

Maximizing Breastfeeding Outcomes in the Outpatient Setting

Satellite Conference and Live Webcast
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Faculty

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Part 3

Foundations for Excellence for In-Hospital Care

Objectives

- Identify the essential elements of in - hospital care of the breastfeeding dyad and the physician's role in supporting this care

In-hospital Care

- Importance of exclusive breastmilk feeding
 - Many healthcare providers and mothers do not understand that exclusive breastfeeding in the hospital supports duration of breastfeeding for both exclusive breastfeeding moms and those that choose combo feedings

Skin - To - Skin Care

Evidence Based Practices

- “Maternal infant separation is the most important barrier to breastfeeding in the developed world”
 - Nils Berman, 2005

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Skin - To - Skin Care

- Defined as the most important post birth strategy central to initiating breastfeeding
 - Immediately after birth
 - Throughout the hospital stay
 - For the next few days / weeks

That Important First Hour

- | | |
|---|--|
| <ul style="list-style-type: none"> • Infant <ul style="list-style-type: none"> – Born in a quiet alert state (Birth – 2 hours) – Makes eye contact easily – Recognizes voices – Cries very little when held skin to skin – Able to find nipples by smell and vision – Licks and smacks when ready to eat – Many times can latch-on unaided | <ul style="list-style-type: none"> • Mother <ul style="list-style-type: none"> – Eager to see and hold baby (skin to skin) – Thermo regulates to meet babies needs <ul style="list-style-type: none"> • NRP guidelines – Oxytocin levels rise and decrease pain – Maintains her connection to the baby |
|---|--|

Guidelines for Perinatal Care

- Newborns who do not require resuscitation should be identified by rapid assessment of three characteristics
 - Is the baby full term (36⁶ or more)?
 - Is the baby breathing with a regular rhythm or crying?
 - Does the baby have good muscle tone?

Guidelines for Perinatal Care

- If the answer to these questions are "yes"
 - The baby does not need resuscitation and should remain with the mother
 - Baby dried
 - Placed skin - to - skin

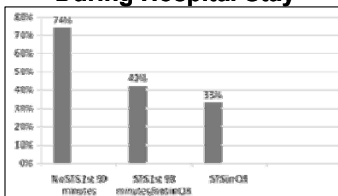
Guidelines for Perinatal Care

- Covered with dry linen to maintain temperature
- Observation of breathing, activity, and color should be ongoing

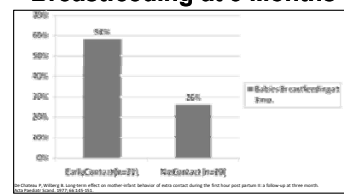
CDC mPINC Survey 2013

- Only 62% of babies (vag) in AL experience immediate STS care for at least 30 minutes in the 1st hour following delivery
- For C / S births 51%

Impact on Supplementation: Percent Supplemented During Hospital Stay



Impact on Duration Percent of Babies Breastfeeding at 3 Months



Rooming - In

Rooming In

- Encourage mother to keep her baby with her, even at night
- Perform routine procedures and examination of the infant in the mother's room
 - Only 47% of babies in Alabama room - in with mother during their hospital stay

Barriers to Rooming - In

- Concerns that moms are tired
- Taking the baby to nursery for procedures
- Belief that newborns need to be observed
- Staff feels uncomfortable assisting mom with infant care
- Mothers ask for their infants to be taken to the nursery

Cochran Review

- Did not find a study that addressed the impact of rooming - in alone on duration
- Did review study that supports the impact of 6 Baby Friendly practices, including rooming - in, on duration
 - Compared mothers experiencing the 6 practices with mothers who had experienced none of the 6 practices

Impact on Duration

- Mothers who received care that included the 6 practices were 13 times more likely to be breastfeeding at 6 weeks than mothers that had not experienced the 6 practices
- Breastfeeding initiation within 1 hour of birth

Impact on Duration

- Giving only breast milk
- Rooming - in
- Breastfeeding on demand
- No pacifiers
- Fostering breastfeeding support groups

Impact on Supplementation

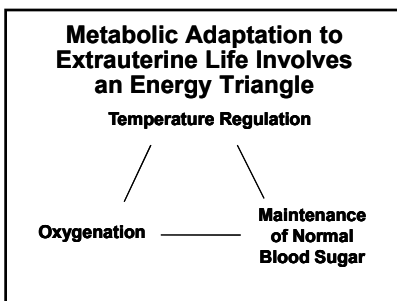
- Supplementation with formula occurs less often when mothers and infants room - in compared with when they do not
- Breastfeeding frequency is greater
 - 8 -12 times in 24 hours

