

The Can Do 5!:
Building Momentum Toward the
Baby-Friendly Hospital Initiative

Marianne Neifert, M.D., F.A.A.P.

Clinical Professor of Pediatrics
University of Colorado Denver School of Medicine
and

Breastfeeding Medical Consultant

Nourish Family Center

July 21 - 22, 2010

Learning Objectives

- State five supportive hospital maternity practices found to significantly extend breastfeeding duration among mothers of healthy, term infants in all socioeconomic groups.
- Identify effective strategies to implement supportive maternity practices, and empower expectant and new mothers to request hospital practices that promote breastfeeding success.
- Identify newborns at-risk for inadequate breastfeeding, and recommend strategies to maximize maternal milk production and infant breastmilk intake.

American Academy of Pediatrics
Feeding Recommendations for Healthy Term Infants

- Human milk is recommended for all infants, unless specifically contraindicated.
- Exclusive breastfeeding is recommended for about six months, when complementary foods rich in iron should be added.
- Breastfeeding should be continued for at least the first year of life, and beyond for as long as mutually desired. There is no upper limit to the duration of breastfeeding.

Pediatr. 115:496-506, 2005

**Healthy People 2010
Breastfeeding Goals for the Nation**

	<u>Target Goal</u>	<u>U.S. Rate (AZ)</u> Based on 2006 NIS Prelim. Data
Ever Breastfed	75%	73.9% (76.5%)
At 6 months	50%	43.4% (45.3%)
At 12 months	25%	22.7% (22.3%)
Exclusively thru 3 mos.	40%	33.1% (29.7%)
Exclusively thru 6 mos.	17%	13.6% (11.9%)

The Baby Friendly Hospital Initiative

- Launched in 1991 as a joint initiative of WHO and UNICEF to ensure that maternity facilities support and protect breastfeeding.
- Optimal breastfeeding maternity practices are summarized in the Ten Steps to Successful Breastfeeding.
- Over 20,000 facilities in > 150 countries have been awarded Baby-Friendly status (93 in the U.S.= 2.9% of all U.S. facilities).

**Baby Friendly Hospital Initiative
Ten Steps to Successful Breastfeeding**

1. Have a written breastfeeding policy that is routinely communicated to all health care staff.
2. Train all health care staff in the skills necessary to implement this policy.
3. Inform all pregnant women about the benefits and management of breastfeeding.

Baby Friendly Hospital Initiative
Ten Steps to Successful Breastfeeding

4. Help mothers initiate breastfeeding within one hour of birth.
5. Show mothers how to breastfeed, and how to maintain lactation even if they are separated from their infants.
6. Give newborn infants no food or drink other than breast milk, unless *medically* indicated. (*Formula used in hospitals should be purchased by the facility and not accepted free or promoted in any way.*)

Baby Friendly Hospital Initiative
Ten Steps to Successful Breastfeeding

7. Practice rooming-in.
8. Encourage breastfeeding on demand.
9. Give no artificial teats or pacifiers (also called dummies or soothers) to breastfeeding infants.
10. Foster the establishment of breastfeeding support groups and refer mothers to them on discharge from the hospital or clinic.

AAP Endorses the Ten Steps

From Aug. 25, 2009 letter from David T. Tayloe, Jr., M.D., AAP President, to WHO Dir. Gen. and UNICEF Exe. Dir.

- ...endorsing the *Ten Steps* will improve the care of mothers and infants in maternity facilities in the U.S. and will be particularly helpful in our national efforts to promote breastfeeding.
- Ensuring that the *Ten Steps* are in place is a vital step towards assuring that future pediatricians learn to care for breastfeeding families in a breastfeeding supportive environment.
- The AAP has put this endorsement into practice through its recent publication of the *Sample Hospital Breastfeeding Policy for Newborns*.

**Colorado PRAMS Survey 2002-2003
(Pregnancy Risk Assessment Monitoring System)**

- Colorado is one of 37 states that participates in the PRAMS (Pregnancy Risk Assessment Monitoring System) project, funded through the CDC. The PRAMS survey is a population-based risk factor surveillance system aimed at identifying and monitoring behaviors and experiences of women before, during and after pregnancy. Questions are tested for validity and reliability. Questions regarding hospital practices supportive of breastfeeding were added to the CO survey during 2002 and 2003.

Colorado PRAMS Survey 2002-2003

- The PRAMS questionnaire was mailed statewide in 2002 and 2003 to a random sample of Colorado mothers each month.
- Mothers completed the survey two to four months after giving birth.
- Telephone follow-up was conducted among women who did not return the survey by mail.
- 12% opted to complete the survey in Spanish.
- The response rate was at least 70% each year, and results were weighted to accurately reflect all Colorado mothers.

Hospital Breastfeeding Practices Questions

Hospital Breastfeeding Practice Questions, Colorado Pregnancy Risk Assessment Monitoring System (PRAMS) Survey, 2002-2003

This questionnaire asks about things that may have happened at the hospital where your new baby was born. For each item, circle Y (Yes) if it happened or circle N (No) if it did not happen.

