Impact of Birth Practices on the Breastfeeding Dyad

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Bright Future Lactation Resource Centre

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Disclosure

- I am the sole author of *Impact of Birthing Practices on Breastfeeding, Second Edition* and receive partial royalties on sales of this book.
  - Mary Kroeger, CNM, MPH was the co-author for the first edition; her estate receives royalties on sales of this book.
- I am the liaison from the International Lactation Consultant Association (ILCA) to the World Health Organization's *Baby-Friendly Hospital Initiative* and receive reimbursement from ILCA for my travel expenses when representing ILCA to WHO.

For Breastfeeding to Succeed

The baby is able to feed: able to cue, suck, swallow, and breathe smoothly

The mother is producing milk and willing to bring her baby to breast many times a day and night

Breastfeeding is comfortable for both

Surroundings support the dyad

What can go wrong during birth?

Mechanical forces disrupt body parts

Chemical (drug) sequelae

Injuries to mother and baby

Psychological impact on relationships

Long-term effects documented

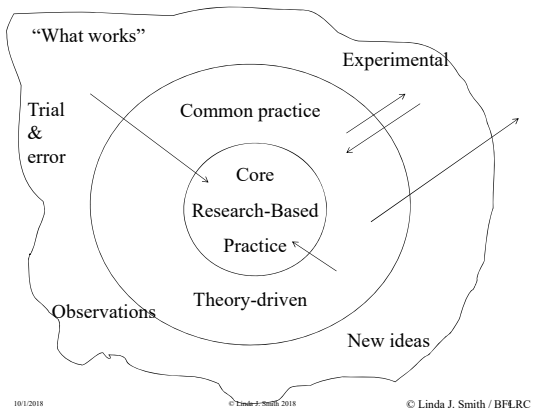
Birth practices affect breastfeeding

This isn't new!

"Alert and active participation by the mother in childbirth is a help in getting breastfeeding off to a good start" (LLLI, 1985 & earlier)

WHO Fortelaza 1985

WHO-UNICEF Joint Statement, 1989



What Evidence Really Counts?

Few studies of birth practices address breastfeeding outcomes

Few studies of breastfeeding control for birth practices

Professional segmentation

Politics of Research

Funding

WHO/UNICEF Global Strategy 2003

"Mothers and babies form an inseparable biological and social unit; the health and nutrition of one group cannot be divorced from the health and nutrition of the other."

How does birth affect BF?

Mother's confidence & trust in ability to birth = confidence in her ability to breastfeed

Attitudes matter

"You can do this!"

Setting the stage for BF problems

- Laboring alone
- In bed, supine
- Immobile
- Food & drink withheld; IV fluids
- Chemical induction and/or augmentation
- Narcotics for pain

Risk factors for BF problems

Chart review of 93 babies presenting with poor suck:

- Epidural & narcotics
- Induction
- Cesarean surgery
- Forceps delivery
- Vacuum extractor
- Long difficult labor, esp. OP presentation

BFHI 2009 - Mother-friendly care

- Hospital policies require mother-friendly labour and birthing practices and procedures including:
  - Encouraging women to have companions of their choice.
  - Allowing women to drink and eat light foods during labour, as desired.
  - Encouraging women to consider the use of non-drug methods of pain relief.
  - Encouraging women to walk and move about during labour, if desired, and assume positions of their choice while giving birth.
  - Care that does not involve invasive procedures

Companion of the Mother's Choice

NO STUDY HAS CONFIRMED THE SAFETY AND EFFICACY OF LABORING ALONE

How did we get here?