8 - 12 Feedings Per Day

- Stabilizes neonatal serum glucose levels
- Helps to prevent pathologic engorgement
- Decreases initial infant weight loss and increases rate of weight gain
- Promotes earlier onset of mature milk production
- Decreases the incidence of jaundice
- Increases the duration of breastfeeding

Hypoglycemia and Breastfeeding

*Full - term and Late Preterm infants



Evidence Based Best Practices

- Labor and Delivery
 - Discuss STS care with the mother pre - delivery and describe the process
 - For ALL infants, not just breastfeeding infants!
 - Dry infant
 - Place next to mother's skin

Evidence Based Best Practices

- Put on cap and cover with warm blanket
- STS can be done after non-emergent C-sections
- Rationale: Helps to prevent hypothermia and hypoglycemia
 - Also helps to stabilize respiratory effort

Evidence Based Best Practices

- Labor and Delivery
 - STS
 - AAP encourages the revision or discontinuation of hospital policies that interfere with early STS contact

Evidence Based Best Practices

- 7th edition of Guidelines for Perinatal Care state that “Newborns that do not require resuscitation should be identified by three characteristics (full-term, breathing with regular rhythm or crying, good muscle tone) and should remain with the mother STS”

Evidence Based Best Practices

- Infant should not be removed for bathing, weighing, examinations, or medications (WHO guidelines)
- Rationale: Immediate bathing of the infant may disrupt initial breastfeeding behavior

Best Practice

- Facilitate first feeding within the first hour following delivery



Best Practice

- Early initial feeding opportunity
 - Infants placed immediately STS tend to find their mother’s breast and spontaneously begin breastfeeding within the first hour

Best Practice

- Infants appear to have a heightened sense of olfactory learning in the first hour after birth and will naturally seek mom’s breast by smell (especially if there is amniotic fluid there)
- Immediate STS is associated with longer duration of breastfeeding

Best Practices

- Early initial feeding
 - Infant remains in direct STS contact with mother until the first feeding spontaneously occurs
 - Delay in 1st feeding is associated with breastfeeding difficulties
 - STS contact in the first three hours following birth is associated with improved exclusive breastfeeding rates in the hospital

Best Practice

- Routine procedures performed STS
 - Requires making breastfeeding the priority, not weighing, measuring, bathing, and “routine” observations such as first physical assessment
 - Perform APGAR assessments and other procedures with may be painful (heel-sticks, medication administration) while mother and baby are STS or breastfeeding

Best Practice

- STS contact and breastfeeding are analgesic to the newborn

Medical Management

- AAP Committee on Fetus and Newborn, Postnatal glucose homeostasis in late-preterm and term infants. *Pediatrics* 2011;127:575-579.
 - Which infants to screen
 - When to screen
 - Laboratory data
 - Clinical signs
 - Management

Medical Management

- ABM Clinical Protocol #1: Guidelines for blood glucose monitoring and treatment of hypoglycemia in term and late-preterm neonates, revised 2014. *Breastfeeding Medicine* 2014;9(4):173-179.
 - General management recommendations

Medical Management

- Supporting the mother
 - Assure mother if supplementation is needed, it is usually temporary
 - Have her pump or hand express for supplementation
 - Provide mother with the means for breast stimulation if needed

Medical Management

- “Skin - to - skin is easily accomplished with an IV line in place and may lessen the trauma of intervention, while also providing physiologic thermoregulation, thus contributing to metabolic homeostasis”

Medical Management

- Stanford University
 - Within the first 4 hours of life:
 - Any glucose level less than 40 mg / dL in a baby with symptoms requires immediate IV fluid therapy

Medical Management

- In an asymptomatic baby, an initial glucose level (within the first 4 hours of life) of less than 25 mg/dL should prompt an immediate feeding with another glucose check in an hour
 - If the subsequent test is still < 25 mg/dL, immediate IV fluid therapy is indicated

Medical Management

- If the subsequent test is > 25 but < 40 mg/dL, the infant should again be fed and retested, although IV fluid therapy may be indicated for some patients in this group
 - Between 4 - 24 hours of life:

Medical Management

- Any glucose level less than 40 mg/dL in a baby with symptoms requires immediate IV fluid therapy
 - In an asymptomatic baby, a glucose level of less than 35 mg/dL should prompt an immediate feeding with another glucose check in an hour

Medical Management

- If the subsequent test is still < 35 mg / dL, immediate IV fluid therapy is indicated
 - If the subsequent test is > 35 but < 45 mg / dL, the infant should again be fed and retested, although IV fluid therapy may be indicated for some patients in this group

Hyperbilirubinemia

Medical Management

- American Academy of Pediatrics Subcommittee on Hyperbilirubinemia. Management of hyperbilirubinemia in the newborn infant 35 or more weeks of gestation. Pediatrics. 2004 Jul;114(1):297-316.

