



Picasso and Breastfeeding

Jane Morton, MD

Picasso was the avatar of Steve Jobs, because he saw elegance in simplicity. Can we apply simplicity to breastfeeding support to make a difference? Can we erase the rules, reduce the gadgets and return to a simple, consistent focus, easy to learn and easy to teach? Maybe only what really matters the most, matters at all. In these presentations, I share my thoughts on combining the latest research with the most critical, logical basic goals each new mother needs to understand, from the very first hour, regardless of the scenario of her delivery.

It's simple to make a case for change in hospital management, when up to 20% of mothers stop breastfeeding by 1 month for primarily preventable problems. Due to demographic factors and obstetrical practices, we are challenged with a growing population of at-risk dyads, primarily those born a little early, who are notorious for suffering from breastfeeding complications. These complications relate to insufficient milk production and suboptimal milk intake and account for delayed discharge, readmission and this early sharp drop off in any breastfeeding.

A simple, proactive approach to care for all dyads might reduce the number of less remedial, time consuming breastfeeding complications. A simple, proactive approach might inspire more healthcare providers, who otherwise shy away from really “being there” to help and share the marvels of becoming a new mother.

So what might this simple, preventative strategy look like? Consider reducing the goals in the first 3 days to only three: A, B and C,. A=attachment (achieving a comfortable and effective latch), B=breastmilk (stimulating a robust supply) and C=calorie (insuring the infant's optimal milk intake). Distill down the critical “grains of truth” about each goal to only two.

A =Attachment:

1. The longer the interval between birth and first feeding, the more likely a baby is to have a dysfunctional suck.
2. Poor attachment improves with uninterrupted contact and optimal milk production

B=Breastmilk production:

1. Production is time sensitive and depends on the early, frequent and effective removal of colostrum from the first hour. The more colostrum removed, especially in the first hour, the more milk a mother will produce.
2. Production, the cornerstone of breastfeeding, is the factor most strongly associated with the duration and exclusivity of breastfeeding.

C=Calorie:

1. You can never over breastfeed a baby in the first 3 days. Put another way, the more colostrum a baby receives, the less likely he/she is to suffer the complications of underfeeding (hypoglycemia, excessive weight loss, jaundice and suboptimal growth).
2. For the term infant, without complications, the needs are small; the reserves are adequate; focus can prioritize A (attachment) and B (breastmilk stimulation). But for the at-risk infant, the needs are higher. So prioritize C and B.

All three goals will be impacted by what a new mother does (or does not do) from the most important first hour after delivery. Learning prenatally the benefits of hand expression (and spoon feeding, if needed) gives expectant mothers the answer to many typical “what if” concerns and prepares her for whatever the outcome of her delivery may be. Unlike a machine, a mother’s touch is quite natural and does not suggest a problem or medicalize milk expression.

From Picasso to Steve Jobs, artists and inventors, and we as teachers, have found that keeping things simple is worth striving for. Building simplicity, repetition, and logic into a didactic setting is key. By making every first hour really count, offering simple skills for these first several days that could prevent the serious complications of insufficient milk production and suboptimal intake, we would enable each mother to exclusively breastfeed, while keeping her newborn safe.



References:

AAP's (American Academy of Pediatrics) Model Hospital Breastfeeding Policy: Safe and Healthy Beginnings: A Resource Toolkit for Hospitals and Physicians' Offices: www2.aap.org/breastfeeding/.../Hospital%20Breastfeeding%20Policy

Becker GE, Smith HA, Cooney F. Methods of milk expression for lactating women. Cochrane review 2015. http://www.cochrane.org/CD006170/PREG_methods-of-milk-expression-for-lactating-women

Bertini G, Breschi R, Dani C. Physiological weight loss chart helps to identify high-risk infants who need breastfeeding support. *Acta Paediatr* 2015; 104(10); 1024-7.

Carberry AE, Raynes-Greenow CH, Turner RM. Breastfeeding within the first hour compared to more than one hour reduces risk of early-onset feeding problems in term neonates: A cross-sectional study. *Breastfeeding Medicine* 2013 Dec; 8(6) 513-514.