	No	Yes
1. Hospital staff gave me information about breastfeeding.....	N	Y
2. My baby stayed in the same room with me at the hospital.....	N	Y
3. I breastfed my baby in the hospital.....	N	Y
4. I breastfed my baby in the first hour after my baby was born.....	N	Y
5. Hospital staff helped me learn how to breastfeed.....	N	Y
6. My baby was fed only breast milk at the hospital.....	N	Y
7. Hospital staff told me to breastfeed whenever my baby wanted.....	N	Y
8. The hospital gave me a gift pack with formula.....	N	Y
9. The hospital gave me a telephone number to call for help with breastfeeding.....	N	Y
10. My baby used a pacifier in the hospital.....	N	Y

Hospital Breastfeeding Practice Questions
PRAMS Survey 2002-2003

The relationship between mothers' experience of supportive hospital practices and their duration of breastfeeding was examined among mothers of full-term, healthy, singleton infants.

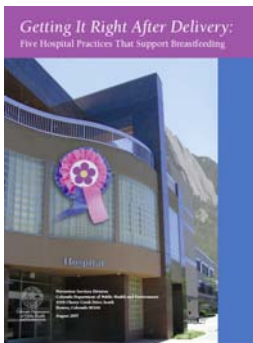
- No low-birth weight or premature infants
- No infants admitted to NICUs
- No multiples

Five Supportive Hospital Practices
Were Significantly Associated with
a Longer Duration of Breastfeeding

- Baby breastfed in first hour: 72%
- Baby stayed in mother's room: 93%
- Baby fed only breast milk: 46% 🙄
- No pacifier use in hospital: 46% 🙄
- Given phone number to call for help: 84%

The average number of practices reported was 2.8; median was 2.2.

2007 Published Findings



Getting It Right After Delivery
www.cdphe.state.co.us/ps/mch/gettingitright.pdf

Also in the Health A-Z index on the department's home page

Hospital Practices that Increase Breastfeeding Duration. *Birth* 34(3): 202-211, September 2007

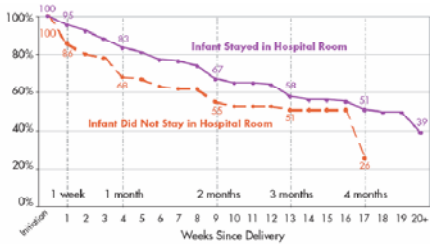
Authors:

Erin Murray, MSPH, RD
Jennifer Dellaport, RD, MPH
Sue Ricketts, MA, PhD

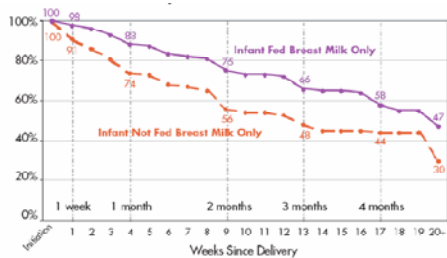
Colorado Breastfeeding Duration Rates
 Mothers of Healthy Breastfed Infants
 by **Breastfed in First Hour After Birth**, 2002-2003
 (graph prepared by CDPHE)



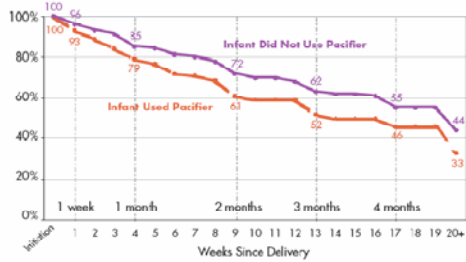
Colorado Breastfeeding Duration Rates
 Mothers of Healthy Breastfed Infants
 by **Infant Stayed in Hospital Room**, 2002-2003
 (graph prepared by CDPHE)



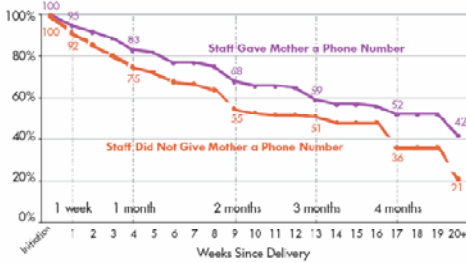
Colorado Breastfeeding Duration Rates
 Mothers of Healthy Breastfed Infants
 by **Infant Fed Breast Milk Only**, 2002-2003
 (graph prepared by CDPHE)



Colorado Breastfeeding Duration Rates
 Mothers of Healthy Breastfed Infants
 by **Infant Used Pacifier in Hospital**, 2002-2003
 (graph prepared by CDPHE)



Colorado Breastfeeding Duration Rates
 Mothers of Healthy Breastfed Infants
 by **Hospital Gave Phone Number**, 2002-2003
 (graph prepared by CDPHE)



Hospital Practices that
 Increase Breastfeeding Duration
Birth 34(3): 202-211, September 2007

All Five Supportive Hospital Practices

Only one if five mothers (18.7%) reported experiencing all five supportive breastfeeding practices. Two-thirds (68%) of mothers who experienced all five successful practices were still breastfeeding at 16 weeks, compared with half (53%) of those who did not.

**“We *Can Do* That!”
“The Can Do 5!”**

- Many hospital staff and administrators view the Baby-Friendly Ten Steps to Successful Breastfeeding as being daunting.
- Yet, even incremental changes in hospital practices can help promote long-term breastfeeding success.
- The “Can Do 5!” initiative represents a positive, highly doable step toward the Baby-Friendly ideal and generates positive momentum among hospital staff.

**Next Steps to Implement
the Study Findings**

- Widespread implementation of successful hospital practices could positively impact breastfeeding duration rates.
- Hospitals need to evaluate their current breastfeeding policies and take steps to implement the five supportive practices.
- Prenatal providers need to educate expectant mothers about the five supportive hospital practices and prepare families for an optimum hospital experience.