Medical Management

- Academy of Breastfeeding Medicine Protocol Committee. ABM clinical protocol #22: Guidelines for management of jaundice in the breastfeeding infant equal to or greater than 35 weeks' gestation. Breastfeed Med. 2010;5(2):87-93.

Biologic Basis for Jaundice in the Newborn

- Physiologic hyperbilirubinemia of the newborn
- Pathologic jaundice
- Breastmilk jaundice
- Starvation jaundice
- Interaction of starvation jaundice and breastmilk jaundice

Breastmilk Jaundice

- 2 / 3 or more breastfed infants will have unconjugated hyperbilirubinemia that extends to the 2 - 3 weeks of life (up to 8 - 10)
 - May appear to be slightly jaundiced in the 2nd and later weeks of life
 - Mechanism is unknown

Breastmilk Jaundice

- Over time, the jaundice and elevated serum unconjugated bilirubin decline to normal adult values even while breastfeeding continues (rate of decline varies infant to infant)

Starvation Jaundice

- “It is important to realize that not all breastfed infants will receive optimal milk intake during the first few days of life”
- 10 - 18% of U.S. newborns lose more than 10% of birth weight
- In newborns ↑ billi can result from reduced caloric intake below optimal intake for age

Starvation Jaundice

- Most often seen in first week of life, can be seen later
- *ABM clinical protocol #22: Guidelines for management of jaundice in the breastfeeding infant equal to or greater than 35 weeks' gestation

Interaction of Starvation Jaundice and Breastmilk Jaundice

- Poor breastfeeding with inadequate caloric intake during the 1st days of life increases intestinal bilirubin absorption because of relative starvation
- If breastmilk jaundice appears when the mature milk comes in the two in combination can result in late exaggerated bilirubin concentration in normal newborns

Interaction of Starvation Jaundice and Breastmilk Jaundice
 – Rule out pathologic jaundice

Management

- Not all exaggerations of unconjugated hyperbilirubinemia in breastfeeding infants can be prevented
 - Close follow - up of the breastfeeding neonate to assess weight loss/gain in the 1st month is key

Management

- Management guidelines have been developed to provide guidance in preventative measures

Supplement vs. Address Management

- CDC mPINC survey results for the U.S. and for Alabama indicate management of the newborn may be a factor in the development of starvation jaundice

CDC mPINC Survey

- Survey conducted by the CDC to provide participating hospitals with an evaluation of their maternity care
 - Evaluation is provided by way of an overall quality score that ranges from 0 – 100
 - In 2013 response rate was 83% of delivering hospital in the U.S.

CDC mPINC Survey

- U.S. overall scored 75 (C care)
- Alabama scored 67 (F care)

Recommended Breastfeeding Management

- Early initiation of breastfeeding
- Education on early feeding cues
 - Lip smacking
 - Hand movements towards mouth
 - Restlessness
 - Vocalizing

Recommended Breastfeeding Management

- Exclusive breastfeeding should be encouraged
 - When supplementation is necessary, the preferred supplements in order of preference
 - Expressed breastmilk
 - Banked donor milk
 - Formula (in that order of preference)

When Supplementation is Necessary

- Three rules:
 - Feed the baby
 - Facilitate return to full direct breastfeeding
 - Protect mother's milk supply

Feed the Baby

- Insure adequate intake of calories
 - Lactation consult / assessment of feeding effectiveness and milk supply
- If inadequate, supplement with the amount needed for adequate intake

Facilitate Return to Full Direct Breastfeeding

- Avoid the use of nipples and pacifiers when possible
 - May have difficulty returning to the breast
 - Prefer bottle nipple / pacifier
- Trained provider teach and follow-up on alternative feeding methods

Facilitate Return to Full Direct Breastfeeding

- Supplemental nursing system
- Cup feeding

Protect Mother's Milk Supply

- Whenever a mother is supplementing
 - Milk should be expressed each time
- Pumping and / or feeding should equal to at least 8 times a day
- Pump for 10-15 minutes


Protect Mother's Milk Supply

- Pump should be a good quality pump that cycles at least 60 - 80 times per minute
- As milk is coming in hand expression should follow each hands on pumping session

Post-treatment Follow-up

- Carefully followed with breastfeeding support
 - Insure adequate intake after infant returns to full direct breastfeeding
- Evaluate for milk exchange and milk production by a trained provider whenever possible

TJC Perinatal Core Measure Set

- PC - 01 Elective Delivery (before 39 completed weeks of gestation)
- PC - 02 Cesarean Section (for first - time, low-risk, singleton, vertex women)
- PC - 03 Antenatal Steroids 
- PC - 04 Health Care - Associated Bloodstream Infections in newborns

TJC Perinatal Core Measure Set

- PC - 05 Exclusive Breast Milk Feeding
 - PC - 05a Exclusive Breast Milk Feeding Considering Mother's Choice

Supplementation

What Do We Know?