Dewey KG, Nommsen-Rivers LA, Heinig MJ, Cohen RJ. [Risk factors for suboptimal infant breastfeeding behavior, delayed onset of lactation, and excess neonatal weight loss.](#) *Pediatrics* 2003;112:607-619

[DiGirolamo AM](#), [Grummer-Strawn LM](#), [Fein SB](#). Effect of maternity-care practices on breastfeeding.. *Pediatrics*. 2008 Oct;122 Suppl 2:S43-9

Dollberg S. A comparison of intakes of breast-fed and bottle-fed infants during the first two days of life. *J Am Coll Nutr* 2001;20(3):209-11

Evans KC, Evans RG, Royal R, Esterman AJ, James SL. Effect of caesarean section on breast milk transfer to the normal term newborn over the first week of life. *Arch Dis Child Fetal Neonatal Ed.* 2003;88:F380-382

Feldman-Winter L, Barone L, Milcarek B, Hunter K, Meek J, Morton J, et al. Residency curriculum improves breastfeeding care. *Pediatrics* 2010 Aug;126(2):289-97. Epub 2010 Jul 5. (www.aap.org/breastfeeding/curriculum)

Flaherman VJ, Schaefer EW, Kuzniewicz MW, Li SX, Walsh EM, Paul IM. Early Weight Loss Nomograms for Exclusively Breastfed Newborns. *Pediatrics* 2015;135(1) e16 – e23. URL: www.pediatrics.org/cgi/doi/10.1542/peds. 2014-1532.

Flaherman VJ, Kuzniewicz MW, Li S, Walsh E, McCulloch CE, Newman TB. First-day weight loss predicts eventual weight nadir for breastfeeding newborns. *Arch Dis Child Fetal Neonatal Ed.* 2013 Nov;98(6):F488-92. doi: 10.1136/archdischild-2012-303076. Epub 2013 Jul 17

[Flaherman VJ](#), [Gay B](#), [Scott C](#), [Avins A](#), [Lee KA](#), [Newman TB](#). RCT Comparing Hand Expression with Breast Pumping for Mothers of Term Newborns Feeding Poorly. *Arch Dis Child Fetal Neonatal Ed.* 2012 Jan;97(1):F18-23. doi: 10.1136/adc.2010.209213. Epub 2011 Jul 11.

[Flaherman VJ](#), [Aby J](#), [Burgos AE](#), [Lee KA](#), [Cabana MD](#), [Newman TB](#). Effect of Early Limited Formula on Duration and Exclusivity of Breastfeeding in At-Risk Infants: An RCT. *Pediatrics.* 2013 Jun;131(6):1059-65.

Furman, L. Early limited formula is not ready for prime time. *Pediatrics* 2013, June;131(6): 1182-1183.

Goyal NK, Attanasio LB, Kozhimannil KB. Hospital Care and early breastfeeding outcomes among late preterm, early term and term infants. *Birth* 2014; 41:1 330-338

Hill PD, Aldag JC, Zinaman M, Chatterton RT. [Predictors of preterm infant feeding methods and perceived insufficient milk supply at week 12 postpartum.](#) *J Hum Lact.* 2007 Feb;23(1):32-8

Hill PD, Aldag JC, Chatterton RT, Zinaman M.J. Comparison of milk output between mothers of preterm and term infants. *Hum Lact.* 2005 Feb;21(1):22-30.

Jesmin E, Chowdhury RB, Begum S, Shapla NR, Shahida SM. Postnatal Support Strategies for Improving Rates of Exclusive Breastfeeding in Case of Caesarean Baby. *Mymensingh Med J.* 2015 Oct;24(4):750-5.

*Jones E, Crossover study measuring expressed milk with and without breast massage. *Arch Dis Child Fetal Neonatal Ed.* 2001;85:F91-95

Kacica, MA., Kreiger L, Johnson GD. Breastfeeding Practices in New York State Maternity Hospitals: Results from a Statewide survey. *Breastfeeding Medicine* 2012 7(6) 409

[Kumar A](#), [Dabas P](#), [Singh B](#). Spoon feeding results in early hospital discharge of LBW babies. *J Perinatology* 2010; 30:209-217

*Larkin T, Kiehn T, Murphy PK, [Uhryniak J](#). Examining the use and outcomes of a new hospital-grade breast pump in exclusively pumping NICU mothers. [Adv Neonatal Care.](#) 2013 Feb;13(1):75-82

Lind JN, Perrine CG, Li R. Relationship between use of labor pain medications and delayed onset of lactation. *J Hum Lact.* 2014 30(2):167-73.