Women have always had labor companion(s)

Obstetric care replaced midwives - 1840s

Birth moved into hospitals by the late 1940's

- Companions prohibited – "sterile" concept

1980: Sosa, Kennell and Klaus' research

Doula-training organizations multiply

Staff reactions mostly positive

Breastfeeding Outcomes
Strongly supports breastfeeding

Reduction in labor length & complications

- 50% fewer Cesareans (p<.002)
- 25% shorter labors (p<.001)
- 30% less Pitocin inductions (P<.001)
- 30% less analgesia, vacuum extractors
- 40% fewer forceps deliveries
- Less meconium aspiration, asphyxia

•Mother cares for baby as she was cared for in labor
•More exclusive breastfeeding
More flexible feeding interval, finds mothering easy
Less "feeding problems, baby with poor appetite"

Freely move about in labor and birth

"Gravity works"

NO STUDY HAS CONFIRMED THE SAFETY AND EFFICACY OF HORIZONTAL AND/OR IMMOBILE POSITIONS FOR LABOR OR BIRTH

How did we get here?

Women have always moved freely, and usually choose upright positions for birth

1857: Simpson introduced ether (chloroform)

1913: DeLee promoted lithotomy

1979: Caldeyro-Barcia's research on upright positions

Staff responses: mixed

Breastfeeding outcomes

Horizontal position = longer 1st stage, poorer fetal oxygenation

Horizontal position = longer 2nd stage, excess molding, more fetal distress, more instruments & surgery

Long labors = delayed lactogenesis (Chen)

Little *direct* research on BF outcomes

Eat and Drink Freely

"Labor is work"

NO STUDY HAS CONFIRMED THE SAFETY AND EFFICACY OF WITHHOLDING FOOD AND DRINK DURING LABOR AND BIRTH

How did we get here?

Women have always consumed food and drink until hard labor begins, and liquids thereafter

1857: Simpson introduced ether (chloroform)

1946: Mendelson studied gastric aspiration

- 44,016 births with general anesthesia
  - 66 aspirations (0.15%) (40 aspirated liquid, 5 aspirated food)
  - 2 deaths (0.005%) (probably from solid food)

*This was **before** intubation, cricoid pressure, H2 antagonists, regional anesthesia, and training of OB anesthesiologists was widespread*

Mendelson, Curtil L. 1946. "The aspiration of stomach contents into the lungs during obstetric anesthesia." *American Journal of Obstetrics and Gynecology no. 52:191-206.*

Light eating & drinking in labor
No direct research re: breastfeeding

- Labor is vigorous exercise / work
- Fasting & starvation slows, complicates labor
- "Most obstetric anesthesiologists agree that a rigid NPO policy in labor is no longer appropriate"
  - O'Sullivan, *Anesthesiol Clin North America* 2003
- "Consumption of a light diet during labour did not influence obstetric or neonatal outcomes in participants, nor did it increase the incidence of vomiting."
  - O'Sullivan, BMJ 2009
- Many countries: rare to withhold food and drink unless woman is at high risk and C/S likely

Cambodia 2001 - Offering oral fluids was "new" policy for these midwives (MK)

Induction of labor

WHO: 10% induction rate for justifiable medical reasons

Chance or Choice? How did we get here?

Simkin: "Need to control parturition is as old as birth"

This isn't new!

- The U.S. Food and Drug Administration disapproved of elective inductions in the 1970s due to iatrogenic prematurity, overcrowded neonatal intensive care units, and huge unnecessary costs

Increased risk of infant death

- Kramer, M. S., Demissie, K., Yang, H., Platt, R. W., Sauve, R., & Liston, R. (2000). The contribution of mild and moderate preterm birth to infant mortality. Fetal and Infant Health Study Group of the Canadian Perinatal Surveillance System. *JAMA, 284*(7), 843-849.

Risks of inducing labor

2X the risk of Cesarean in primiparas

Synthetic oxytocin (syntocinon) = stronger CTX

- ↑ pressure on baby's head
- ↑ maternal pain
- ↑ infant pain ?

Less-mature baby

WHO: 10% induction medically justified

US: 23.8% in 2010, 23.7% in 2011 and (23.3%) in 2012

The baby's experience matters

"Minimizing pain and discomfort to the infant during birth seems to be of importance in reducing the risk of committing suicide by violent means as an adult."

