InJoy
Birth & Parenting Education

The MotherBaby Transition -- Management of 3rd and 4th Stages

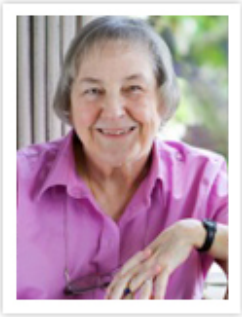
The third and fourth stages of labor are typically defined as maternal events, but a normal third and fourth stage include mother and baby together -- "motherbaby."

This one-hour presentation focuses on management of the transition from pregnancy to mother and fetus to newborn for safety, promotion of maternal-infant attachment, and optimization of breastfeeding.

We'll examine key issues in active and physiologic management of third stage, the evidence on skin-to-skin contact, suctioning the newborn's airway, timing of umbilical cord clamping, and some heart-warming ways to foster parent-infant attachment.

Meet Your Presenter --

Penny Simkin, PT



Penny Simkin, PT, is a physical therapist who has specialized in childbirth education and labor support since 1968. She estimates she has prepared over 11,000 women, couples, and siblings for childbirth. She has assisted hundreds of women or couples through childbirth as a doula. She producer of several birth related films and is the author of many books and articles on birth for both parents and professionals. Books include *The Labor Progress Handbook* (2011), with Ruth Ancheta, *The Birth Partner* (2008), and *When Survivors Give Birth: Understanding and Healing the Effects of Early Sexual Abuse of Childbearing Women* (2004), with Phyllis Klaus.

Currently, she serves on several boards of consultants, the Editorial Board of the journal, *Birth*, and serves on the senior faculty at the Simkin Center for Allied Birth Vocations at Bastyr University, which was named in her honor.

Today her practice consists of childbirth education, birth counseling, and labor support, combined with a busy schedule of courses, conferences and workshops.

Third & Fourth Stage of Labor: The Gap Between Evidence and Practice			
LEARNER'S OBJECTIVES	**TIME FRAME**	**CONTENT OUTLINE**	**FORMAT**
(List in behavioral terms. We need at least 3-4 objectives per hour of speaking)	(For each objective)	(For each objective. The outline must be a general summary of exactly what you will be presenting for each objective which is critical to be awarded Nursing Credits)	(Describe the teaching strategies/method)
1. Name 3rd and 4th stage routines that are without benefit and may cause harm.	30 min	I. Introduction: the Normal 3rd and 4th stages of labor for a term infant and unmedicated mother A. Physiological tasks in third stage for the transition from fetus to newborn B. Physiological tasks in third stage for the mother C. Physiological tasks in fourth stage for newborn D. Physiological tasks in fourth Stage for mother II. Typical clinical procedures and research findings of efficacy (12 minutes) A. Pitocin injected in mother B. Clamp and cut the cord immediately C. Traction on cord for birth of placenta D. Newborn assessment and procedures E. Separation of baby from mother F. Warmer	PowerPoint Question and answer Handouts
2. Compare expectant vs. active management of third stage	12 min	III. Expectant vs. Active management of Third Stage A. Features of expectant management 1. Benefits of delaying cord clamping B. Features of active management	PowerPoint Question and answer Handouts
3. Discuss the advantages to the infant of delaying cord clamping.	8 min	III-A-1. Benefits of delaying cord clamping	PowerPoint Question and answer Handouts

4. Describe "best practices" for 3rd and 4th stage management when mother and baby are in good health.	40 min	IV. Fourth stage as the "stabilization" or "recovery" stage A. Mother-baby contact: usual practices 1. Benefits of prenatal and postpartum singing to baby B. Breastfeeding initiation practices C. Routine assessments and procedures V. The Doula's role regarding 3rd and 4th stages (10 minutes) A. Prenatal suggestions B. Intrapartum tasks C. Postpartum fallow up or care VI. Conclusion	PowerPoint Question and answer Handouts

The bibliography for your session:

1. Andersson O, Hellstrom-Westas L, Andersson D, Domellof M. Effect of delayed versus early umbilical cord clamping on neonatal outcomes and iron status at 4 months: a randomised controlled trial. *BMJ* 2011; 343:d7157.
2. Bair M, Williams J. Management of the third stage of labor. *J Midwifery Womens Health*. 2007;52(4):412-14.
3. Begley CM, Gyte GM, Murphy DJ, et al. Active versus expectant management for women in the third stage of labour. *Cochrane database of systematic reviews (Online)*. 2010;(7):CD007412. Available at: http://www.ncbi.nlm.nih.gov/pubmed/20614458 [Accessed May 11, 2011].
4. Bergman N. Kangaroo Mother Care for all. 2010. Available at: http://www.kangaroomothercare.com [Accessed December 5, 2011].
5. Buckley SJ. Leaving well alone - Perspectives on a natural third stage. In: *Gentle Birth, Gentle Mothering: The Wisdom and Science of gentle Choices in Pregnancy, Birth, and Parenting*. Brisbane: One Moon Press; 2005:184-213.
6. Burke C. Active versus expectant management of the third stage of labor and implementation of a protocol. *The Journal of perinatal & neonatal nursing*. 24(3):215-28; quiz 229-30. Available at: http://www.ncbi.nlm.nih.gov/pubmed/20697238 [Accessed May 11, 2011].
7. Chalmers B, Dzakpasu S, Heaman M, Kaczorowski J. The Canadian Maternity Experiences Survey: An overview of findings. *J Obstet Gynaecol Can*. 2008;30:217-28.

8. Declerq E, Sakala C, Corry M, Appelbaum S. *Listening to Mothers, II: Report of the Second National U.S. Survey of Women's Childbearing Experiences*. New York; 2006.
9. Fahy K, Hastie C, Bisits A, et al. Holistic physiological care compared with active management of the third stage of labour for women at low risk of postpartum haemorrhage: a cohort study. *Women and birth : journal of the Australian College of Midwives*. 2010;23(4):146-52. Available at: http://www.ncbi.nlm.nih.gov/pubmed/20226752 [Accessed December 30, 2010].
10. Hastie C, Fahy KM. Optimising psychophysiology in third stage of labour: theory applied to practice. *Women and birth : journal of the Australian College of Midwives*. 2009;22(3):89-96. Available at: http://www.ncbi.nlm.nih.gov/pubmed/19345629 [Accessed January 25, 2011].
11. Hofmeyr GJ, Abdel-Aleem H, Abdel-Aleem MA. Uterine massage for preventing postpartum haemorrhage. *Cochrane database of systematic reviews (Online)*. 2008;(3):CD006431. Available at: http://www.ncbi.nlm.nih.gov/pubmed/18646154 [Accessed May 11, 2011].
12. Hutton EK, Hassan ES. Late vs early clamping of the umbilical cord in full-term neonates: systematic review and meta-analysis of controlled trials. *JAMA : the journal of the American Medical Association*. 2007;297(11):1241-52. Available at: http://www.ncbi.nlm.nih.gov/pubmed/17374818.
13. Leduc D, Senikas V, Lalonde AB, et al. Active management of the third stage of labour: prevention and treatment of postpartum hemorrhage. *Journal of obstetrics and gynaecology Canada : JOGC = Journal d'obstétrique et gynécologie du Canada : JOGC*. 2009;31(10):980-93. Available at: http://www.ncbi.nlm.nih.gov/pubmed/19941729 [Accessed March 13, 2011].
14. Malloy ME. Waiting to Inhale: How to Unhurry the Moment of Birth. *The Journal of Perinatal Education*. 2011;20(1):8-13.
15. McDonald S. Management of the third stage of labor. *J Midwifery Womens Health*. 2007;52:254-61.
16. McDonald SJ, Middleton P. Effect of timing of umbilical cord clamping of term infants on maternal and neonatal outcomes. *Cochrane database of systematic reviews (Online)*. 2008;(2):CD004074. Available at: http://www.ncbi.nlm.nih.gov/pubmed/18425897 [Accessed January 25, 2011].
17. Mercer JS, Erickson-Owens DA, Graves B, Mumford Haley M. Evidence-based practices for the fetal to newborn transition. *Keepkidshealthy.com*. 2007;52(3):262-272. Available at: K4.0.
18. Mercer J. Current best evidence: A review of the literature on umbilical cord clamping. *J Midwifery Womens Health*. 2001;46(6):402-14.
19. Moore ER, Anderson GC, Bergman N. Early skin-to-skin contact for moter and their healthy newborn infants. *The Cochrane Database of Systematic Reviews*. 2003;(2):Art. No.: CD003519. DOI: 10.1002/14651858.CD003519. Available at: K4.0.
20. Sloan M. *Birth Day: A Pediatrician Explores the Science, the History, and the Wonder of Childbirth*. New York: Ballantine Books; 2009.

