Cooper Medical School of Rowan University

The Role of Physicians in the BFHI

Oklahoma Baby-Friendly Symposium

Presented by

Lori Feldman-Winter, MD, MPH, Cooper Health Care

Professor of Pediatrics CMSRU

Disclosure

- I have no relevant financial relationships with the manufacturer(s) of any commercial product(s) and/or provider of commercial services discussed in this CME activity.
- I do not intend to discuss an unapproved/investigative use of a commercial product/device in my presentation.

Objectives

1. Describe how physicians affect system level changes required for hospitals to become Baby-Friendly designated
2. Delineate the role physicians plan in each of the Ten Steps to Successful Breastfeeding
3. Identify common barriers for physicians as hospitals adopt the Ten Steps

Physicians are the Gatekeepers of Health Care

Int. J. Environ. Res. Public Health **2012**, *9*, 1308-1318;

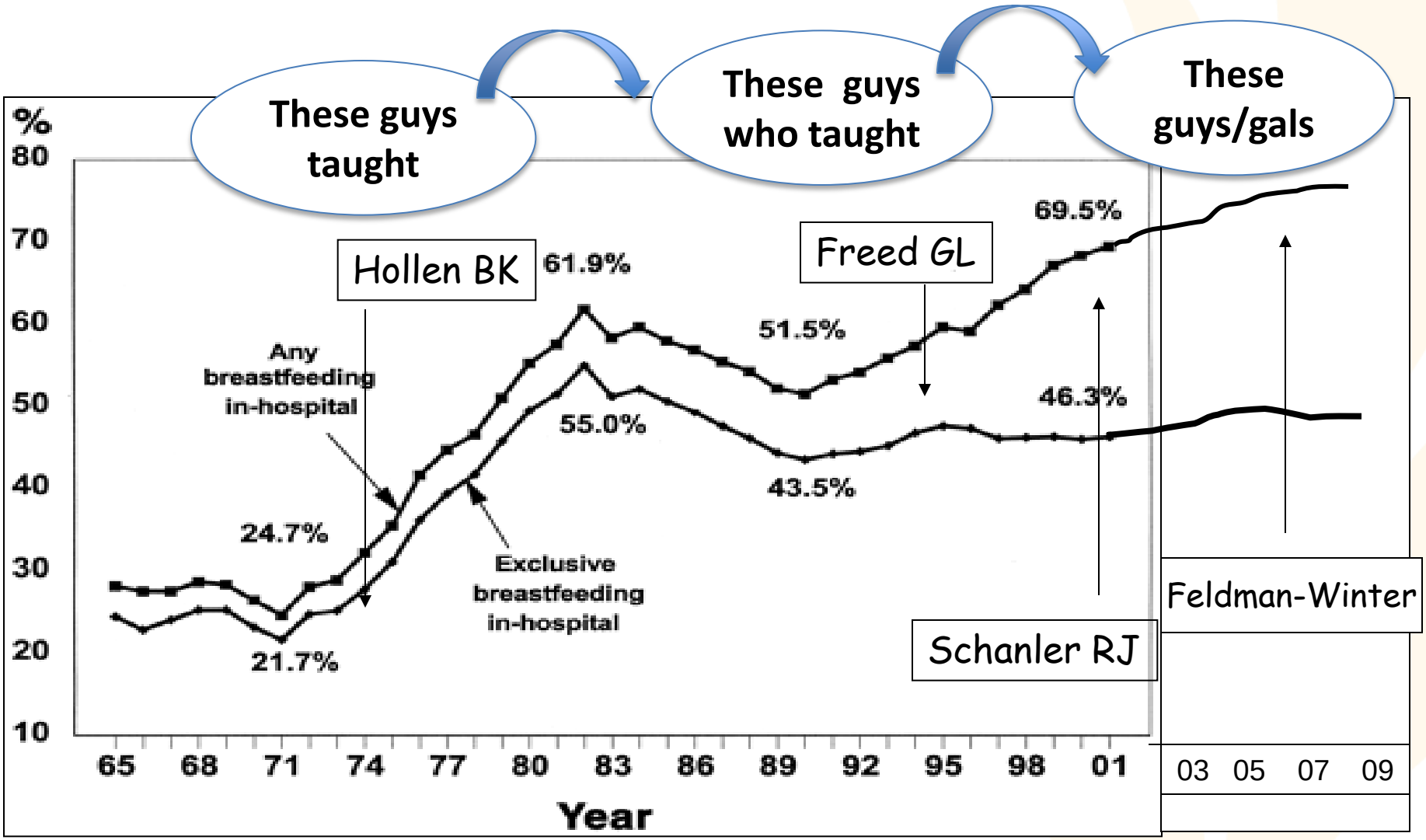
Engaging Physicians as a Challenge

- If physicians are not properly educated they undermine process and outcome measures
- “I won’t do that” examine babies in the rooms
- “ There’s nothing wrong with giving a supplement if it avoids hyperbilirubinemia or hypoglycemia”

Engaging Physicians as an Opportunity

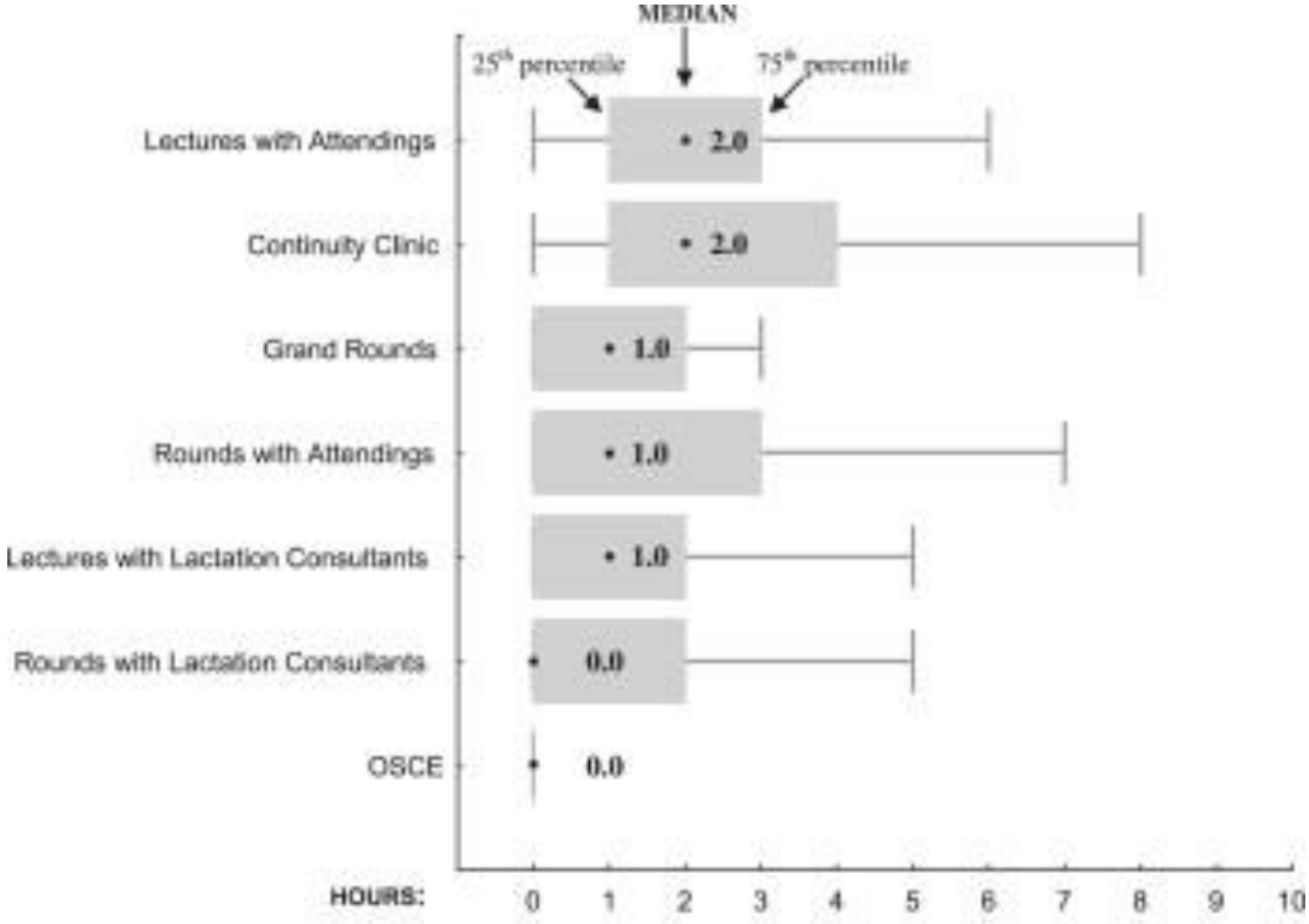
- Your adversaries can become your best allies
- You need them for change and to become Baby-Friendly
- Making a Difference Matters!
- Seeing the greater good as a motivation to change, rather than carrots or sticks
- Being part of a beneficial process bigger than oneself