Lussier M, Brownell E, Proulx T, Bielecki D, Marinelli K, Bellini S, Hagadorn J. Daily breast milk volume in mothers of very low birth weight neonates: A repeated measures randomized trial of hand expression versus electric breast pump expression. *Breastfeeding Medicine* 2015

[Macdonald PD](#), [Ross SR](#), [Grant L](#), [Young D](#). Neonatal weight loss in breast and formula fed infants. *Arch Dis Child Fetal Neonatal Ed* 2003;88:F472–F476

Mangel L, Ovental A, Batscha N, Arnon M, Yakoni I, Dolberg S. Higher fat content in breastmilk expressed manually: A randomized trial. *Breastfeeding Medicine* 2015 10(7); 352-354.

McLaurin KK Hall CB, Jackson EA, Owens OV, Mahadevia PJ. Persistence of morbidity and cost differences between late-preterm and term infants during the first year of life. *Pediatrics* 2009;123:653-9

Merewood A., Morton JA. Inside Track: Using your hands to express your milk. *J Hum Lact* 2013. 29: 635

Morton, J., Hall J., Pessl, M. 5-Steps to Improve Bedside Breastfeeding Care: Proposal for a Shared, Sustainable, Proactive Model, 2013. AWHONN's *Nursing for Women's Health* Vol 17, issue number 6, pp 478-488.

[Morton J](#), [Hall JY](#), [Wong RJ](#), [Thairu L](#), [Benitz WE](#), [Rhine WD](#). Combining hand techniques with electric pumping increases milk production in mothers of preterm infants., *J Perinatol*. 2009 Nov;29(11):757-64. Epub 2009 Jul 2.

Morton J, Wong RJ, Hall JY, Pang WW, Lai C, Hartmann P, Rhine W. Combining hand techniques with electric pumping increases the caloric content of milk in mothers of preterm infants.. *J Perinatol*. 2012 Jan 5. doi: 10.1038/jp.2011.195

Morton J. Rethinking bedside care: A shared, sustainable, and proactive model. *J Hum Lact*. 2012 Feb;28(1):11-3

Morton J. The importance of hands; a commentary. *J Hum Lact*. Volume 28 Issue 3 August 2012 pp. 276 - 277.

Morton J. Perfect storm or perfect time for a bold change. *Breastfeeding Medicine*. 2014, Vol 9(4); 180-183.

Morton J. A proposal for policy makers implementing Baby-friendly care. Accepted for publication in *Breastfeeding Medicine* on 6/20/2014. Summary of report from the 7th Breastfeeding Summit, Washington D.C. June 3 & 4, 2014.

Naveed M, Manjunath, C. S., Sreenivas, V. An autopsy study of stomach capacity and birth weight. *Indian J Gastroenterol* 1992;11:156–158.

Odom EC, Li R, Scanlon KS, [Perrine CG](#), [Grummer-Strawn L](#). Reasons for earlier than desired cessation of breastfeeding. *Pediatrics*. 2013 Mar;131(3):e726-32. doi: 10.1542/peds.2012-1295. Epub 2013 Feb 18.

Ohyama M, Watabe H, Hayasaka Y. Manual expression and electric breast pumping in the first 48 h after delivery. *Pediatr Int*. 2010;52:39-43

Parker LA, Sullivan S, Krueger C, Kelechi T, Mueller M. [Effect of early breast milk expression on milk volume and timing of lactogenesis stage II among mothers of very low birth weight infants: a pilot study.](#) J Perinatol. 2012 Mar;32(3):205-9. doi: 10.1038/jp.2011.78. Epub 2011 Sep 8.

Parker LA, Sullivan S, Krueger C, Mueller M. Association of Timing of Initiation of Breastmilk Expression on Milk Volume and Timing of Lactogenesis Stage II Among Mothers of Very Low-Birth-Weight Infants Breastfeeding Medicine. 2015, 10(2): 84-91.