- 50% of breastfeeding babies have been given formula by 6 weeks
- Some mothers enter breastfeeding with a goal of exclusively breast milk feeding for 3 months or more
 - 2 / 3 of those mothers do not reach their goal

TJC 2012 Report

- TJC reported that our in-hospital supplementation rate is much higher than previously thought
 - 2011 rate of supplementation was 53.8% (all babies)
- If we cannot get past the first 2 - 3 days of hospitalization without supplementation, what hope is there of reaching 6 months?

Who is Held Accountable?

- The Joint Commission
 - Hospitals delivering more than 1,100 babies per year are required to adopt PC Core Measure Set
 - TJC adopted Exclusive Breast milk Feeding as one of the five accountability measures that these hospitals must report on

Supplementation of Breastfeeding Infant

- Academy of Breastfeeding Medicine Protocol Committee. ABM clinical protocol #3: hospital guidelines for the use of supplementary feedings in the healthy term breastfed neonate, revised 2009. Breastfeed Med. 2009 Sep;4(3):175-82.

Supplementation

- Formula supplementation of health newborn infants in the hospital is commonplace, despite widespread recommendations to the contrary

Supplementation

- “Given early opportunities to breastfeed, breastfeeding assistance, and instruction, the vast majority of mothers and babies will successfully establish breastfeeding.”
 - May take 24 hours / appropriate intervention

Supplementation is Not Indicated for

- The sleepy infant with fewer than eight to 12 feedings in the first 24-48 hours with less than 7% weight loss and no signs of illness
- The healthy, term, AGA infant with a bilirubin level less than 18 after 72 hours of age when the baby is feeding well and stooling adequately and weight loss is less than 7%

Supplementation is Not Indicated for

- The fussy / cluster feeding infant
- The tired of sleepy mother

Possible Indication for Supplementation

- Hypoglycemia
- Clinical and laboratory evidence of significant dehydration that is not improved after skilled assessment and proper management of breastfeeding
 - Weight loss > 10%, poor feeding, high sodium

Possible Indication for Supplementation

- Weight loss 8 – 10% with delayed lactogenesis II (5 days or later)
- Delayed bowel movements or continued meconium stools on day 5

Possible Indication for Supplementation

- Insufficient intake despite adequate milk supply as evaluated by pre / post feeding weights
- Hyperbilirubinemia
- Delayed Lactogenesis II (day 3 - 5 or later) and inadequate intake by infant
- Breast pathology or prior surgery resulting in poor milk intake

Possible Indication for Supplementation

- Intolerable pain during feedings unrelieved by interventions
- Late Preterm Infant with poor feedings after the first 12 hours of life

Volume

- First 24 hours
 - Pumped or hand expressed breast milk
 - 5 - 10 cc's per feeding
 - 5 cc's is about two teaspoon
 - Supplements
 - Banked donor breast milk

Volume

- Elemental formulas
- Formula
- Water (in small quantities)

Volume

- Second 24 hours
 - Pumped or hand expressed breast milk
 - 10 - 15 cc's per feeding
 - Supplements
 - Banked donor milk
 - Elemental formula
 - Formula

Volume

- Third 24 hours
 - Pumped breast milk
 - 15 - 30 cc's per feeding or to satiety
 - Supplements
 - Banked donor breast milk
 - Elemental formula
 - Formula

Method

- Cup
- Supplemental Nursing System / System
- Bottle

Preparing A Mother for Discharge

Preparing A Mother for Discharge

- Before discharge a mother should be able to:
 - Feed her baby
 - Understand the importance of exclusive breastfeeding
 - Recognize that feeding is going well
 - Know out how to get on - going assistance and support

Physician’s Role in Hospital Care

- Educate self and staff
- Educate patients
- Play an active / supportive role for the development of breastfeeding friendly policies in the hospital setting
- Support the use of pasteurized human donor milk in appropriate populations in the hospital setting

Pasteurized Human Donor Milk

- Quick Facts
 - Mothers who donate are not compensated in any way
 - They must have written approval from their Obstetrician and Pediatrician
 - They fill out extensive health histories

Pasteurized Human Donor Milk

- They submit a blood test
- They agree to certain lifestyle limitations such as caffeine intake, alcohol and pharmaceutical intake

Pasteurized Human Donor Milk

- Quick facts
 - The milk is pasteurized using the Holder method
 - This method kills HIV, HTLV, hepatitis B and C, CMV, and bacteria including syphilis
 - Immunologic properties unique to human milk are preserved

Pasteurized Human Donor Milk

- The macronutrients are unchanged by pasteurization
- The milk is tested after pasteurization to ensure safety