Know Where They are Coming From



Graph data modified from the Mother's Survey, Ross Products Division of Abbott, and CDC NIS

Breastfeeding education over 3 years of residency (n = 102)



Osband YB. et. al. Acad Pediatr. 2011;11(1):75-9.

Pediatricians' Attitudes

Table 5. Pediatricians' Opinions on Issues of Breastfeeding Promotion and Benefits, 2004 vs 1995 (Percentage of Respondents)

Opinion (% Agree)[a]	2004 (n=669)	1995 (n=817)	AOR (CI)
Almost any mother can be successful at breastfeeding if she keeps trying	62.2	69.2	0.75 (0.59-0.95)
Breastfeeding and formula feeding are equally acceptable methods for feeding infants	45.1	45.0	1.02 (0.81-1.28)
Benefits of breastfeeding outweigh the difficulties or inconvenience mothers may encounter	58.0	68.2	0.60 (0.47-0.76)
In the long run, formula-fed babies are just as healthy as breastfed babies	26.0	34.5	0.70 (0.55-0.90)
Advice from family and friends is the most important influence in the decision to breastfeed	55.1	72.6	0.50 (0.40-0.64)
Pediatricians have little influence on whether mothers initiate breastfeeding	5.8	18.2	0.27 (0.18-0.40)

Feldman-Winter L. et al. Arch Pediatr Adol Med. 2008;162:1142-1150.

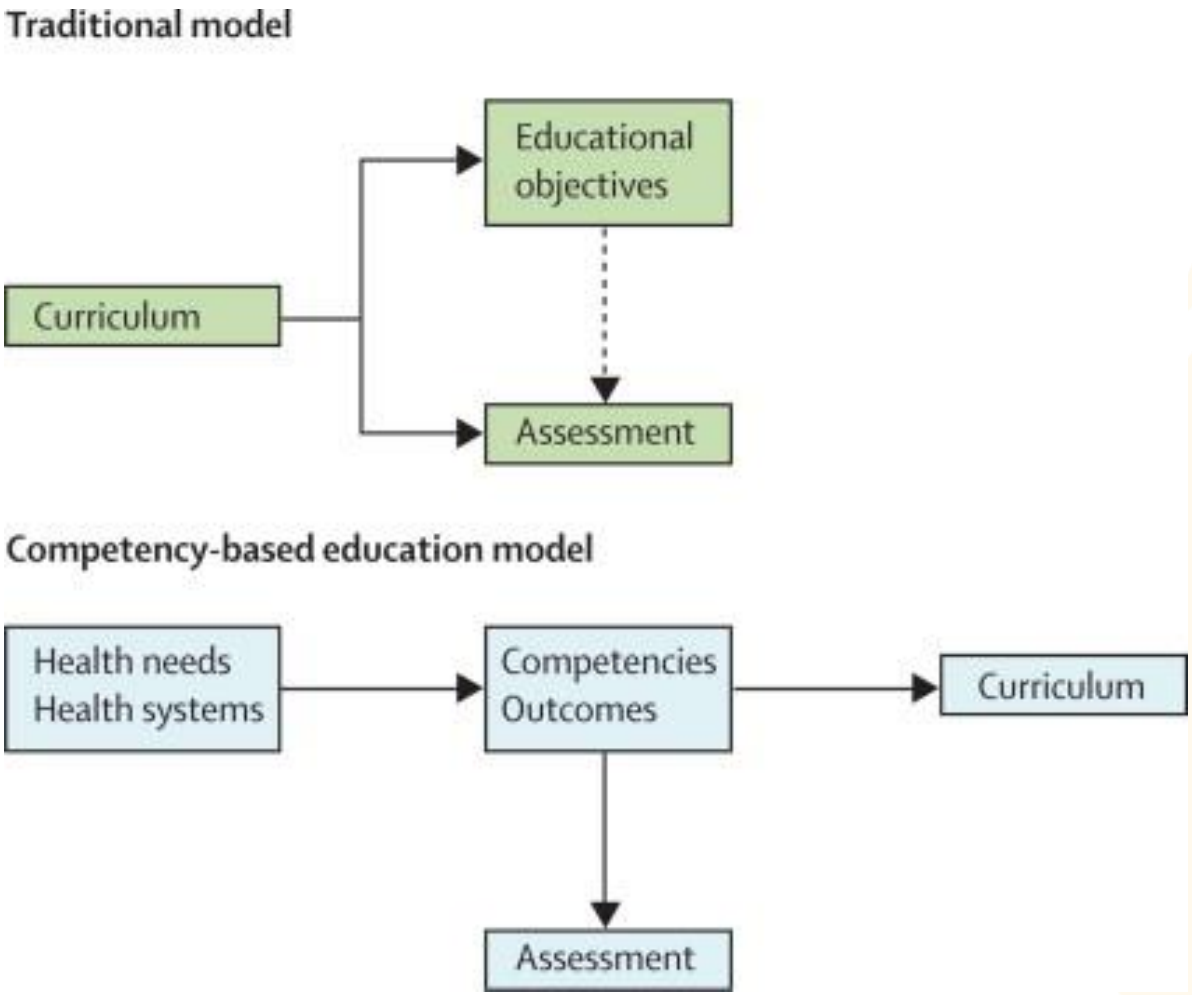
Pediatricians' Confidence and Practice Patterns

Table 6. Breastfeeding Management and Opinions on Breastfeeding Promotion Based on Personal Experience[a] (Percentage of Respondents)

Breastfeeding Management in 2004[b]	Personal Experience (n=423)	No Experience (n=236)	AOR (CI)
Confident or very confident			
Adequately address mother's concerns about breastfeeding	95.0	72.0	6.01 (3.40-10.64)
≥5 Times in the last year			
Manage breastfeeding problems	89.0	63.5	3.54 (2.28-5.50)
Observed breastfeeding	66.2	53.4	1.97 (1.36-2.86)
Counseled an expectant or new mother about infant feeding choices	86.5	72.0	2.00 (1.29-3.13)
Taught a new mother breastfeeding techniques	46.8	20.4	3.98 (2.63-6.03)
Counseled mothers about breastfeeding problems	66.0	38.4	2.76 (1.93-3.96)
Asked a breastfeeding mother whether she is using herbal agents	24.2	16.3	1.62 (1.05-2.52)
Considered cultural beliefs before observing breastfeeding	29.3	19.4	1.57 (1.04-2.37)
Taught a new mother how to use a breast pump	10.4	2.1	6.07 (2.29-16.07)

Feldman-Winter L. et al. Arch Pediatr Adol Med. 2008;162:1142-1150.