"Birth events likely to cause pain to the infant: non-vertex presentation, meconium stained fluid and membranes, instrumental delivery or internal version, resuscitation, complications requiring ward care (separation)"

- *Jacobson B, Bygdman M. BMJ 1998;317:1346-9*

Cranial bones & dura move

22 bones / bony segments in infant

Articulate at 34 sutures / places

Dura connects cranial structures, spinal column, sacrum

Twists during Cardinal movements

Infant transition to extrauterine environment

Realignment of bones & dura

Aided by sucking, breastfeeding, breathing, crying, movement

Usually resolves in 1-2 weeks

Excess forces to baby's head

Induction & augmentation

Pushing on fundus

Supine position

Immobility

Instruments and Cesarean surgery

Result: more & abnormal molding

Indirect outcomes

Synthetic oxytocin = stronger contractions
- ↑ pressure on baby's head
- Increased cranial molding, probably stressful

↑ infant pain ?

↑ maternal pain
- ↑ Maternal desire for pain relief drugs
- Reduced natural endorphins in mother & baby/fetus

Less-mature baby
- "Mild- and moderate-preterm birth infants are at high relative risk for death during infancy and are responsible for an important fraction of infant deaths" (Kramer, JAMA 2000)
- Higher risk of Cesarean (

More / excessive molding

Facial and/or jaw asymmetry
- Wall, V., & Glass, R. (2006). Mandibular Asymmetry and Breastfeeding Problems: Experience From 11 Cases. *J Hum Lact, 22(3), 328-334.*

Torticollis
- Stellwagen, L., Hubbard, E., Chambers, C., & Jones, K. L. (2008). Torticollis, facial asymmetry and plagiocephaly in normal newborns. *Arch Dis Child, 93(10), 827-831.*
- Stellwagen, L. M., Hubbard, E., & Vaux, K. (2004). Look for the "stuck baby" to identify congenital torticollis. *Contempory Pediatrics, 21(May), 55.*

BF outcomes – one new study

Brimdyr, K., Cadwell, K., Widström, A.-M., Svensson, K., Neumann, M., Hart, E. A., . . . Phillips, R. (2015). The Association Between Common Labor Drugs and Suckling When Skin-to-Skin During the First Hour After Birth. *Birth, n/a-n/a. doi: 10.1111/birt.12186*

https://www.youtube.com/watch?v=gX44xcS995k

"Results suggest that intrapartum exposure to the drugs fentanyl and synthetic oxytocin significantly decreased the likelihood of the baby suckling while skin-to-skin with its mother during the first hour after birth."

Clinical implications of induction

Immaturity: more respiratory problems

Difficulty coordinating suck/swallow/breathe

Effect on lactogenesis ?
- May contribute to delayed lactogenesis

Head pain from excess forces?

More drugs to metabolize

Begins a cascade of interventions

Reduces chance for unassisted vaginal birth (Tracy)

Instruments = more injuries & insults

Forceps
- Compromise trigeminal nerve, parietal bones
- Bruising & pain

Vacuum extractor
- Disrupt parietals, occiput, internal bones & dura
- Brain bleeds

Cesarean: pressure at cranial base

Cesarean + vacuum

- Baby couldn't latch, suck or get milk at breast
- Baby chewed and flattened mother's nipple
- Mother stopped breastfeeding & blamed herself

Research Evidence

"Vacuum vaginal delivery was a strong predictor of early cessation of breastfeeding"

- Hall RT, Mercer AM, Teasley SL, et al. 2002. A breastfeeding assessment score to evaluate the risk for cessation of breastfeeding by 7 to 10 days of age. *J Ped* 141:659–664.

Poor feeding is one sign of intercranial bleeding

- Avrahami E, Amzel S, Katz R, et al. 1996. CT demonstration of intracranial bleeding in term newborns with mild clinical symptoms. *Clin Radiol* 51:31–34.