2008 COBFC Outreach to Hospitals

Steps Involved:

- Obtain a small grant from Colorado Physical Activity and Nutrition Program
- Contract with a Project Coordinator, Erin Murray, MSPH, RD
- Host 2 trainings for COBFC volunteer presenters
- Develop a hospital resource kit
- Offer technical assistance to hospitals

Contents of Hospital Resource Kit

- Letter from CMO of state health dept
- Copy of the Report, *Getting It Right After Delivery*
- Reproducible materials on a CD (e.g., PowerPoint presentation of report highlights)
- Two DVDs: *Troubleshooting Breastfeeding Problems* –Dr. Neifert-- and *From Bottles to Breasts to Baby Friendly*– Boston Medical Center
- Breastfeeding Self-Appraisal Questionnaire
- Samples of Model Hospital Breastfeeding Policies
- Additional supporting articles and educational resources

Outcomes of 2008 Hospital Outreach

- 8 volunteers presented to staff at 21 hospitals, primarily in Colorado's metropolitan areas (Front Range)
- Challenge getting administrators and providers to attend; met predominantly with lactation staff
- Consistently high positive feedback
- Learning curve (*Can Do 5!* slogan)
- Improvement (2002 to 2008) in PRAMS data responses

“Can Do 5!” Crib Cards

<p>I am a Breastfeeding Baby</p> <p>Breast milk ONLY please.</p> <p>Baby: _____ Mom: _____</p> <p>▼ No water or other liquids are needed ▼</p> <p>Birth Weight: _____ Date of Birth: _____ Time: _____</p> <p>Birth Length: _____ Gender: _____</p> <p><small>ESPANOL HAY MÁS EN BASTIDOS</small></p> <p>5 Tips for Breastfeeding Success!</p> <ol style="list-style-type: none"> 1. Breastfeed within the first hour. Ask your baby to nurse every 2-3 hours and night as well. 2. Allow the baby to suck. Allow your baby to nurse every 2-3 hours and night as well. 3. Breastfeed often, even 24 hours. Your milk supply will increase over time. 4. Avoid using pacifiers in the first month. Babies who use a pacifier may not nurse as often after three months of age. 5. Ask for a lactation consultant or call the help or support. All breastfeeding questions are welcome. Call your doctor or nurse. Ask your hospital staff for help. <p><small>Thank you for giving your baby a healthy start!</small></p> <p>Colorado WIC Program Colorado Crib 5! American Academy of Pediatrics</p>	<p>Soy un bebé alimentado con Leche Materna</p> <p>SOLAMENTE leche materna, por favor.</p> <p>Bebé: _____ Madre: _____</p> <p>▼ No necesita otros líquidos ni agua ▼</p> <p>Peso al nacer: _____ Fecha de nacimiento: _____ Hora: _____</p> <p>Longitud al nacer: _____ Género: _____</p> <p><small>ESPAÑOL Y MÁS EN BASTIDOS</small></p> <p>5 sugerencias para Amamantar Bien a un Bebé!</p> <ol style="list-style-type: none"> 1. Amamantar al bebé en los primeros 60 minutos. Pide que te ayude a iniciar. 2. Deja que el bebé succiona. Permite que el bebé succiona cada 2-3 horas y durante la noche. 3. Amamanta con frecuencia, incluso 24 horas. Tu leche aumentará con el tiempo. 4. Evita el uso de chupetes en el primer mes. Los bebés que usan chupetes pueden no amamantar tan a menudo. 5. Pide ayuda si tienes dudas. Pregunta a tu médico o enfermera. Pregunta a tu personal de salud. <p><small>¡Gracias por darle a su bebé la mejor forma de empezar su vida!</small></p> <p>Colorado WIC Program Colorado Crib 5! American Academy of Pediatrics</p>
---	--

5 Tips for Breastfeeding Success!

Breastfeed within the first hour. Ask to comfort your baby skin-to-skin soon after birth.

Room in with your baby. Keep your baby in your room all day and night so you can get to know and watch over your baby. This early time of practicing breastfeeding together is important.

Breastfeed often, every 1½ to 3 hours. Your milk provides everything your baby needs. No water or other liquids are needed.

Avoid using a pacifier in the first month. Babies who use a pacifier may not nurse as often. Offer your breast at the earliest sign of hunger to give your baby as much milk as possible.

Ask for a telephone number to call for help or support. All breastfeeding questions are important, especially after you go home! Have hospital staff write numbers to call here: Hospital _____ Doctor _____

Thank you for giving your baby a great start!



Colorado
WIC
Program

Colorado
Can Do 5!



2009 Outreach to Hospitals

- Built on lessons of previous year
- Applied for and awarded Tobacco Settlement funds
- Contracted with Marianne Neifert, MD
- Invitation sent from Colorado Department of Public Health and Environment to all hospitals not visited in 2008 to receive a presentation on the five supportive hospital practices
- Targeted diverse health professionals, including community partners (WIC, public health, Nurse Family Partnership nurses)

The **Can Do 5!** Best Practices Supportive of Breastfeeding

- 1) Infants are breastfed in the first hour after birth.
- 2) Infants stay in the same room as their mothers.
- 3) Infants are fed only breastmilk and receive no supplementation.
- 4) No pacifier is used.
- 5) Staff give mothers a phone number to call for help with breastfeeding.