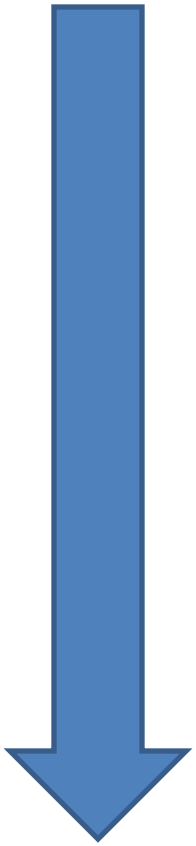
Traditional vs. Competency-based Education



Cooper Medical School of Rowan University

Frenk J. et. al. Lancet 2010.

Competency-based Education



- **Health System needs**
  - Need to improve physician knowledge, skills and attitudes to support exclusive breastfeeding
- **Competencies**
  - Skills in taking history, doing assessments and counseling
- **Outcomes**
  - Increased Exclusive Breastfeeding
- **Assessment of Outcomes**
  - measure rates
- **Assessment of Competencies**
  - Tools
  - Direct observation, OSCE
- **Develop curriculum**

Training Residents

Studied 14 programs; >20 residents per program from Pediatrics, OB/GYN, FM

TABLE 3 Improvements in Knowledge, Confidence, and PPs among Residents Exposed Versus Not Exposed to Curriculum

	Intervention			Control			OR	95% CI
	N	*n* Improved	*n* Not Improved	*N*	*n* Improved	*n* Not Improved		
Knowledge	154	129	25	106	69	37	2.767	1.541–4.970
Confidence	152	115	37	103	58	45	2.411	1.409–4.127
PPs	152	111	41	103	72	31	1.166	0.671–2.026
PPs, excluding cultural questions	152	106	46	101	52	49	2.171	1.289–3.658

CI indicates confidence interval.

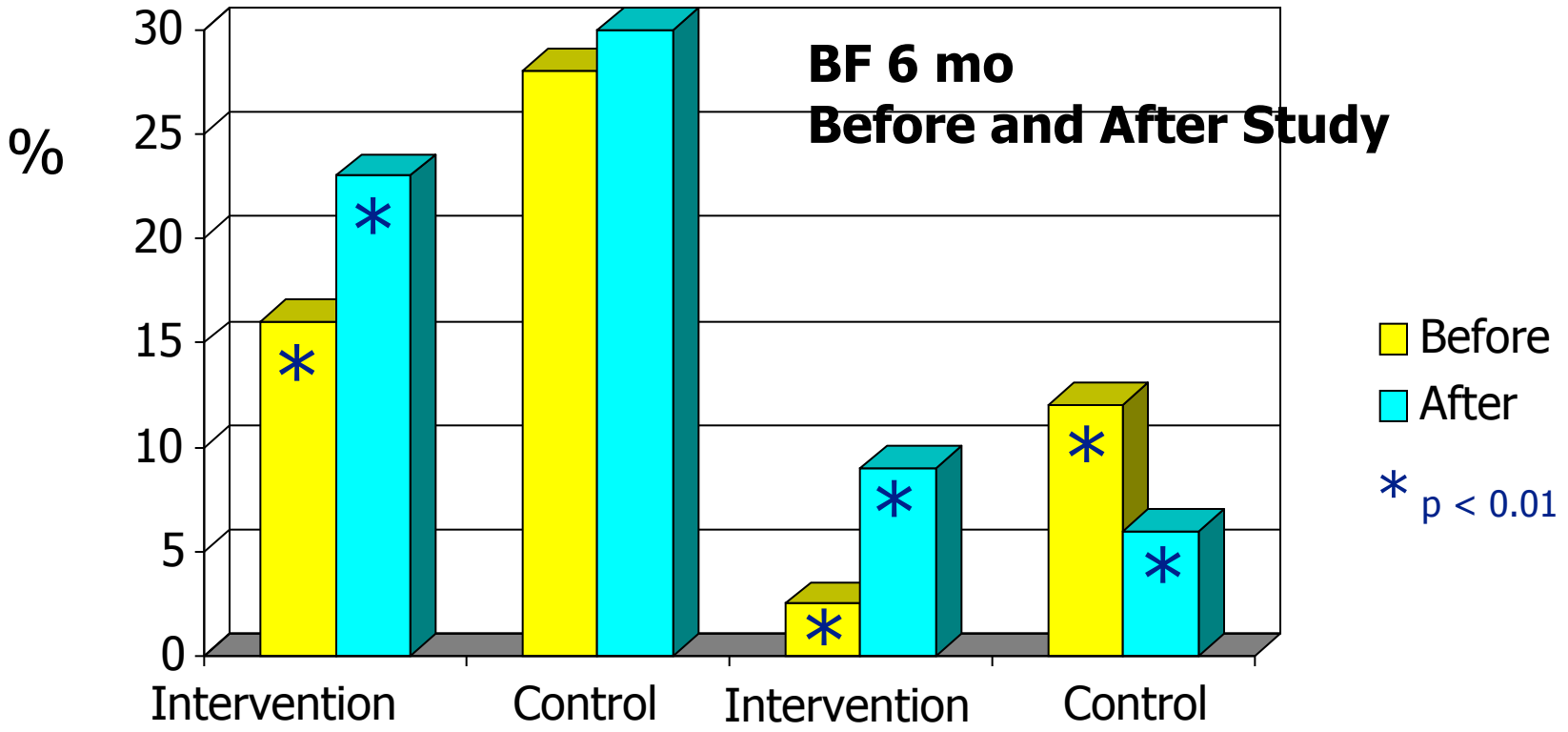
2-3 times more likely to have greater knowledge, confidence and improved practice patterns

http://www.aap.org/breastfeeding/curriculum/

Source: Feldman-Winter et al. *Pediatrics.* 2010

Residency Curriculum

Exclusive Breastfeeding



BF Before and After Study

Feldman-Winter et al, Pediatrics 2010; 126:289-297

Health Education Theory: Diffusion of Innovation

* Or any curricula

Team of Trainers

*AAP Curriculum

Faculty Development

OB/GYN, FM, Pediatrics

Residents become Innovators

Innovators Impact Health Care System: Knowledge, PP, Confidence

Change Behavior

⇑ EBF

Dixit A, Feldman-Winter L, Szucs KA. 2015. Journal of Human Lacta

Getting Physician Buy-in

- Treat physician like they would treat a patient- listen and emphasize, build trust and respect
- Solicit input, use focus groups
- Respect physicians' time
- Make it quantitative, docs like numbers
- Link the work to performance and quality
- Communicate frequently and then some
- Address skepticism head on
- Reward and recognize contributions