Perrine [CG](#), [Scanlon KS](#), [Li R](#), [Odom E](#), [Grummer-Strawn LM](#). Baby-Friendly hospital practices and meeting exclusive breastfeeding intention. Pediatrics. 2012 Jul;130(1):54-60. doi: 10.1542/peds.2011-3633. Epub 2012 Jun 4.

Prior E, Santhakumaran S, Gale C, Philipps LH, Modi N, Hyde MJ. Breastfeeding after cesarean delivery: a systematic review and meta-analysis of world literature. Am J Clin Nutr 2012. 95(5); 1113-1135.

Ruwei Li, Fein SB, Chen J, Grummer-Strawn L Why mothers stop breastfeeding: mothers' self-reported reasons for stopping during the first year. Pediatrics 2008; 122(2):S69-S76.

Saxton A, Fahy K, Rolfe M, Skinner V, Hastie G. Does skin-to-skin contact and breast feeding at birth affect the rate of primary postpartum haemorrhage: Results of a cohort study. Midwifery 2015 31(11):1110-1117

Shrago LC, Reifsnider E, Insel K. The neonatal bowel output study: indicators of adequate breast milk intake in neonates. Pediatr Nurs. 2006 May-Jun;32(3):195-201.

Stanford website: <http://newborns.stanford.edu/Breastfeeding/index.html>

See: The Perfect Latch, Hand Expression, Maximizing Milk Production

Stevens J, Schmied V, Burns E, Dahlen H. Immediate or early skin-to-skin contact after a Caesarean section: a review of the literature. Matern Child Nutr. 2014 Oct;10(4):456-73. doi: 10.1111/mcn.12128. Epub 2014 Apr 10.

Slusher TM et al. Comparison of maternal milk (breastmilk) expression methods in an African nursery. Breastfeed Med. 2012 Apr;7(2):107-11..

[Taveras EM](#), [Capra AM](#), [Braveman PA](#), [Jensvold NG](#), [Escobar GJ](#), [Lieu TA](#). Proportion of mothers who breastfed, by week, among low-risk mothers, Kaiser Permanente. E. M. Pediatrics 2003;112:108-115

Tita AT, Landon MB, Spong CY, Lai Y, Leveno KJ, Varner MW, Moawad AH, Caritis SN, et al. Timing of elective repeat cesarean delivery at term and neonatal outcomes. N Engl J Med. 2009 Jan 8;360(2):111-20.

Wagner EA, Chantry CJ, Dewey KG, Nommsen-Rivers LA. Breastfeeding Concerns at 3 and 7 days postpartum and feeding status at 2 months. *Pediatrics*. 2013;132(4):865-875

Ward, P. L., Deshpande. 2005) Metabolic adaptation at birth. *Semin Fetal Neonatal Med*. 10(4):341-50.

Wang, M.L, Dorer, D. J., Fleming, M. P., Catlin, E.A. (2004) Clinical outcomes in near-term infants. *Pediatrics*, 114, 372-376

Yilmaz G, Caylan N, Karacan CD, Bodur I, Gokcay C. Effect of cup feeding and bottle feeding on breastfeeding in late preterm infants: a randomized controlled study. *J Hum Lact* 2014. 30(2);174-9.

Zanardo V, Svegliado G, Cavallin F, Giustardi A, Cosmi E, Litta P, Trevisanuto D. Elective cesarean delivery: does it have a negative effect on breastfeeding? *Birth*, 2010 37(4):275-9.

Attachment:

A PERFECT LATCH

<http://newborns.stanford.edu/Breastfeeding/FifteenMinuteHelper.html>

Breastmilk Production:

STEPS for HAND EXPRESSION

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

STEPS for HANDS-ON PUMPING

<http://newborns.stanford.edu/Breastfeeding/MaxProduction.html>

Caloric/nutritional parameters; easy to remember two 10's and two 5's:

- Two **10's** (approximations)
 - Weight loss is normal but not **>10%**
 - Regain birth weight by day **10**

- Two **5's** (approximations)
 - Average size feed in first day is **5** mls (tsp)
 - Indicator of sufficient intake is bright yellow stools by day **5** (Shrago LC)



Figure 10