American Academy of Pediatrics
Breastfeeding and the Use of Human Milk
Pediatr 2005; 115:496-506

Recommendations for Healthy Term Infants

Early Skin to Skin Contact

- Healthy infants should be placed and remain in direct skin-to-skin contact with their mothers immediately after birth until the first feeding is accomplished.
- Delay weighing, measuring, bathing, needlesticks, and eye prophylaxis until after the first feeding is completed. Except under unusual circumstances, the newborn infant should remain with the mother throughout recovery.

Early Skin-to-Skin Contact for Mothers
and Their Newborn Infants

- Early skin-to-skin contact (STS) involves placing the naked newborn prone on the mother's bare chest shortly after birth.
- Early mother-infant intimate contact may help infants develop a synchronous, reciprocal, interaction pattern.
- **Immediate STS contact has a positive effect on long-term breastfeeding in term dyads.**

Anderson, et al. *The Cochrane Database of Systematic Reviews*
2003, Issue 2.

Effect of Early Skin-to-Skin Mother-Infant
Contact During the First 3 Hours
Following Birth on Exclusive Breastfeeding
During the Maternity Hospital Stay

L. Bramson, et al. *J Hum Lact* 2010; 26(2):130-137

- Data was collected on 21,842 mothers who delivered a singleton term infant at 19 hospitals in San Bernardino and Riverside counties between July 2005 - July 2006.
- **Early skin-to-skin contact during the first three hours after birth was strongly associated with exclusive breastfeeding in the hospital in a dose-response manner.**

Early Skin-to-Skin Contact and Exclusive Breastfeeding in the Hospital
 L. Bramson, et al. *J Hum Lact* 2010; 26(2):130-137

- The study controlled for other factors known to impact breastfeeding duration, including intention to breastfeed, maternal socio-demographic data, and intrapartum variables.
- **The longer a mother experiences early skin-to-skin contact during the first 3 hours following birth, the more likely she will breastfeed exclusively during her maternity hospitalization.**
- Mother-infant skin-to-skin contact should occur as early, as often, and as long as possible during the entire postpartum stay.

Additional Benefits of Early STS Contact

- Babies who receive immediate skin-to-skin contact after birth, compared with control infants, slept longer, were mostly in quiet sleep state, exhibited more flexor movements and postures, and showed less extensor movements.
- In addition to promoting successful breastfeeding, **immediate skin-to-skin contact helps reduce the stress of birth, ease a baby's transition to life outside the uterus, and regulate the baby's nervous system responses.**

Ferber and Makhoul. *Pediatr* 2006;113:858-865.

Perceived Obstacles to Implementing the "Can Do 5!"

Early First Feeding and Immediate Skin-to-Skin

- Belief that it will take longer for the L & D nurse to complete her required postpartum checks.
- Concerns about delaying routine newborn procedures (Vitamin K, eye prophylaxis, bathing, weighing, etc.).
- Other family members present are eager to hold the newborn shortly after birth.
- Busy maternity services: "We need the delivery room for another patient."

**The *Can Do 5!* Best Practices
Supportive of Breastfeeding**

- 1) Infants are breastfed in the first hour after birth.
- 2) **Infants stay in the same room as their mothers.**
- 3) Infants are fed only breastmilk and receive no supplementation.
- 4) No pacifier is used.
- 5) Staff give mothers a phone number to call for help with breastfeeding.

American Academy of Pediatrics
Breastfeeding and the Use of Human Milk
Pediatr. 115:496-506, 2005

Recommendations for Healthy Term Infants
Rooming-In

Appropriate initiation of breastfeeding is facilitated by continuous rooming-in throughout the day and night.

**Maternal and Infant Benefits
of Continuous Rooming-In**

- Mothers and babies remain in close proximity—reassuring and comforting to both.
- Mothers learn to recognize infant feeding cues.
- Infants have frequent opportunities to learn to latch on and breastfeed effectively.
- Mothers get to know their babies and gain confidence in their ability to care for them.
- Family-centered care promotes family bonding and increases patient satisfaction.

Interruptions to Breastfeeding Dyads on Postpartum Day 1 in a University Hospital.

Morrison, Ludington-Hoe, Anderson. *JOGNN*, 35:709, 2006

- On PP day 1, the frequency and duration of interruptions (persons entering the room plus phone calls) from 8 a.m. to 8 p.m. were determined for 29 healthy mother-infant dyads intending to breastfeed.
- The number of episodes and length of time alone and the frequency and duration of breastfeeding sessions also were recorded.

Interruptions to Breastfeeding Dyads on Postpartum Day 1 in a University Hospital

JOGNN, 35:709, 2006

- A mean of 54 interruptions were recorded, each averaging 17 minutes long.
- Half of the 24 episodes of time alone per dyad were less than or equal to 9 minutes; most commonly only 1 minute long.
- Mothers had very little time alone to rest, breastfeed, or take care of themselves.
- Instituting "nap time," "quiet time," or "do not disturb time," may enhance breastfeeding opportunities for new mothers.

How Too Many Visitors Can Undermine Breastfeeding

- The presence of guests interferes with unrestricted breastfeeding. A mother may use a pacifier to postpone breastfeeding when guests are present.
- Lactation consultants find it difficult to spend one-on-one time instructing new mothers.
- Infants may "shut down" by sleeping or crying in response to excessive stimulation.
- Mothers who have become depleted due to "hosting" visitors may ask the nursing staff take over the care of their babies.

Perceived Obstacles to
Implementing the “Can Do 5!”