Wenneker and Blattner 2005

Peer to Peer Partnership for Physician Engagement

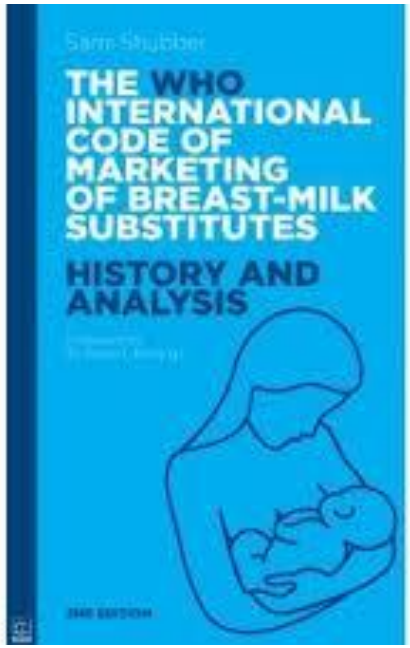
- Docs teach docs
  - We speak a different language
- Walk the talk
  - Model what docs can do to improve care
- Spread the news
  - Docs love good PR
  - Celebrate accomplishments of those who partner
  - Encourage all to enlist

Pediatricians and the BFHI

- AAP has endorsed the Ten Steps to Successful Breastfeeding (not Baby-Friendly per se)
  - http://www2.aap.org/breastfeeding/healthprofessionaisresourceguide.html
- The AAP has endorsed the United States Breastfeeding Committee's Core Competencies
  - http://www.usbreastfeeding.org/Portals/0/Publications/Core-Competencies-2010-rev.pdf

STEP 1

Have an ***infant feeding*** policy that is routinely communicated to all health care staff.



HELP DRAFT INFANT FEEDING POLICY

The Policy and Protocols

- The Ten Steps
- The Code of Marketing
  - How will physicians implement the code?
- Policy for supplementation
  - Documentation
  - Physician order
- Policy for hypoglycemia and hyperbilirubinemia
  - Follow evidence based guidelines and algorithms

The Code

- Breastmilk Substitutes (BMS)-medically necessary; requested after informed consent documented.
- Prohibits marketing of BMS, complementary foods, bottles and teats
- Educational materials free of marketing, and no group education on preparation of formula
- Education on BMS includes hazards of preparation that are eliminated by breastfeeding

No More Sample Packs (Consider Office)

Show of hands:

Are you giving new moms formula sample packs?

The Locked Cabinet

Infant Formula

Show of hands:
Do you track
formula use in hospital?

STEP 2

Train all health care staff in the skills necessary to implement the policy.

- 20 hours including 5 supervised for staff
- 15 lessons
- 4 competencies

- 3 hours for physicians and APNs but need to have same knowledge and skills

Competencies

- Verify competencies in 5 hours of supervised education
- 4 competencies listed by BF-USA:

1 - Communicating with pregnant and postpartum women about infant feeding

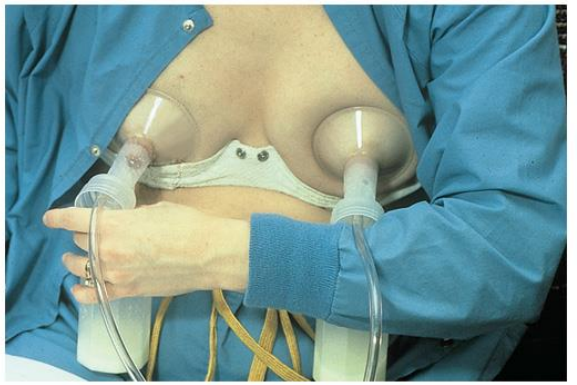
2 - Observing and assisting with breastfeeding

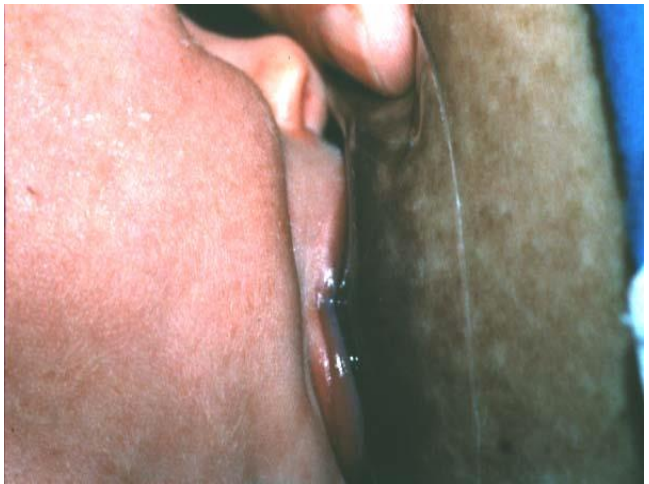
3 - Teaching hand expression and safe storage of milk

4 -Teaching safe formula preparation and feeding

Skills Fairs

- Stations
  - Assess breastfeeding dyad
  - Maintain milk supply
  - Use of pumps, shields, other tools
  - Solve common problems
- Interdisciplinary
- Volunteers





STEP 3

Inform all pregnant women about the benefits and management

- Use opportunities at well child visits for pregnant mothers to reinforce prenatal education
- Mothers need to know:
  - List of benefits
  - Basic management - position and latch, feeding on-cue
  - Importance of skin-to-skin contact
  - Rooming-in
  - Risks of supplements while breastfeeding in the first 6 months.

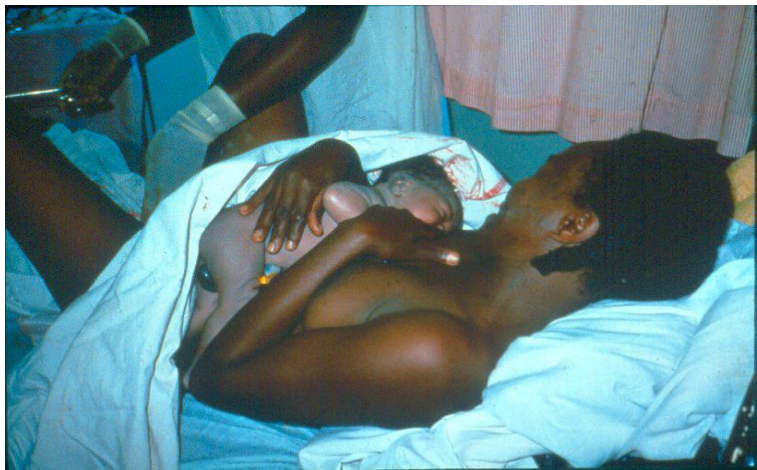
STEP 4

Help mothers initiate breastfeeding within one hour of birth.

Now interpreted as:

"Place babies in skin-to-skin contact with their mothers immediately following birth for at least an hour and encourage mothers to recognize when their babies are ready to breastfeed, offering help if needed."

This step applies to all babies, regardless of feeding method.



Breastfeeding in the DR/OR

- Uninterrupted skin-to-skin within 5 minutes for at least the first hour after life.
- AHRQ: Level IIa evidence; good
- AAP Policy: Initiate in the first hour; keep newborn and mother together in recovery and after; avoid unnecessary oral suctioning.
- Delay procedures until after first hour

Moore ER, Anderson GC, et al. Cochrane Database Syst Rev. 2012 May 16;5:CD003519.