Research Evidence (cont.)

Tappero: "Forceps use can cause bruising and nerve damage to the sides of the infant cranium, causing the jaw to deviate to the paralyzed side when the mouth is open." *Physical Assessment of the Newborn, 1993.*

Evans: "The volume of milk transferred to infants born by caesarean section was significantly less than that transferred to infants born by normal vaginal delivery on days 2 to 5 ($p < 0.05$)." *Arch Dis Child Fetal Neonatal Ed* 2003;88:F380–F382.

Vacuum and jaundice

"All infants exposed to vacuum assisted delivery devices will have a caput succedaneum" – FDA 1998

"Cephalohematoma or significant bruising" is a 'major risk factor' for hyperbilirubinemia and kernicterus" – AAP 2004

Jaundiced babies feed poorly; poor feeding can cause or exacerbate jaundice

Misalignment may persist

Epidural = 4x more OP presentations

"*A strong association of epidural with fetal occiput posterior position at delivery represents a mechanism that may contribute to the lower rate of spontaneous vaginal delivery consistently observed with epidural*."

Lieberman E. Obstet Gynecol 2005; 105 (5 Pt 1):974-82

Instruments affect mother

Forceps = more vaginal injury, pain

Surprise / emergency C/S = role in maternal PTSD reactions

Vacuum = possible role in maternal reactions to birth (?)

Unexpected appearance of injured baby = ?? Effect on bonding?

Elective Cesarean Surgery

Any Cesarean Surgery

All Cesareans increase risk

Poorer infant outcomes
- More separation, suctioning, resuscitation
- More formula supplementation
- Poorer bonding with mother
- Reduced milk transfer days 2-5 (Evans, 2003)

More maternal pain & drugs
- Longer recovery, surgical recovery
- Delayed onset of lactogenesis
- More difficulty starting breastfeeding
- Adhesions and late-onset problems
- ***3X the risk of maternal death (2006)***

Clinical Implications of Cesarean

WHO: 10 – 15% probably medically justified

NIH: Trial of Labor is a reasonable option for many pregnant women with a prior low transverse uterine incision. *NIH Consensus Development Conference: Vaginal Birth After Cesarean: New Insights* March 8–10, 2010

ACOG: VBAC guidelines 2010; Cesarean prevention guidelines 2014

Watch for possible infant respiratory and suck problems
- Effect on direct breastfeeding; increased need for feeding devices

Watch for possible delayed onset of lactation
- Prenatal expression of colostrum after 36 weeks?

Plan for extended maternal pain
- Most pain relievers are compatible with BF

Assure close skilled follow up!

Suctioning & airway management

Oral aversion

Superstimulus

Triggers poor tongue movements

Injury to oropharanyx (L. Black)

Mucus has a purpose (M. Klaus)

Research on suctioning

Lack of benefit

- "Routine intrapartum oropharyngeal and nasopharyngeal suctioning of term-gestation infants born through MSAF does not prevent MAS. Consideration should be given to revision of present recommendations." Vain et al, *Lancet 2004;364 (9434):597-602*

Long term negative consequences

- "Noxious stimulation caused by gastric suction at birth may promote the development of long-term visceral hypersensitivity and cognitive hypervigilance, leading to an increased prevalence of functional intestinal disorders in later life." Anand, Runeson, Jacobson, *J Pediatr 2004;144:449-54*

In many countries, routine suctioning is no longer practiced.