Baby Remains in the Mother’s Room

- Excessive visitors during the day leave mothers so depleted and exhausted that many feel unable to care for their babies at night.
- Some obstetricians advise exhausted new mothers to have their baby cared for in the nursery at night “so they can get more sleep.”
- Mothers may arrive at the hospital anticipating a “well-earned rest” and expecting that highly trained mother/baby nurses will be more than willing to assume nighttime baby care duties.

The **Can Do 5!** Best Practices
Supportive of Breastfeeding

- 1) Infants are breastfed in the first hour after birth.
- 2) Infants stay in the same room as their mothers.
- 3) Infants are fed only breastmilk and receive no supplementation.
- 4) No pacifier is used.
- 5) Staff give mothers a phone number to call for help with breastfeeding.

American Academy of Pediatrics
Breastfeeding and the Use of Human Milk
Pediatr. 115:496-506, 2005

Recommendations for Healthy Term Infants
Use of Supplements

Supplements should not be offered to breastfed newborns unless ordered by a physician for a medical indication.

Solids and Formula: Association with Pattern and Duration of Breastfeeding

Hornell, Hofvander, Kylberg. *Pediatr* 2001; 107(3): e38

- 506 Swedish mothers kept daily records of the number of breastfeeding episodes and when foods or fluids other than suckled breast milk were consumed by their infants.
- As soon as regular formula feeds were started, a sharp decrease occurred in the frequency of breastfeeding and the suckling duration. The younger the infant at the start of regular formula feeds, the shorter the duration of breastfeeding.

Guidelines for Supplementing Breastfed Newborns

- Don't hesitate to supplement when a **valid medical indication** exists.
- Use **expressed breastmilk** whenever possible.
- Consider **alternative methods** of feeding supplemental milk to breastfed infants.
- **Begin pumping** to protect the mother's milk supply and obtain expressed breastmilk.
- Offer **appropriate volumes** by age of infant.
- Correct underlying **breastfeeding problems**.
- **Support** mother and ensure **close follow-up**.

Average 24-Hour Infant Milk Intake in the First Postpartum Week

Casey, et al. Nutrient intake by breast-fed infants during the first five days after birth. *AJDC* 1986;140:933-936.

<u>Days Postpartum</u>	<u>Average Daily Milk Volume</u>	<u>Appropriate Feeding Volume</u>
Day 1	1 oz.	5 - 10 cc
Day 2	4 oz.	15 - 20 cc
Day 3	11 oz.	30 - 40 cc
Day 4	19 oz.	60 cc
Day 5	19 oz.	60 cc

By the end of the first postpartum week, mothers can be expected to produce approximately 20 oz./day.

Obstacles to Implementing
the "Can Do 5!"

Baby is Fed Only Breastmilk

- One in four breastfed infants in the U.S. are supplemented with infant formula within two days of birth.
- Much of the formula fed to breastfed infants is by maternal request and occurs at night.
- Formula is often prescribed for sleepy infants who have gone 4 or more hours without nursing.
- Formula remains widely used, rather than expressed mother's milk or donor breastmilk.

- WIC moms perceive that hospitals and doctors promote formula; the benefits of exclusive breastfeeding are not understood. "I always did both because that was the way I did it in the hospital." "I think they get all the benefits even with formula. I don't see why they wouldn't because they're still breastfeeding."
Holmes, et al. *Breastfeeding Medicine*. 4:25-30, 2009
- The WIC food package for breastfeeding mothers has been enhanced to include healthier and more culturally acceptable foods.
- Breastfed infants on WIC no longer receive any formula during the first month postpartum to help breastfeeding get off to the best possible start.

National Survey of Maternity
Care Practices (mPINC)

- In June, 2008, the CDC released the results of the first national survey of maternity care practices (mPINC), based on responses from 2690 hospitals and birth centers nationwide, representing 82% of facilities with registered maternity beds.
- Facility-specific benchmark reports were provided to each facility that completed a survey, comparing individual facility scores with those of facilities in their state and with facilities of a similar size nationally.

The Joint Commission Introduces
Perinatal Care Core Measures

Beginning April 1, 2010, Joint Commission accredited hospitals will be able to report on a set of perinatal care core measures to meet Joint Commission accreditation requirements (replacing the existing pregnancy and related conditions measure set).

- Elective deliveries --Cesarean sections
- Health care-associated --Use of antenatal steroids
bloodstream infections in newborns
- [Exclusive breast milk feeding](#)

www.usbreastfeeding.org Click on: "Implementing
TJC Core Measure on Exclusive Breast Milk Feeding"

The Impact of Commercial Hospital
Discharge Packs on Exclusive Breastfeeding

- An Oregon study examined the relationship between exclusive breastfeeding at 10 weeks postpartum and the giving of commercial hospital discharge packs to breastfeeding women.
- [Women who received commercial formula gift packs were more likely to exclusively breastfeed for fewer than 10 weeks than women who had not received the packs.](#)

Rosenberg KD, *Am J Public Health* 98(2):290-5, 2008

The **Can Do 5!** Best Practices
Supportive of Breastfeeding

- 1) Infants are breastfed in the first hour after birth.
- 2) Infants stay in the same room as their mothers.
- 3) Infants are fed only breastmilk and receive no supplementation.
- 4) [No pacifier is used.](#)
- 5) Staff give mothers a phone number to call for help with breastfeeding.

American Academy of Pediatrics
Breastfeeding and the Use of Human Milk
Pediatr. 115:496-506, 2005

Recommendations for Healthy Term Infants
Pacifier Use

Pacifier use is best avoided during the initiation of breastfeeding and introduced only after breastfeeding is well established.