Overcoming Barriers

- Gowns without snaps
- Eyes and thighs
- Staffing to monitor
- Baby's weight
- C-Sections
- Fear

Photos courtesy of Cindy Curtis And Jack Newman

Duration of Skin-to-Skin Matters

Variable	STS ≤ 60 min	STS > 60 min	P value
	N=18	N=61	
STS Duration	51.1 ± 13.5	81.0 ± 14.9	<0.01
Adjusted mean salivary cortisol (ug/Dl)*			
60 min	5.03 ± 0.46	3.94 ± 0.24	<0.05
120 min	2.71 ± 0.40	2.08 ± 0.21	

* Adjusted for time until STS started, cortisol at 1 min, umbilical artery PH, mode of delivery, condition of amniotic fluid, birth weight, length of first and second stage of labor (minutes)

Takahashi Y et al. Early Hum Devel. 2011. 87:151-157

So…what's the problem with immediate and continued STS?

THE OFFICIAL NEWSMAGAZINE OF THE AMERICAN ACADEMY OF PEDIATRICS

AAP News

DEDICATED TO THE HEALTH OF ALL CHILDREN

Hospitals should balance skin-to-skin contact with safe sleep policies

By Jay Goldsmith, MD, FAAP

- Sudden Postnatal Death
- Mothers sleepy
- Discontinuous observation
- Medications problematic
  - MgSO4
  - Narcotics
- Bed sharing denounced

Hospitals should encourage skin-to-skin contact between mothers and babies while also emphasizing safe sleep practices that prevent potential dangers to newborns.

Volume 34 • Number 11
November 2013
www.aapnews.org

Sudden Unexpected Postnatal Collapse (SUPC)

- Sudden collapse in previously vigorous spontaneously breathing newborn with five minute APGAR>8
- Gestational age >35 weeks
- Incidence 2.6-38/100,000
- One third occur in first 2 hours, 1/3 between 2 and 24 hours and final 1/3 between 1-7 days of life
  - Herlenius and Kuhn. Trans Stroke Res 2013;4:236-47
- Another study suggests 73% occur in first 2 hours
  - Becher J-C, et al. Arch Dis Chil Fetal Neonatal Ed 2012;97:F30-4

Go Back to the Step 4 Algorithm

1. Delivery of newborn (not just head)
2. Dry and stimulate for first breath/cry
3. Place skin to skin with cord attached (with option to milk cord), clamp after 1 minute or after placenta delivered
4. Continue to dry entire newborn except hands
5. Cover head and place pre-warmed blankets to cover body of baby on moms chest
6. Assess 1 and 5 minute Apgar
7. Replace wet blankets with dry warm blankets
8. +/- Cap for head
9. Assist and support to breastfeed
10. Monitor continuously

Safe Positioning for Skin to Skin Contact

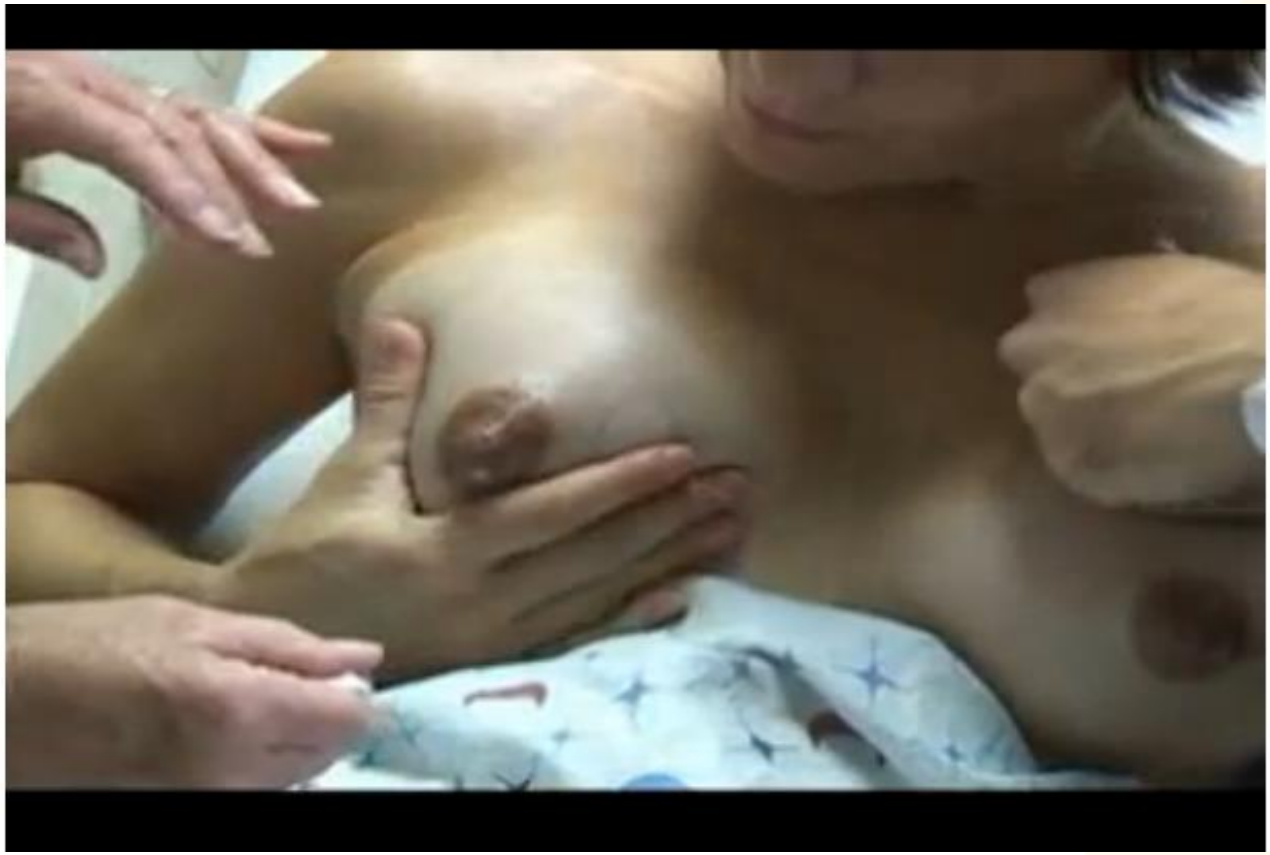
- Face can be seen
- Head is in “sniffing” position
- Nose and mouth not covered
- Head turned to one side
- Neck straight not bent
- Shoulders and chest face mom
- Legs are flexed
- Covered back with blankets
- Monitor dyad
- When moms want to sleep baby is placed in bassinet or with another support person

STEP 5

Show mothers how to breastfeed and how to maintain lactation even if they are separated from their infants.

