beautiful Basket

Congratulations to the following families for their commitment to skin to skin holding!

L3 winner [redacted] (40 hours)

L2 winner [redacted] (30 hours)

Random drawing:

L3- [redacted] L2- [redacted]

Staff Basket Contents:

- In Search of the Hidden Clover-Escando Island
- \$25 gift certificate to Copper Canyon Grille
- 30 minute chair massage voucher
- Pens/Socks/2 tubing holders for kangaroo'ing
- Bath & Body Works Candle
- Free appetizer at Brio
- WPH Badge pull
- \$5 Loris gift card
- Refillable mug
- 2 Regal Cinema tickets

Congratulations to the staff basket winners!

L3 Nurse- [redacted]

L2 Nurse- [redacted]

RT- [redacted]



FPQC: M.O.M PROJECT

Breastfeeding and Kangaroo Care Initiatives

April 6, 2017

Maureen Pahl, BSN, IBCLC

South Miami Hospital



NICU

62 bed NICU:

15 private/semi-private Level III rooms

24 private Level II rooms

23 ward style Level II beds



South Miami Hospital Distinctions

- U.S. News & World Report 2013-2014 Best Hospital Ranking
- 100 Best Companies to Work For
- World's Most Ethical Companies
- The Joint Commission Gold seal for Pre-Term Labor and Prematurity
- Leapfrog National Patient Safety Scorecard
- Health Stream Excellence Award
- Best of the Best Places to Give Birth
- Best Companies for working mothers
- Outstanding Patient Experience Award
- Kid's Crown Awards
- Magnet since 2004



Disease Specific Certification Program Prematurity

Infants who were born at 32 weeks gestation or less & their families.

Program Goal:

To provide a multidisciplinary approach focused on improving the outcomes of our premature babies and the care that we deliver.



Prematurity Program Objectives

1. Implementing and planning, *systematic methods* for evaluating and *improving the quality* and appropriateness of patient care, treatment and services provided.
2. Continue adoption of *evidence-based practice* to improve healthcare outcomes .
3. Provide and use *outcomes data* to improve clinical processes and implement changes and monitor results.
4. Provide *education and training* for staff related to PI activities, processes and methodology, patient safety activities, error and human factor analysis.
5. Facilitate the development of *teamwork*, a customer focused environment and a culture of *continuous improvement*.
6. Employ an *interdisciplinary, collaborative approach* to PI activities.

TRIM Process

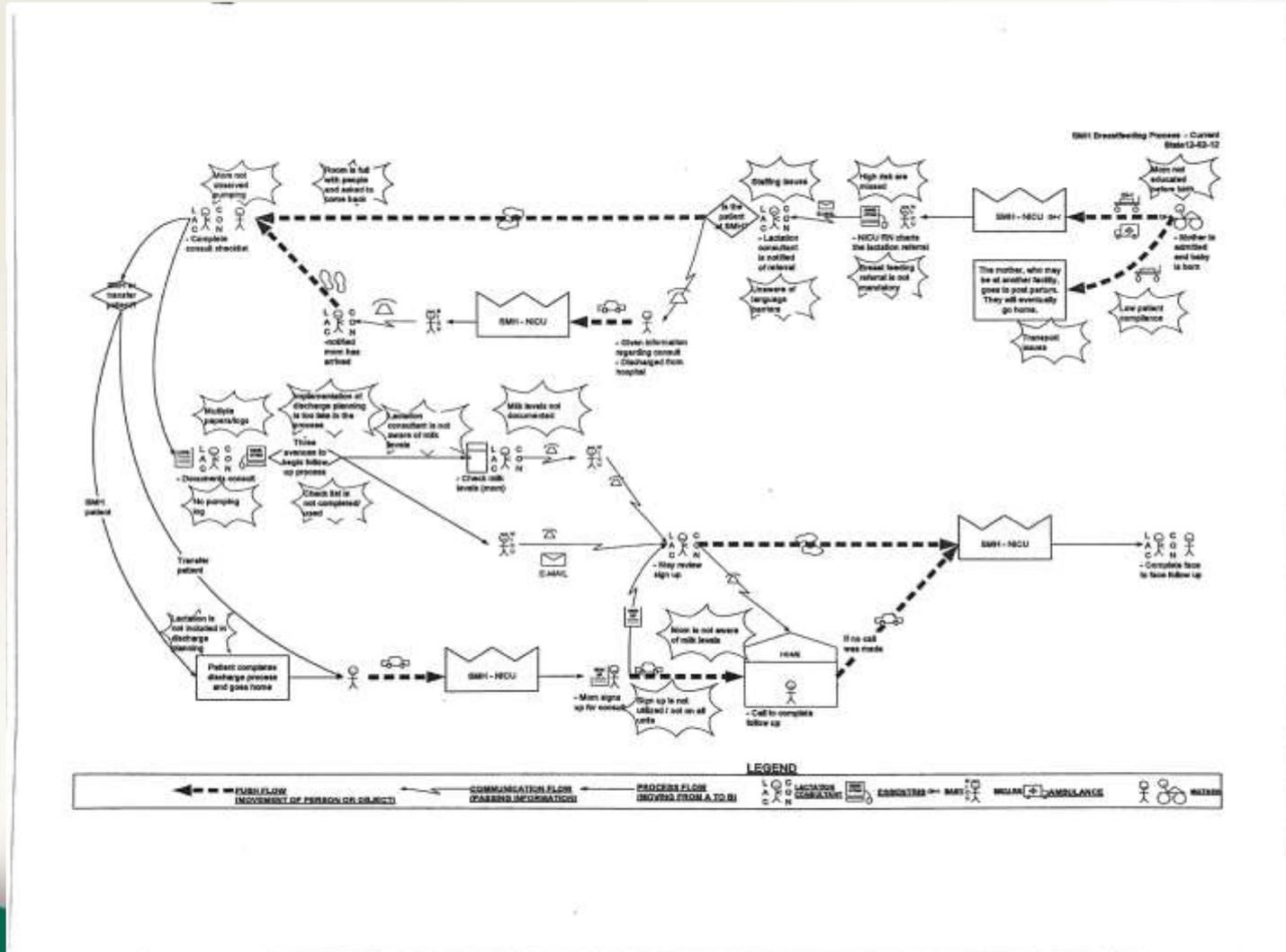
Tteams

Refocus

Imagine

Measure

TRIM



Kangaroo Care

Rationale:

Kangaroo Care is a relatively **simple**, inexpensive **intervention** that has been shown to **improve the process of lactation** in the newborn period overall. It has further been shown to **promote physiologic stability, enhance bonding** and accelerate brain maturation in this patient population.

Goal:

To **increase the incidence of kangaroo care** by 50% for our preterm infants. This goal was met for over 6 months.

–Increased target up to **80% in September of 2014**.

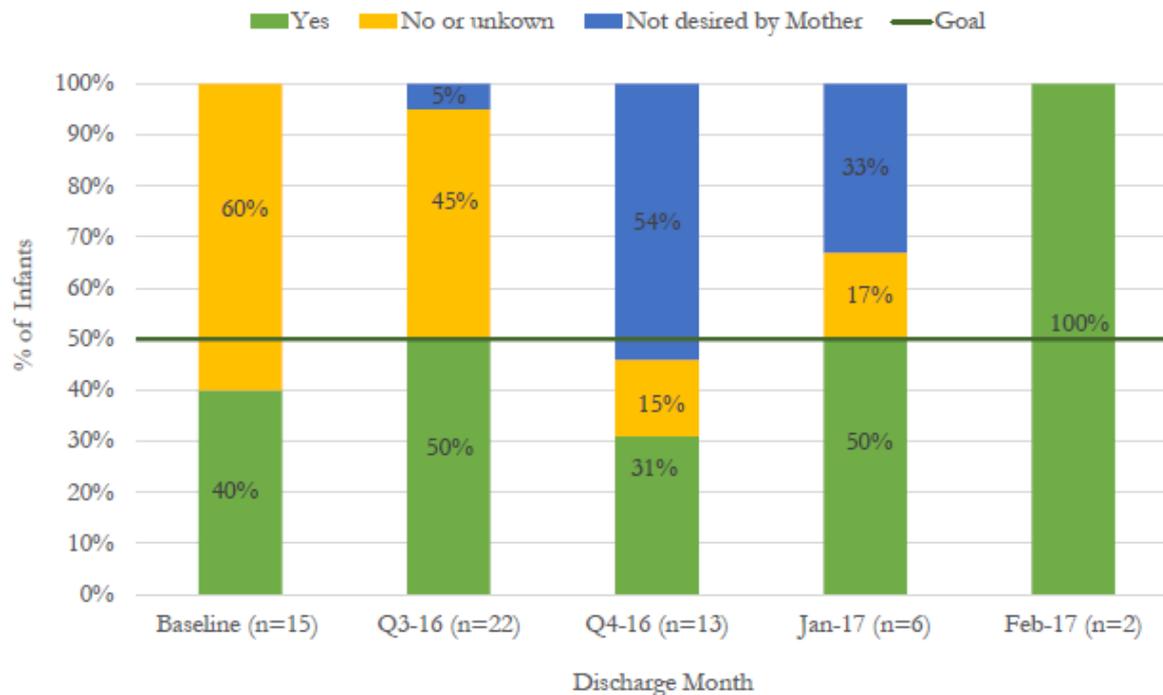


Kangaroo Care Challenges

- Prematurity patients with:
 - central lines
 - on humidity
- Physician support
- Novice nurses
- Private rooms

Current Data Report

Fig 8. Skin-to-skin care documented at ≤ 10 DOL



“Heart to Heart”



Prematurity Day



Kangaroo Care Day



Kangaroo Care Day



Kangaroo Brochure

WHAT IS KANGAROO CARE?

It's directly holding the baby against the parent's skin while baby is only wearing a diaper

WHAT ARE THE BENEFITS OF KANGAROO CARE?

- Stabilizes baby temperature
- Promotes closeness and familiarity
- Promotes stability of vital signs
- Increase in milk production
- Provides calmness
- Increases weight gain
- Improves sleep organization
- Accelerates brain maturation

WHO CAN KANGAROO?

Mom and Dad can both provide kangaroo care for those babies who are stable.

For some very preterm infants, the first 3 days are not ideal.

Stable includes no deterioration of condition within 24hrs before Kangaroo care. Your baby's nurse will let you know if Kangaroo care is possible.

Please be patient. We have your baby's best interest in mind.

HOW DO YOU KANGAROO?



PREPARATION FOR KANGAROO CARE

- Be prepared to Kangaroo with your baby for a minimum of one hour
- Wear loose fitted clothing that open in the front (button/zipper) or a tube top. Moms remove bra prior to Kangaroo care.
- Please refrain from using scented lotions and perfumes and smoking.
- We will provide for you privacy and comfort to the best of our abilities.
- **ENJOY THIS UNIQUE AND WONDERFUL EXPERIENCE**

Questions??





Partnering to Improve Health Care Quality
for Mothers and Babies

DISCUSSION AND Q&A

If you have a question, please enter it in the Question box or Raise your hand to be un-muted.

We can only unmute you if you have dialed your Audio PIN (shown on the GoToWebinar side bar).



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Questions?

Technical Assistance:

FPQC@HEALTH.USF.EDU