21. Soltani H, Hutchon DR, Poulose TA. Timing of prophylactic uterotonics for the third stage of labour after vaginal birth. *Cochrane database of systematic reviews (Online)*. 2010;(8):CD006173. Available at: http://www.ncbi.nlm.nih.gov/pubmed/20687079 [Accessed May 11, 2011].
22. Tan W, Klein M, Saxell L, Shirkoohy S, Asrat G. How do physicians and midwives manage the third stage of labor? *Birth*. 2008;35(3):220-9.
23. UNICEF. Baby-friendly hospital initiative. 2009. Available at: http://www.who.int/nutrition/topics/bfhi/en/index.html [Accessed December 5, 2011].
24. Van Rheenen P. Delayed cord clamping and improved infant outcomes. *BMJ* 2011; 343:d7127.
25. Velaphi S, Vidyasagar D. The pros and cons of suctioning at the perineum (intrapartum) and post-delivery with and without meconium. *Seminars in fetal & neonatal medicine*. 2008;13(6):375-82. Available at: http://www.ncbi.nlm.nih.gov/pubmed/18474453 [Accessed May 12, 2011].
26. Anon. 2005 American Heart Association (AHA) guidelines for cardiopulmonary resuscitation (CPR) and emergency cardiovascular care (ECC) of pediatric and neonatal patients: neonatal resuscitation guidelines. *Pediatrics*. 2006;117(5):e1029-38. Available at: http://www.ncbi.nlm.nih.gov/pubmed/16651282 [Accessed May 12, 2011].

1 **Third and Fourth Stages of Labor**

2 **Webinar Experience and Handouts**
InJoyVideos.com/mother-baby

3 **About Penny Simkin**
www.PennySimkin.com

4 **Overview**
- Definitions of normal 3rd, 4th stages of labor
- The normal transition for mother and baby from pregnancy to motherhood
- Typical clinical procedures and customs vs. evidence-based "best practices"
- Expectant, Active, and Holistic Psychophysiologic Management of 3rd stage
- Fourth stage management to support safety and family integration
- The doula's role during 3rd and 4th stages

5 **Acknowledgment**
- Marshall and Phyllis Klaus
- John Kennell
- For discovering and drawing attention to the importance of this time for mothers and babies *(First published study in 1972)*

6 **Definition of Third Stage**
- The part of labor from the birth of the baby until the placenta and fetal membranes are delivered. Also called the "placental stage." (MedicineNet.com)

Is this all that happens in 3rd stage?

7 **Holistic Definition of Third Stage**
- A holistic definition includes the baby and mother together:
- Fetus to newborn — an enormous transition
- He is dried and placed skin-to-skin with his mother and

familiarizes himself with:
- mother's smells, touch, taste, voice
- new sights and sounds

- "MotherBaby" — coined by CIMS

8

In a normal 3rd stage, family should be together, with mother & baby skin to skin!

9 **Singing to the Baby**
- One of Life's Most Precious Moments
- In late pregnancy, parents choose one song that they love and can sing.
- Every day, they (individually and together) sing the song out loud to the unborn baby
- Baby hears it clearly in utero and remembers it
- Baby prefers this song over others
- Baby prefers parents' voices over others
- Singing may be preferable to speaking (engages both sides of the baby's brain)

10 **Singing to the Baby**
- Parents greet the baby with his or her song at birth
- Baby responds by calming, orienting to parents' voices.
- No one else can do that for this baby!

11 **Singing to Baby Before and After Birth**
- Science & Sensibility Blog Posts by Penny
- Part One: http://www.scienceandsensibility.org/?p=6224
- Part Two: http://www.scienceandsensibility.org/?p=6236

12 **What Happens in the Mother?**

13 **Hormonal Influences in the Third Stage**
- Mothers' prolactin levels rise steeply after birth
  - Related to baby's suckling – intensity, duration, and frequency
  - The "altruistic hormone" helps put baby first
- Oxytocin (the "love hormone") levels increase in both mother

and baby in the first hour and remain for days
- Smell augments both mother and baby's release of oxytocin

- Beta-endorphins, inducing feelings of pleasure, euphoria, and mutual dependency, peak at birth in both mother and baby

14 **Hormonal Influences in the Third Stage (Cont.)**
- Catecholamines (stress hormones that can compete with oxytocin) are high during labor and drop steeply afterwards.
- Baby produces catecholamines during birth, which promotes adaptation to extrauterine life and alertness (wide-open eyes).
- Contact facilitates these processes
- Consequences of separation?

15 **What Happens in the Baby?**

The First Minutes

16 **The First Five Minutes of Life**

"There is no time in life, not even the moment of death, that can compare to the human body's transformation in the first five minutes outside the womb."