The Problem with Early Pacifier Use

- During the early weeks of life, baby's sucking efforts should provide him with the milk he needs, stimulate a generous supply, and reinforce correct breastfeeding technique.
- Overusing a pacifier in the early weeks may interfere with learning to latch, decrease the frequency of breastfeeding, limit milk production, and prevent the baby from drinking enough breastmilk.
- Frequent early pacifier use may be a marker for troubled feeding or a lower maternal commitment to unrestricted breastfeeding.

The Changing Concept of SIDS

AAP, *Pediatrics* 2005;116:1245-1255

Recommendations

6. Consider offering a pacifier at nap time and bedtime: Use the pacifier when placing the infant for sleep throughout the first year. If the infant refuses the pacifier, you do not need to force it. It does not need to be reinserted after the infant falls asleep.

Do not dip the pacifier in any sweet solution. Clean pacifiers often and replace them regularly. For breastfed infants, delay using a pacifier until the infant is 1 month of age to assure breastfeeding is well established.

The Role of Pacifiers in Newborn Pain Relief

- Multiple studies show that oral sucrose—especially when combined with additional measures, such as swaddling, offering a pacifier, and skin-to-skin contact—is a simple, safe and effective method of analgesia for infants during painful procedures.
- [The AAP recognizes the analgesic benefit of pacifiers during painful procedures](#) when breastfeeding cannot provide the analgesia. Pacifier use in the hospital in the neonatal period should be limited to specific medical indications such as pain reduction, calming in a drug exposed infant, etc.

AAP Endorses the Ten Steps

Highlights from the Aug. 25, 2009 letter from David T. Tayloe, Jr., M.D., AAP President, to the Dir. Gen. of WHO and the Ex. Dir. of UNICEF

- The Executive Committee of the BOD of the AAP extends AAP endorsement to the WHO/UNICEF *Ten Steps to Successful Breastfeeding* with the following footnote to step 9.
“[The AAP does not support a categorical ban on pacifiers due to their role in SIDS reduction and their analgesic benefit during painful procedures...](#)”
- This footnote will be included in all AAP references to the Ten Steps.

Obstacles to Implementing the “Can Do 5!”

Baby Does Not Use a Pacifier

- Some hospitals include a pacifier in their Admission Pack, which encourages its use.
- Pacifiers used for painful procedures are given to mothers--instead of being discarded--which promotes their continued use.
- Pacifiers may be offered by mothers to postpone breastfeeding when guests are present or by night nurses to allow mothers more time to rest between feedings.

The *Can Do 5!* Best Practices Supportive of Breastfeeding

- 1) Infants are breastfed in the first hour after birth.
- 2) Infants stay in the same room as their mothers.
- 3) Infants are fed only breastmilk and receive no supplementation.
- 4) No pacifier is used.
- 5) [Staff give mothers a phone number to call for help with breastfeeding.](#)

Predictors of Breastfeeding Duration
 Scott, et al. *Pediatr* 117:e646-e655, 2006

- The authors sought to identify factors linked with the risk of discontinuing full breastfeeding by 6 months and any breastfeeding by 12 months.
- 587 new mothers in Perth were recruited in the hospital and interviewed by telephone at 4, 10, 16, 22, 32, 40, and 52 weeks. 93.8% of mothers left the hospital breastfeeding.
- [36.1% of women reported 1 or more breastfeeding problems in the first 4 weeks.](#) Women reporting early problems were significantly more likely to discontinue full breastfeeding before 6 months and any breastfeeding before 12 months.

Why Do Women Stop Breastfeeding?
 Ahluwalia, et al *Pediatr* 116:1408-1412, 2005

- Using PRAMS data from 2000 and 2001, the authors examined the reasons women stop breastfeeding in the early postpartum period.
- 68% of mothers began breastfeeding. One fourth of these discontinued breastfeeding by four weeks postpartum.
- [The most common reasons for early breastfeeding cessation were: infant difficulties nursing, sore nipples, inadequate milk supply, and the infant was not satisfied.](#)

Reasons for Stopping Breastfeeding

Murray, Ricketts, Dellaport. *Birth*. 34 (3), Sept. 2007.

The top 3 reasons for stopping breastfeeding could be linked to a poor start in the hospital:

- Not producing enough milk—43%
- Did not satisfy baby—40%
- Difficulty nursing—28%

Mothers who experienced all 5 supportive breastfeeding practices were significantly less likely to discontinue breastfeeding due to any of the top 3 reasons.

Post-Discharge Breastfeeding Support and Consultative Services

- A growing number of hospitals now offer follow-up support groups for breastfeeding mothers, infant weight checks, and out-patient breastfeeding services.
- Breastfeeding services are available through lactation consultants in private practice and specialty breastfeeding centers.
- Some physicians utilize an office nurse who is also a lactation consultant to provide on-site breastfeeding services.

Post-Discharge Breastfeeding Services

- WIC can provide peer counselors, breast pumps, and breastfeeding evaluation and management. Selected WIC staff may have additional breastfeeding training and credentials and can provide consultations.
- Primary care providers can offer ongoing support, screening for lactation difficulties, and referral to breastfeeding resources.
- La Leche League can provide invaluable information and mother-to-mother support.

Obstacles to Implementing the “Can Do 5!”