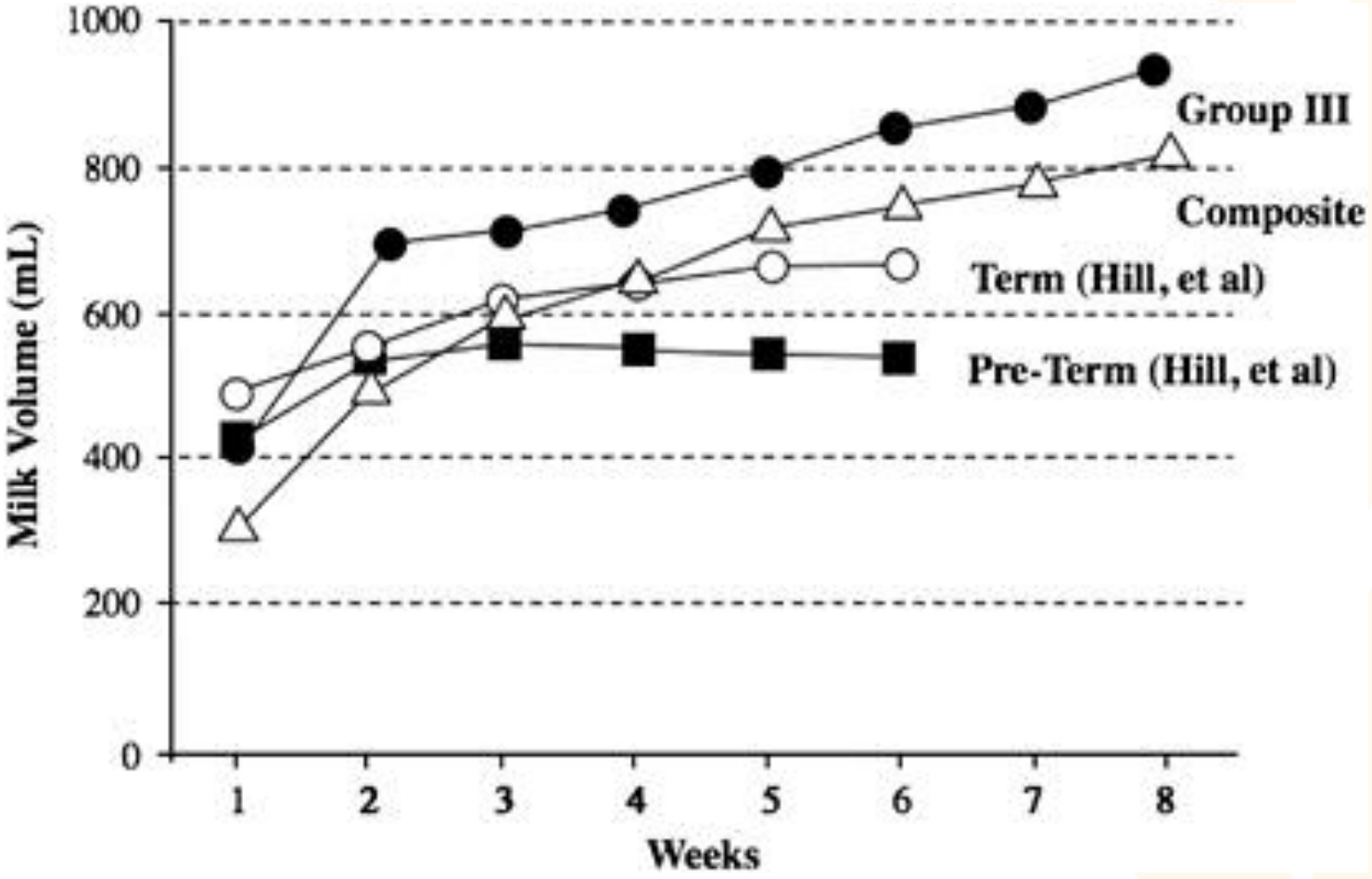
1) The importance of exclusive breastfeeding
2) How to maintain lactation for exclusive breastfeeding for about 6 months
3) Criteria to assess if the baby is getting enough breast milk
4) How to express, handle, and store breast milk, including manual expression
5) How to sustain lactation if the mother is separated from her infant or will not be exclusively breastfeeding after discharge

Know How to Teach Hand Expression



http://newborns.stanford.edu/Breastfeeding/HandExpression.html

Increased Milk Volume with HE followed by HOM



Cooper Medical School of Rowan University

J. Morton et al. J Perinatology 2009

STEP 6

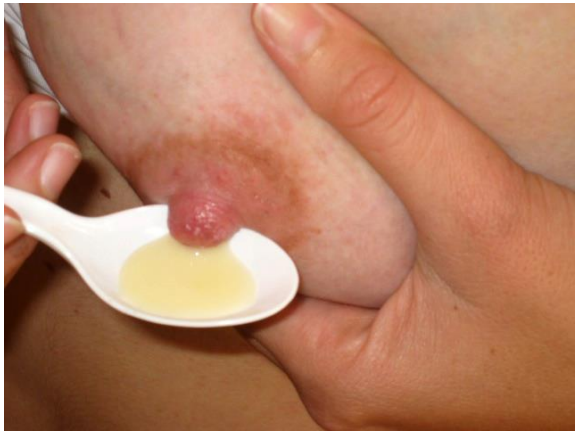
Give newborn breastfed infants no food or drink other than breastmilk, unless medically indicated.

- Understand physiology and define medical indications to supplement
- Determine if nurse and/or physician needs to order supplements with formula
- Revise protocols

Over-feeding in early life

- Exclusive breastfeeding:
- 15-30cc day 1
- 30-150cc day 2

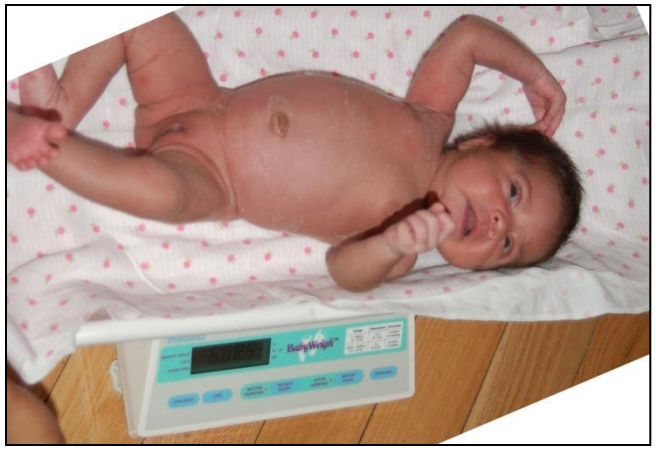
- Exclusive formula feeding:
- 60-90 cc every 2 to 3 hours each day; approx 24 ounces (720cc)



≠

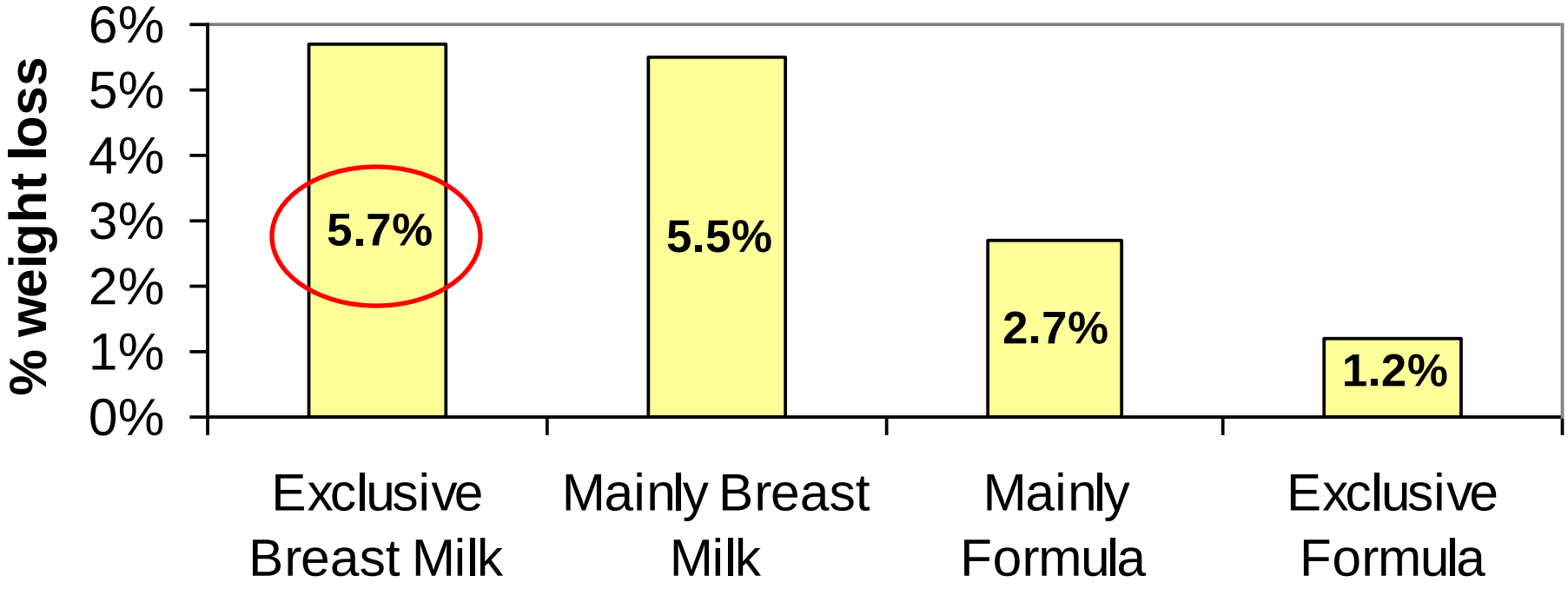
Weight Loss in an Inner City Baby-Friendly Hospital