–Mark Sloan, p. 32, *Birth Day*, 2009

17

18 **Adaptation to Extra-Uterine Life**
- Surge in newborn catecholamines causes:
  - Absorption of lung liquid
  - Inflation of lungs
  - Alertness
  - Temperature regulation
  - Metabolism (increased glucose, free fatty acids, protects brain from low blood sugar*)
- Most placental blood transfused to baby
- Umbilical cord ceases pulsing

19 **Adaptation to Extra-Uterine Life**
- First breaths
- Circulation rerouted to lungs
  - Fetal circulation – only 10% of blood went to lungs

- Newborn – 100% of blood goes through lungs
- Secretions expelled

20

21 **Baby's First Breath!**

22

23 **First Minutes**
- Good color
- Alert
- Within minutes, breathing is well established

24 **Nine Minutes Old**
- Alert
- Wide Eyed
- Loveable!
- Catecholamines promote bonding

25 **Newborn Care Routines**

Safety?
Other Effects?
Worth?

26 **Newborn Care Routines - Suctioning**
- Nose
- Mouth
- Trachea

27 **Effects of Suctioning Baby**
- Bulb & deep suctioning cause gagging and abrasions of mucus membranes
  - Deep suctioning can cause bradycardia or cardiac arrhythmia*
- Doesn't reduce respiratory problems or meconium aspiration in vigorous baby
- Vigorous newborn is able to expel the fluids, mucus, and handle meconium
- Self-clearing of secretions may improve early breastfeeding

28 **Time of Cord Clamping/Cutting**

29 **Immediate Cord Clamping – Customary Processes**
- Usually the umbilical cord is clamped and cut by 30 seconds

after birth.

- The result – approximately 30-40 % of fetal blood remains in the placenta.
- Practice is based on the belief that placental blood is "extra," and if it gets to the baby, the baby is likely to develop jaundice.
- It also saves a few minutes for staff who are accustomed to performing assessments and routine procedures in the warmer away from the mother.
- However, recent research indicates that there is harm in this practice.
- If the cord is not clamped, placental blood transfuses to the baby over a period of 3 to 5 minutes or until the cord stops pulsating.

30 **Effects of Timing of Cord Clamping**

- Immediate clamping & cutting
  - Doesn't prevent jaundice, as believed
  - Decreases birth weight (due to blood loss)
- Delaying clamping for 2 min. or no pulsating
  - Allows transfusion of blood from placenta to baby (increasing baby's volume by 30-40%)
  - Allows quicker, more complete perfusion of capillaries in baby's lungs (better breathing)
  - Increases iron stores and decreases anemia in baby at 2 and 6 months
  - Encourages close mother-infant contact
  - May be especially beneficial for at-risk baby (premature, ill, requiring resuscitation or a blood transfusion).

31 **Other Notable Findings**

- Gravity influences amount of placental transfusion.
- Transfusion takes 2-3 minutes longer when baby is skin to skin than when held below placenta.
- Cord milking is believed safe if cord is to be cut prematurely (though safety not studied thoroughly).
- Inadequate iron stores may have an irreversible impact on the

developing brain, despite oral iron supp.
Mercer, Erickson-Owens. *J Perinat Neonat Nurs 2012; 26:202*

32 **Delivery of the Placenta**
Expectant Management
Active Management
Holistic Psychophysiological Management

33 **Expectant Management of 3rd Stage**
- Mother usually supine
- Placenta delivered without routine oxytocics
- After placental separation, caregiver "guards" uterus and applies controlled traction to cord
- Mother pushes
- No oxytocics unless bleeding is excessive
- Caregiver may massage fundus

(Begley, et al, in Cochrane reviews, 2010)

34 **Third Stage Expectant Management**

35 **Active Management of 3rd Stage**
- Mother usually supine
- Prophylactic oxytocic injected with birth of baby
- Early cord clamping and cutting
- Controlled cord traction and guard uterus to deliver the placenta
- Uterine massage after delivery of placenta

36 **Benefits of Active Management**
- Compared to expectant management, RCTs show that active management has
  - Less maternal blood loss and anemia
  - Fewer postpartum hemorrhages than expectant management in usual hospital environment
  - Shorter third stage

37 **Drawbacks of Active Management**

- Some uterotonics more dangerous than others
- Decreases in baby's birthweight
- Due to lower blood volume and placental transfusion
- Due to early clamping/cutting of umbilical cord
- Conclusion (from Cochrane 2010): Perhaps giving a ["safer"] uterotonic and delaying cord clamping would reduce severe maternal bleeding without reducing the baby's blood volume

38 **Holistic Psychophysiologic Management of 3rd Stage**

- Only for women at lowest risk for postpartum hemorrhage*
  - Excellent health, normal labor & birth for mother and baby
  - Skin to skin contact
  - Supportive knowledgeable trusted birth team
  - Mother feels safe in the environment
  - Willingness to use oxytocics, if needed

39 **Holistic Psychophysiologic Management of 3rd Stage**

- Completely spontaneous "hands off" delivery
- mother upright to utilize gravity
- No RCTs comparing this with active and expectant management
- Though used by some low-intervention midwives and doctors when there are no risk factors for pph and a low tech (homelike) environment

40 **Fourth Stage of Labor**

41 **Definition of Fourth Stage**

- The hour or two after delivery when the tone of the uterus is established and the uterus contracts down again, expelling any remaining contents.
- These contractions are hastened by breast-feeding, which stimulates production of the hormone oxytocin.
- The "recovery period" when vital signs, uterine tone, and

bleeding are stabilized.