Affect suck *if done before 1st BF*

Separation from mother for **any reason**

Weighing & Measuring

Vitamin K injection

Heel stick for metabolic tests

Circumcision

Infant hypothermia

Epidural Effects on Infant Neurobehavior, Hormonal Effects

Drugs for pain relief

ALL cross the placenta (Loftus,1995)

IV or Epidural: rapid transfer
- 15 seconds to 1-2 minutes

Epidural: higher absolute dose than IV

Highly lipid (fat) soluble

Redistribute to fetus/infant brain
- can't always find in cord blood

All delay the onset of lactation !
- Lind, J. N., Perrine, C. G., & Li, R. (2014). Relationship between Use of Labor Pain Medications and Delayed Onset of Lactation. *Journal of Human Lactation, 30(2), 167-173*

Epidural rates continue to rise

Overall, 2008 births:	61%
White non-Hispanic	68%
Black and Asian	62%
Hawaiian	53%
Hispanic	48%
Native American/Alaska	42.1%

Source: National Vital Statistics Report, vol. 59, No. 5, April 2011

Pediatric half-life of drugs matters

Bupivicaine: 8.1 hours

Mepivacaine: 9 hours

Fentanyl: up to >18 hours, dose-related

~5 half-lives to clear from baby

Observed effects for at least 30 days *(Sepkoski, 1992)*

"HE'S NOT SLEEPY – HE'S DRUGGED!"

All drugs reach the baby… even local lidocaine

"It has not previously been reported that the use of analgesia via pudendal block has an adverse effect on the initiation of developing breastfeeding behavior including sucking."

Ransjo-Arvidson, A., Matthiesen, A., Lilja, G., Nissen, E., Widstrom, A., & Uvnas-Moberg, K. (2001). Maternal analgesia during labor disturbs newborn behavior. *Birth, 28, 5 - 12.*

Risks of epidural analgesia

Poor progress of labor (esp.in primips)

More oxytocin augmentation

Longer second stage

Less SVD; more instrument delivery

More maternal fever

More newborn sepsis workup

Psychological:
- Less interaction with baby (Sepkoski)
- Less mastery of mothering skills (Poore)

Less maternal movement in labor
- More malpresentation, more pain

Overhydration = more edema (?)
- Supine hypotension = more fluids

More augmentation = more force on baby

More resuscitation = poor latch/suck

More instruments = more injuries

More chance of Cesarean surgery

Delayed onset of lactation (Lind 2014)

Maternal epidural risks

Bladder injury; urinary incontinence
Accidental lumbar puncture, nerve injury
Long-term backache in vaginal birth
Spinal headache, other headaches
Convulsions
Allergic shock
Respiratory paralysis
Cardiac arrest
Disempower mother's experience (Poore)

Abundant Evidence of consequences

"Among women who breast-fed previously, those who were randomly assigned to receive high-dose labor epidural fentanyl were more likely to have stopped breast-feeding 6 weeks postpartum than women who were randomly assigned to receive less fentanyl or no fentanyl."

- Beilin Y et al. Effect of labor epidural analgesia with and without fentanyl on infant breast-feeding: A **prospective, randomized, double-blind study**. *Anesthesiology* 2005, *103*(6), 1211-1217.
- Note: "high dose" was more than 150 µg fentanyl

Delayed spontaneous breastfeeding; increased formula supplementation

"Significantly fewer babies of mothers with EDA during labour suckled the breast within the **first 4 hours of life** [odds ratio (OR) **3.79**].

These babies were also more often given artificial milk during their hospital stay (OR 2.19) and fewer were fully breast fed at discharge (OR 1.79).

Delayed initiation of breast feeding was also associated with a prolonged first (OR 2.81) and second stage (OR 2.49) and with the administration of oxytocin (OR 3.28).

Key conclusions: **the study shows that EDA is associated with impaired spontaneous breastfeeding including breastfeeding at discharge from the hospital."**

- Wiklund, I., Norman, M., Uvnas-Moberg, K., Ransjo-Arvidson, A. B., & Andolf, E. (2009). Epidural analgesia: breast-feeding success and related factors. *Midwifery, 25*(2), e31-38.

Reduced warming effect of STS

"Skin temperature increased significantly (p=0.001) during the entire experimental period in the infants belonging to the control group.