- Average infant weight loss: 4.9% (range 0.00%-9.9%)
- Weight loss >7% 20% (23/118)
- Weight loss >8% 7% (8/118)
- Weight loss >10% 0 infants



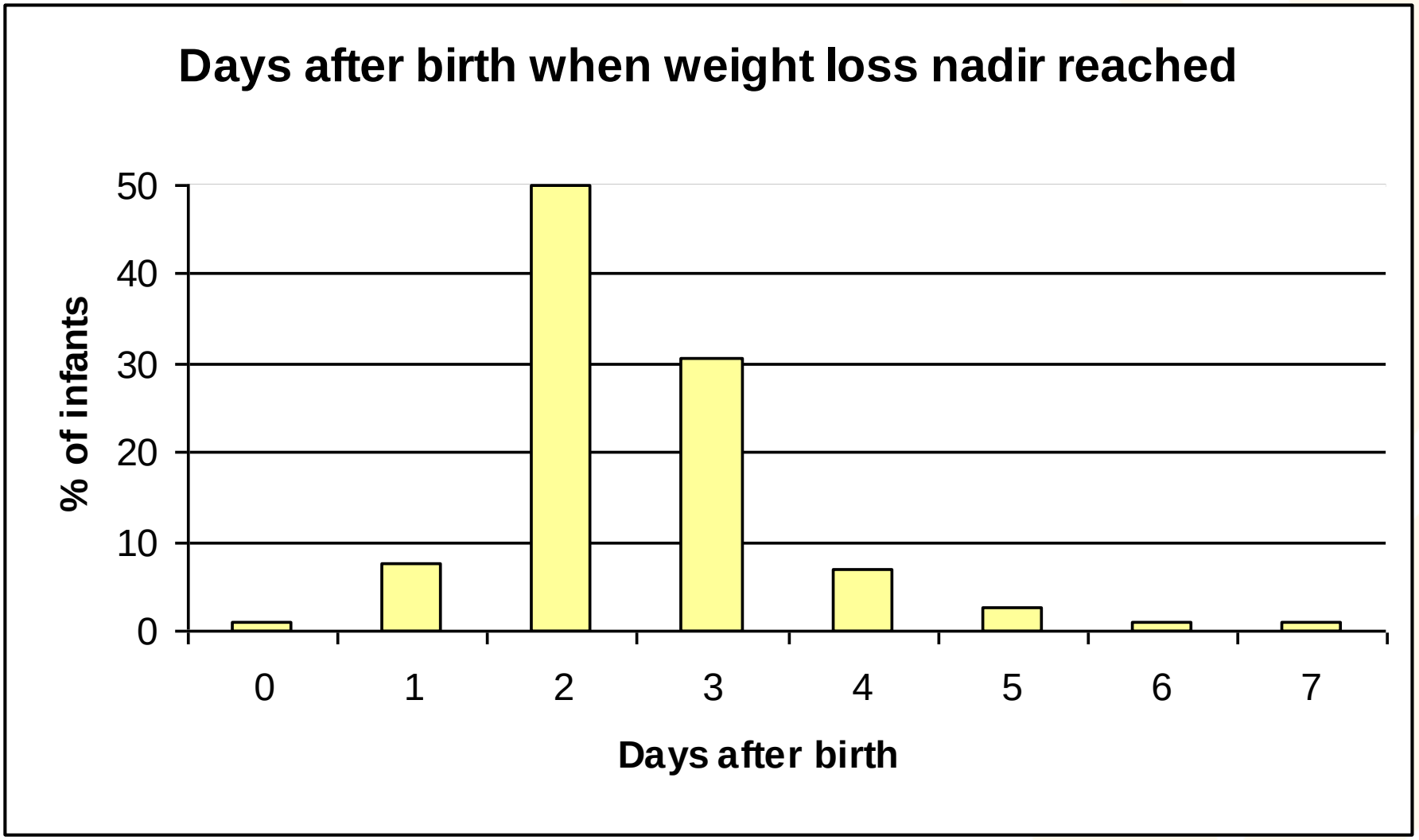
Grossman X, Feldman-Winter, L, Merewood A. *J Amer Nutrit and Diet*. Mar 2012

Results by Feeding



Infant weight loss nadir was significantly associated with feeding category (p=0.00)

Grossman X, Feldman-Winter, L, Merewood A. *J Amer Nutrit and Diet*. Mar 2012

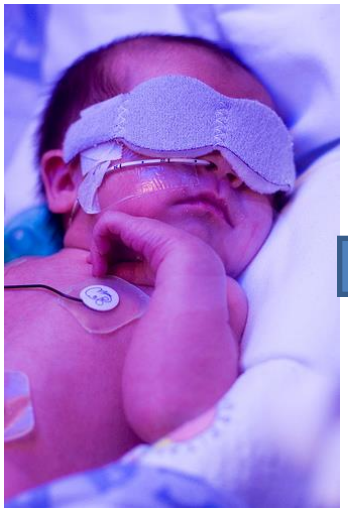


58.5% reached weight loss nadir by 2 days after birth

What about jaundice? Why do breastfeeding infants become jaundiced?

- Breastfed infants have prolonged period of physiologic jaundice
- Difficulties establishing breastfeeding will increase the likelihood of hyperbilirubinemia, not physiologic
- “starvation jaundice”
- Distinguish between early non-breastfeeding jaundice vs. breastmilk jaundice

Revise Approach to Jaundice



- Establish new protocols
- Buy-in to maintain exclusive BF
- Consistent approach

Szucs K. et al. Pediatrics . 2013;131:e1982.

Screening and Management of Postnatal Glucose Homeostasis in Late Preterm and Term SGA, IDM/LGA Infants

[(LPT) Infants 34 – $36^{6/7}$ weeks and SGA (screen 0-24 hrs); IDM and LGA ≥34 weeks (screen 0-12 hrs)]

Symptomatic and <40 mg/dL ⟶ IV glucose

ASYMPTOMATIC

Birth to 4 hours of age

INITIAL FEED WITHIN 1 hour
Screen glucose 30 minutes after 1st feed

Initial screen <25 mg/dL

Feed and check in 1 hour

- <25 mg/dL ↓ IV glucose*
- 25–40 mg/dL ↓ Refeed/IV glucose* as needed

4 to 24 hours of age

Continue feeds q 2-3 hours
Screen glucose prior to each feed

Screen <35 mg/dL

Feed and check in 1 hour

- <35 mg/dL ↓ IV glucose*
- 35 – 45 mg/dL ↓ Refeed/IV glucose* as needed

Target glucose screen ≥45 mg/dL prior to routine feeds

* Glucose dose = 200 mg/kg (dextrose 10% at 2 mL/kg) and/or IV infusion at 5–8 mg/kg per min (80–100 mL/kg per d). Achieve plasma glucose level of 40-50 mg/dL.