Mother is Given a Phone Number to Call for Help after Hospital Discharge

- In some rural communities, few breastfeeding resources are available, including quality pumps.
- Early medical follow-up is not universal.
- WIC may not hear in a timely manner that their client has given birth.
- Many physicians aren't aware of or don't routinely refer their nursing moms to hospital-based breastfeeding services or local community resources.

Prepare Expectant Mothers to Request Supportive Hospital Breastfeeding Practices

- [Plan for early skin-to-skin contact.](#)
(Your baby may have “sticky lotion on her.” You may want to limit visitors during this intimate get-to-know-you time).
- [Encourage mother's partner to help limit the number of visitors and their length of stay.](#)
(The purpose of rooming-in is to learn to read your baby's feeding cues, meet her needs, and get breastfeeding well-established.)

Prepare Expectant Mothers to Request Supportive Hospital Breastfeeding Practices

- [Staying rested during the day will make it easier to care for and feed your baby at night.](#) Your milk provides everything your baby needs.
- [Avoid using a pacifier until your baby is breastfeeding well and gaining weight.](#) Frequent, cue-based breastfeeding is normal and beneficial for both of you.
- Early breastfeeding problems are common and usually easy to resolve. Don't struggle on your own. [All breastfeeding questions are important, and expert help is available.](#)

Participant Comments

- “This was wonderful; having various community entities working together will make a positive difference. It brings community members together on the same page to support mothers, families and babies.”
- “Thank you so much for coming to our community. It helped bring our breastfeeding community together!”
- “Will provide the ‘Can Do 5!’ to clients prenatally ...add to my power point for my childbirth class.”
- “I really liked the ideas about preparing expectant parents for a positive hospital experience.”

Participant Comments

- “Will provide patient/family education in L&D for skin-to-skin, rooming in & feeding in the 1st hour.”
- “As an L&D nurse, I vow to do more to make sure mom and baby get as much skin-to-skin as possible...”
- “I hope to help moms have more uninterrupted bonding/feeding time w/o a room full of visitors.”
- “Try to reduce interruptions for mom and baby. Implement our ‘quiet time’ from 1 pm to 3 pm.”
- “I will think twice about supplementing. Rethink expectations of volume of feeds for newborn.”

Participant Comments

- “Educate staff and try to remove formula gift bags.”
- “I hope to start a hospital breastfeeding committee and a breastfeeding mothers’ support group.”
- “We plan to start a follow-up program after discharge.”
- “I will use this information with every shift! Be a much better nurse. Thanks!”
- “I can’t wait to use this with my patients!”
- “I will use this daily in my NFP practice!”

Participant Comments

- “Thank you! We have committed staff – we need tools - which your resource kit will provide.”
- “The support documentation in the Resource Kit was particularly useful in forming guidelines for infant feeding. The CDs were informative and still remain useful educational tools that we show to our nurses.”
- “I will try to start a local breastfeeding task force.”
- “We will continue moving toward Baby Friendly.”
- “I would like to push for our hospital to be a Baby-Friendly Hospital.”

Endocrine Control of Lactation Neuroendocrine Reflex Arcs

- **Milk Production** - Prolactin is a key lactogenic hormone, stimulating initial alveolar milk production. But, the height of the prolactin level doesn't directly correlate with milk production. Rather, prolactin is “permissive” for lactation.
- **Milk Ejection Reflex** - Oxytocin contracts the myoepithelial cells, forcing milk from the alveoli into the ducts where it is removed by the infant.
- Cortisol, insulin, and thyroid, parathyroid, and growth hormone also support lactation.

The Milk Ejection Reflex (MER)

- The milk-ejection reflex is triggered by breastfeeding or milk expression. It can be conditioned to occur, e.g. by seeing, hearing, or smelling your baby.
- Let-down may be perceived as a pins-and-needles, tingling, or tightening sensation. Milk may spray or drip rapidly from the breasts.
- The MER can be inhibited by adrenalin, discomfort, embarrassment or other stress.
- Milk ejection is essential for the infant to obtain adequate milk.

Facilitating the Milk Ejection Reflex (MER) in the Postpartum Period

- Encourage skin-to-skin contact, which promotes oxytocin release.
- Promote a relaxed, unrushed environment.
- Prevent sore nipples, and manage postpartum pain in C-section moms.
- Invite visitors to step out when the infant shows feeding cues.
- Help condition the MER with breast massage, drinking fluids, interacting with the infant.

Autocrine Control of Lactation

The influence of local factors acting in the breast

- It is not just the level of maternal hormones, but the efficiency of milk removal, that governs the volume produced in each breast.
- A protein factor--a chemical inhibitor of milk secretion called *feedback inhibitor of lactation (FIL)*--is secreted with other milk components.
- If milk is not removed from the gland, FIL accumulates and interacts with the milk producing cells to inhibit milk production, possibly by altering cell sensitivity to prolactin.

What Do We Know About Milk Production Between Birth and 6 Months Postpartum?

- For mothers of both term and preterm infants, the average amount of milk at days 6 and 7 is highly associated with week 2 milk volume and moderately associated with week 6 milk volume.
- Milk production is relatively constant between 1 and 6 months of lactation.
- Exclusively breastfed infants drink about 788 g (26 - 28 oz.) of breast milk daily between 1 and 6 months (with a wide range of normal).

Kent, et al. *Pediatr* 2006; 117:e387-e395.
P Hill, et a. *J Hum Lact* 2005; 21(1):22-30.