The same response was observed in infants whose mothers received OT intravenously during labour (p=0.008).

No such rise was observed in infants whose mothers were given an EDA during labour.

CONCLUSION: The results show that the skin temperature in newborns rises when newborns are put skin-to-skin to breastfeed two days postpartum. This effect on temperature may be **hampered by medical interventions during labour such as EDA."**

- Jonas, W., Wiklund, I., Nissen, E., Ransjo-Arvidson, A. B., & Uvnas-Moberg, K. (2007). Newborn skin temperature two days postpartum during breastfeeding related to different labour ward practices. *Early Hum Dev, 83*(1), 55-62.
- Epidural

Hormone effects

- Reduced oxytocin
  - Rahm, V. A., Hallgren, A., Hogberg, H., Hurtig, I., & Odlind, V. (2002). Plasma oxytocin levels in women during labor with or without epidural analgesia: a prospective study. *Acta Obstet Gynecol Scand, 81*(11), 1033-1039.
- Reduced pulsatile oxytocin
  - Nissen, E., Uvnas-Moberg, K., Svensson, K., Stock, S., Widstrom, A. M., & Winberg, J. (1996). Different patterns of oxytocin, prolactin but not cortisol release during breastfeeding in women delivered by caesarean section or by the vaginal route. Early Hum Dev, 45(1-2), 103-118.
- Reduced maternal socialization; increased anxiety and aggression
  - Jonas, W., Nissen, E., Ransjo-Arvidson, A. B., Matthiesen, A. S., & Uvnas-Moberg, K. (2008). Influence of oxytocin or epidural analgesia on personality profile in breastfeeding women: a comparative study. *Arch Womens Ment Health, 11*(5-6), 335-345.
- Lowered endogenous oxytocin with epidural + oxytocin infusion
  - Jonas, W., Johansson, L. M., Nissen, E., Ejdeback, M., Ransjo-Arvidson, A. B., & Uvnas-Moberg, K. (2009). Effects of Intrapartum Oxytocin Administration and Epidural Analgesia on the Concentration of Plasma Oxytocin and Prolactin, in Response to Suckling During the Second Day Postpartum. *Breastfeed Med, 4*(2), 71-82

Infant has beta-endorphins

Rise significantly in third trimester

Increase >4 cm dilation (normal labor)

Movement through pelvis is stressful

Induction, instruments, C/S = excess pressure on infant head and body

Potent pain-relief

- "beta-endorphin is 18 to 33 times more potent than morphine"
- Loh, *Proc Natl Acad Sci USA* 1976

Labor drugs & endorphins

Fentanyl and bupivicaine block ***maternal*** endorphins

Epidural drugs block ***infant*** endorphins

Elective C/S blocks ***infant*** endorphins
- Therefore …

Baby is defenseless against normal forces

Mechanical forces cause even MORE pain

Protections via breastfeeding

Colostrum has twice the amount of beta-endorphin as mother's blood

Colostrum & milk endorphins remain elevated at least 10 days (Zanardo, 2001)

Levels are even higher for preterm births
- ***BUT…***

Elective C/S delivery and epidural drugs significantly ***lower milk endorphin levels***

More hormone responses

Beta-endorphins in BABY affected by drugs

Beta-endorphins in MILK affected by drugs

Oxytocin responses blocked by drugs; affect bonding and more

Separation triggers stress responses
- Both mother and baby
- Permanent biological changes – increased cortisol → stronger and quicker stress responses

Cumulative effect of interventions

"RESULTS: We observed increased rates of operative birth in association with each of the interventions offered during the labour process. For first time mothers the association was particularly strong.

CONCLUSIONS: This study underlines the need for better clinical evidence of the effects of epidurals and pharmacological agents introduced in labour.

At a population level it demonstrates the magnitude of the fall in rates of unassisted vaginal birth in association with a cascade of interventions in labour and interventions at birth particularly amongst women with no identified risk markers and having their first baby."