Symptoms of hypoglycemia include: Irritability, tremors, jitteriness, exaggerated Moro reflex, high-pitched cry, seizures, lethargy, floppiness, cyanosis, apnea, poor feeding.

AAP Committee on Fetus and Newborn. Pediatrics.*127(3); 2011:575 -579*

STEP 7

Practice rooming-in - allow mothers and infants to remain together twenty-four hours a day.

Continuous rooming-in

- Guideline: separation of mothers and infants will occur only if medically indicated and justification is documented in the chart.
- Pediatricians perform normal newborn exams in the room with the mother
- Patient and family centered care
- Family centered teaching rounds

Procianoy. *J Top Pediatr* 1983;29:112
Perez-Escamilla. *Am J Public Health* 1994;84:89

STEP 8
Encourage unrestricted breastfeeding

- Mothers are taught to recognize their infant's feeding cues and feed on-demand.
- No restrictions on frequency or duration of breastfeeding.
  - Step 7 facilitates Step 8
  - On-demand or cue-based
  - **NOT every 2 to 3 hours!!**
  - AAP recommends 8-12 times per day (tally feeds)
  - **NOT for 10 or 15 minutes each side**

"8 or more in 24"

STEP 9
Give no pacifiers or artificial nipples to breastfeeding infants

- No pacifiers given unless medically necessary
- Educate about why not
- Explain relationship of pacifiers and SIDS protection, AAP statement to introduce after breastfeeding is established at about 1 month
- Families may provide own pacifiers if they insist on using one but document education

Why No Bottles?

- Sensitive window of learning to suckle
- Artificial nipple or bottle supplementation to breastfeeding newborns may lead to a phenomenon known as ‘nipple confusion’ that may interfere with successful breastfeeding
- The strongest evidence is from premature newborns
- Collins C, Ryan P, Crowther C, McPhee A, Paterson S, Hiller J. Effect of bottles, cups, and dummies on breast feeding in preterm infants: A randomised controlled trial. Br Med J. 2004;329:193–8.

Origins of Nipple Confusion

- The notion of nipple confusion was initially introduced in the WHO/United Nations Children's Fund 1989 statement, which later became the basis for the United Nations Children's Fund "Baby-friendly hospital initiative" and the "Ten steps to successful breastfeeding"
- Artificial teats may confuse the infant's oral response because less work is needed to suck on an artificial teat, which might eventually decrease the child's desire to suck on the breast

Where's the Evidence?

- Canadian Study examined hcp's opinions with two questions:
- "Do you think that giving frequent bottle feeds leads to the 'nipple confusion' phenomenon?" and "Do you think that giving even one bottle feed leads to the 'nipple confusion' phenomenon?"
- Bottle feeding supplements was common, NGT feeding common in the level II nursery and among alternative devices used the most common were cup and finger feeding

Al-Sahab B, et al. Paediatr Child Health. 2010 Sep;15(7):427-31.

Beliefs about Method Used

- Only 15.0% of the level II nurses agreed that frequent bottle feeds lead to the nipple confusion phenomenon
- Compared with 44.4% of the postpartum nurses and 56.2% of the pediatricians
- Findings demonstrated considerable variation in the practices and beliefs surrounding supplementation methods

Al-Sahab B, et al. Paediatr Child Health. 2010 Sep;15(7):427-31.

The RCT

- **Randomized clinical trial of pacifier use and bottle-feeding or cup feeding and their effect on breastfeeding.**
- Supplemental feedings, regardless of method (cup or bottle), had a detrimental effect on breastfeeding duration.
- There were no differences in cup versus bottle groups for breastfeeding duration.
- Effects were modified by the number of supplements
- Among infants delivered by cesarean, cup feeding significantly prolonged exclusive, full, and overall breastfeeding duration

Howard CR, et al Pediatrics. 2003 Mar;111(3):511-8.

Effects in the LPI

- **Effect of Cup Feeding and Bottle Feeding on Breastfeeding in Late Preterm Infants**
- Infants randomized to cup vs. bottle more likely to be exclusively breastfed, but no difference in overall breastfeeding and no difference in LOS

Table 3. Feeding Practices at Discharge and at 3 and 6 Months of Age (n = 522).

	Bottle Feeding (n = 268), No. (%)	Cup Feeding (n = 254), No. (%)	*P* Value
Any breastfeeding at discharge	244 (91)	252 (99)	< .001
Any breastfeeding at 3 months	221 (82)	223 (88)	.088
Any breastfeeding at 6 months	158 (59)	176 (69)	.015
Exclusive breastfeeding at discharge	123 (46)	184 (72)	< .0001
Exclusive breastfeeding at 3 months	126 (47)	196 (77)	< .0001
Exclusive breastfeeding at 6 months	113 (42)	146 (57)	< .001

Yilmaz G. et al. J Hum Lact. 2014 May;30(2):174-9.

Some Practical Issues

- Babies will likely consume less volume if they are not bottle fed
- You can deliver small aliquots via syringe feeding
- Consider expressed mother's milk since you are not expecting large volumes

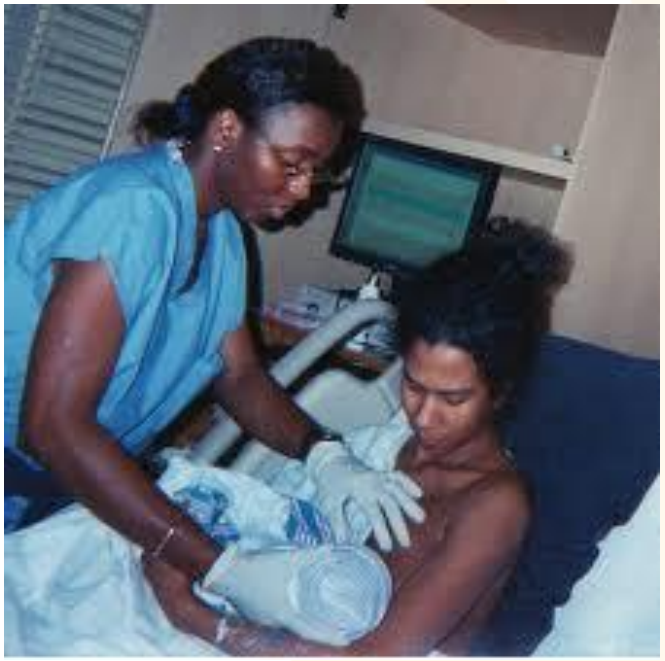
STEP 10

Foster the establishment of breastfeeding support groups and refer mothers to them on discharge from the hospital or birthing center.

Pediatricians can identify and collaborate with Community partners, establish mechanism for Referrals and coordination of care.

Conclusions

- The BFHI is evidence based and helps to increase exclusive and overall breastfeeding
- Physicians are necessary for implementation of the BFHI
- Interdisciplinary care models works best
- Collaborate in key!



“Well done is better than well said.” - Benjamin Franklin