Ensuring an Abundant Milk Supply
When an Infant Does Not Nurse Effectively

- The level of milk production in the early weeks after birth is likely to be maintained at a similar level thereafter.
- Thus, mothers of at-risk infants should use an effective electric double breast pump to bring in and preserve a generous milk supply until the infant is able to nurse effectively.
- If milk is not regularly removed, and the breasts remain overly full, the mother's rate of milk production will slow, and insufficient milk may result.

“Late-Preterm” Infants: A Population at Risk
Engle W, Tomashek K, Wallman C and the Committee
on Fetus and Newborn. *Pediatr* 120:1390-1401, 2007

- Infants born 34^{0/7} through 36^{6/7} weeks' gestation are less physiologically and metabolically mature than term infants. They are at higher risk of morbidity and mortality than term infants.
- Late-preterm infants represent more than 70% of all preterm births (<37 weeks). During the last 15 years, the proportion of all US births that were late preterm increased from 7.3% in 1990 to 9.1% in 2005, or > 375,000 births annually.

“Late-Preterm” Infants: A Population at Risk
Pediatr 120:1390-1401, 2007

Possible explanations for the rise in late-preterm births:

- Increased use of reproductive technologies, resulting in more multiple births
- More women giving birth at an older age
- Advances in obstetric practice, with earlier detection of at-risk fetuses requiring early delivery
- Increased rates of labor induction and cesarean delivery

“Late-Preterm” Infants: A Population at Risk

Pediatr 120:1390-1401, 2007

- The AAP (and NICHD) recommend a change in terminology from “near term” to “late-preterm” to emphasize that these infants are physiologically immature and have special health care needs compared to full term infants (37-41 weeks).
- Late-preterm infants have been called “imposter” babies, because they often masquerade as full-term infants, and many are discharged within 48 hours after birth.

“Late-Preterm” Infants: A Population at Risk

Pediatr 120:1390-1401, 2007

Examples of Increased Neonatal Morbidity and Mortality Among Late-Preterm Infants:

- Temperature instability
- Hypoglycemia
- Respiratory distress and apnea
- Jaundice
- Feeding Problems
- Suspected sepsis
- Longer hospital stays
- Increased neonatal mortality rate (0-27 days)

“Late-Preterm” Infants: A Population at Risk

Pediatr 120:1390-1401, 2007

Late-preterm infants have an increased risk of hospital readmission in the neonatal period for the following diagnoses:

- Jaundice (71%)
- Suspected sepsis (20%)
- Feeding difficulties (16%)

Risk factors for readmission include:
first born; breastfed at discharge; mother with L & D complications; public insurance

“Late-Preterm” Infants: A Population at Risk
Pediatr 120:1390-1401, 2007

The late-preterm infant’s neurologic immaturity, immature GI function, and low oromotor tone predispose to feeding difficulties, especially with breastfeeding. Breastfeeding may appear successful in the hospital, but not be sustained after discharge, with resulting decreased stooling, increased enterohepatic circulation, hyperbilirubinemia, and dehydration.

Breastfeeding Challenges
in Late-Preterm Infants

Late preterm infants often:

- Are **sleepier**, with fewer alert-awake periods
- Have **poor muscle tone** and less stamina
- Have **difficulty attaching** to the breast effectively
- Have **weak** intraoral **suction** pressures
- Have **immature suck-swallow-breathe cycles**
- Are **unable to extract enough milk** to maintain the mother’s supply

“Finding the *high-risk* baby
in the low-risk nursery”

- Identify mother-baby pairs who are at risk for inadequate breastfeeding.
- Tailor a breastfeeding plan for at-risk infants, and provide close follow-up and monitoring after discharge.

Infant Breastfeeding Risk Factors

Many infant variables can impact milk transfer:

Biologic factors: birth weight, gestational age, labor medications, oral anatomic variations, neurologic status, medical conditions

Behavioral characteristics: temperament, suckling style, appetite

(Maternal factors: nipple protuberance, breast variations, milk supply, milk ejection reflex)

Infants At Risk for Inadequate Breastfeeding

- Small (< 6 lbs.), IUGR, preterm, and late-preterm infants
- Twins or higher multiples
- Infants with neuromotor problems, including Down Syndrome
- Infants with medical problems, such as cardiac, respiratory, or infectious illnesses or jaundice

Infants At Risk for Inadequate Breastfeeding

- Infants with oral abnormalities, such as cleft palate or severe micrognathia
- Infants with minor variations that can interfere with feeding, such as tongue-tie or high-arched palate
- Infants with latch-on problems

“Prevention Pumping” or “Insurance Pumping”

- Some late-preterm and other at-risk infants take weeks to learn to nurse effectively.
- Whenever an infant nurses ineffectively, both infant well-being and maternal milk supply can be placed in jeopardy.
- “Prevention pumping”—removing milk remaining after the infant nurses—will protect a mother’s milk supply until her infant is able to drain her breasts well.
- Breastfeeding problems are easier to overcome when the mother has a generous milk supply and the infant is thriving.



got options!

Given a generous milk supply and a healthy, thriving baby, chances are excellent that an infant will learn to breastfeed effectively.

“Triple Feeding” Regimen for At-Risk Breastfed Infants

- Breastfeed (limit to 20 mins., sometimes less).
- Pump both breasts for 10 – 15 mins., using a highly effective electric double breast pump.
- Supplement the infant with expressed milk, plus donor milk/infant formula as required.
- As the milk supply increases and the infant nurses more effectively, the amount of supplement should decrease.
- Wean from pumping after baby is fully breastfed and gaining weight appropriately.