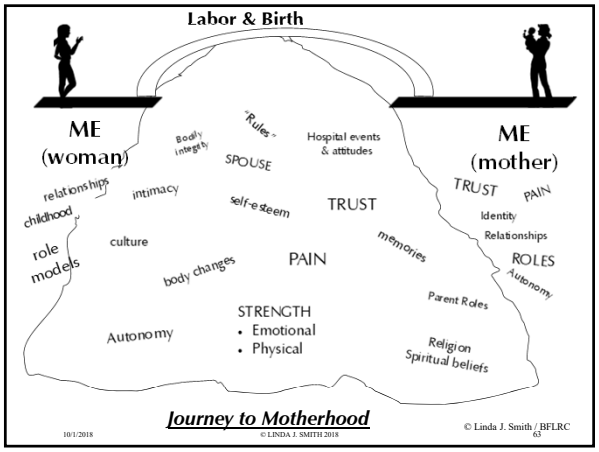
- Tracy, S. K., Sullivan, E., Wang, Y. A., Black, D., & Tracy, M. (2007). Birth outcomes associated with interventions in labour amongst low risk women: a population-based study. *Women Birth, 20*(2), 41-48.

Traumatic birth impedes BF

"RESULTS: Eight themes emerged about whether mothers' breast-feeding attempts were promoted or impeded. These themes included (a) proving oneself as a mother: sheer determination to succeed, (b) making up for an awful arrival: atonement to the baby, (c) helping to heal mentally: time-out from the pain in one's head, (d) just one more thing to be violated: mothers' breasts, (e) enduring the physical pain: seeming at times an insurmountable ordeal, (f) dangerous mix: birth trauma and insufficient milk supply, (g) intruding flashbacks: stealing anticipated joy, and (h) disturbing detachment: an empty affair.

CONCLUSIONS: The impact of birth trauma on mothers' breast-feeding experiences can lead women down two strikingly different paths. One path can propel women into persevering in breast-feeding, whereas the other path can lead to distressing impediments that curtailed women's breast-feeding attempts."

- Beck, C. T., & Watson, S. (2008). Impact of birth trauma on breast-feeding: a tale of two pathways. *Nurs Res, 57*(4), 228-236.



Birth rituals convey values

All cultures have birth rituals

Rituals have two purposes
- Rational, technical, realistic
- Communicative, "magical"

North-American birth initiates women into a technocratic society (*Davis-Floyd)*
- Body = machine
- Mind-body separation
- Linear, hierarchical relationships
- Distrust of female, natural, instincts

What's the rush for bathing?

"Before the bath was delayed, infants were bathed at an average of 2.4 hours of life. Afterward, infants were bathed at an average of 13.5 hours of life.

"In-hospital exclusive breastfeeding rates increased from 32.7% to 40.2% ($p < 0.05$) after the bath was delayed.

"The odds of breastfeeding initiation were 166% greater for infants born after the intervention than for infants born before the intervention (AOR = 2.66; 95% CI 1.29, 5.46).

Conclusions: "In our cohort, a delayed newborn bath was associated with increased likelihood of breastfeeding initiation and with increased in-hospital breastfeeding rates."
- Preer, G., Pisegna, J. M., Cook, J. T., Henri, A.-M., & Philipp, B. L. (2013). Delaying the Bath and In-Hospital Breastfeeding Rates. *Breastfeeding Medicine, 8(6), 485-490.*

Surgery during birth

Episiotomy: more pain
- Limits comfortable positions for feeding
- Medications
- Psychological impact - violation

Cesarean: pain, infection, immobility
- Separation =bonding delayed, affected
- Antibiotics = more nipple thrush
- Psychological, esp. if unconscious

Perinatal origin of adult self-destructive behavior

- Perinatal events – adolescent suicide (Salk, 1985)
- Suicide method – birth events (Jacobsen, 1987)
  - Asphyxia deaths – asphyxia at birth
  - Violent mechanical suicide – mechanical birth trauma
  - Drug addiction – opiates / barbiturates in labor
- Labor pain meds – amphetamine addiction (Jacobson, 1988)
- Opiates in labor – opiate addiction in adults (Jacobson, 1990)
- Fentanyl in labor – imprinting?
  - Brimdyr, K., & Cadwell, K. (2018). A plausible causal relationship between the increased use of fentanyl as an obstetric analgesic and the current opioid epidemic in the US. *Medical Hypotheses, 119, 54-57.*

Injured, drugged babies feed poorly

- Damaged nipples = pain, infection
- Poor feeding = hungry, fussy baby
  - undermines mom's confidence, behaviors
- Poor feeding = retained milk, low supply
- Need even more equipment (pumps) and help in establishing breastfeeding

Practice changes

SOLUTION: Mother-Friendly Practices (BFHI 2009)

- Continuous support in labor (doula, family, friend)
- Light foods & fluids during labor
- Move about freely including delivery
- Non-drug pain relief
- Avoid unnecessary interventions

Results of the BFHI on birth practices

Ukraine: "When MFM was introduced, the OB community changed practices 'from the top down' in 6 months"

- *Dr. Elena Sherstyuk and Dr. Lidiia Romanenko, June 2008, WHO biannual meeting of BFHI National Coordinators, Geneva*

2018 WHO Guidance

WHO recommendations Intrapartum care for a positive childbirth experience

http://www.who.int/reproductivehealth/publications/intrapartum-care-guidelines/en/

http://www.who.int/reproductivehealth/topics/maternal_perinatal/intrapartum-care-infographics/en/

Recovery and Restoration

Recovery and restoration

Immediate and uninterrupted skin-to-skin contact "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." BFHI Step 4

24-hour rooming-in with safe bedding-in
- BFHI Step 7

Lactation support from skilled provider teams

Follow-up care & support in the community
- BFHI Step 10

Support the mother!

Listen to mothers tell their birth story *until they don't need to tell it any longer*

Provide sensitive lactation support as long as mother wants / needs help

Help her start, maintain, or wind down BF

Document, share evidence with all MDs

Other?

Be prepared for difficulties

Immediate & uninterrupted Skin-to-Skin

Begin hand expression by 1-2 hours PP

Donor milk available on prescription

Keep mothers and babies together 24/7

Safe bedsharing

Close skilled follow-up (teams)

- During and after hospital stay
- Ongoing community support (LLL)

Role of BF helpers

- Document labor profiles of difficult breastfeeding situations and discuss with providers
- Request joint discussions on problem cases and investigate the possible reasons and contributing factors for BF difficulties
- Communicate and collaborate with obstetric and pediatric physicians, midwives and nurses
- Form / join / connect local birth & breastfeeding coalitions

Community breastfeeding activist and baby, Malawi (MK)

For Breastfeeding to Succeed

The baby is able to feed: able to cue, suck, swallow, and breathe smoothly

The mother is producing milk and willing to bring her baby to breast many times a day and night

Breastfeeding is comfortable for both

Surroundings support the dyad

The good news

Breastfeeding is increasing

More research on birth & breastfeeding

Non-drug pain relief is effective

Birth matters for best breastfeeding outcomes

Summary

Failure to breastfeed is harmful

Cesarean surgery can negatively affect breastfeeding initiation

All labor pain-relief drugs including epidurals negatively affect infant neurobehavior and onset of milk production

Cumulative effects of interventions on BF

Recovery may be challenging and long

Thanks to…

LLLI for realizing that *birth matters* 60 years ago!

UNICEF and WHO for *Recommendations for Intrapartum Care for a Positive Childbirth Experience*

To *all of you* for thinking about this issue from now on!

Linda J. Smith, MPH, IBCLC, FACCE

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