Is that all there is to Fourth Stage?

42 **A Holistic Mother-Baby Definition**
43 **Immediate Placement of Baby & Access for Feeding**
44 **Baby's Location**
45 **Effects of Placement of Baby on Mother and Baby**
46 **Benefits of Skin-Skin Contact at All Gestations (Kangaroo Mother Care)**
- Reduces crying
- Increases sleep time
- Improvements in apnea, O_2 saturation, respiration and heart rate
- Maintains baby's temperature
- Increases milk letdown and earlier breastfeeding
- Speeds weight gain
- Shortens hospital stay
- Enhances mother/father/infant bonding
- Brings greater satisfaction

47 **Routine Newborn Assessments**
- All newborn assessments can be done while in the arms of mother or father or partner
  - Apgar scoring
  - Vitamin K
  - Eye antibiotics
  - Blood draws
  - Most assessments of mother and baby vital signs
  - Weighing, measuring can be delayed

48 **The Culture of the Setting**
Amenable to Change?

49 **Culture of the Setting**
- The Childbirth Educator and the Doula must be aware of the customs and policies of the birth setting, and the flexibility of staff.
- What and how the educator teaches depends on the above.

- Prenatally, the doula and the educator help clients understand --
  - == What is ideal, what is real, and what is available
  - == Without eliminating discussion of best practices
- In labor, the doula adapts her role to the reception by the staff.
- The culture of the setting dictates the roles to a great extent.

50 **Realities of the Hospital Setting**
51 **Realities of the Hospital Setting**
52 **Realities of the Hospital Setting**
53 **Realities of the Hospital Setting**
54 **Realities of the Hospital Setting**
55 **What's a Doula/Educator To Do?**

- Not much during labor, without prior anticipation and problem-solving

56 **Birth Doula's/Educator's Role Before Birth**
57 **Strategies When Caregiver Doesn't Agree With Clients Wishes**
58 **Clients' Choices After Discussion**

1. Come to an understanding with caregiver
   - Convince caregiver to comply with her wishes
   - Compromise? Caregiver goes to bat for her?
2. Give up her preference, because
   - She's changed her mind
   - The emotional cost of hanging on is too great
   - She likes her caregiver and is willing to give in
   - She feels powerless
3. Change care provider or hospital to one that is likely to support her preferences
   - Easier said than done, but could be considered

59 **Birth Doula's/Educator's Role in Client Discussions**

- Not to solve the woman's dilemma, but to help her solve it
- If woman wants to change caregivers or place of birth, support her in that.
- Accept her way of dealing with it and the decisions she makes. Follow her lead; don't push her

- Be a listening ear, a guide, and supporter
- Help her live with the decision if it's hard to accept (for her or for you), and to revise plans, if necessary
- Help her be resilient and make the most of the situation

60 **Postpartum Doula's/Educator's Role: After Birth**

- Process the birth with the woman
- Ask about her postpartum care and her feelings about it
- If the 3rd and 4th stage care was disappointing. . .
  - Acknowledge and validate her disappointment
  - Help her compensate for early loss or deprivation
  - Skin to skin contact, singing to baby
  - "Laid back breastfeeding" – encourage baby to seek and find the breast
  - Be optimistic that what they lost is not unrecoverable
- Suggest writing a letter to caregiver or staff when the time feels right
    - Emphasize positives, then describe negatives
    - Use calm language
    - Purpose – to lead to change, not simply to express anger

61 **Our Roles Beyond the Birthing Room**

- Become a birth activist for better births
- Support organizations whose goals you share
- If you are upset and in danger of burning out:
  - Take a break, or
  - Limit yourself to clients whose values you share or who choose hospitals that you appreciate
  - Consult a mentor and fellow doulas for support, perspective
  - Use introspection: can you change your own situation or attitude to make things better?

62 **Conclusions**

- Little focus has been directed to the 3rd and 4th stages of labor
- Definitions and management are usually based on separation of mother and newborn.

- It's time to treat "Mother-Baby" as an inseparable unit, except under highly unusual and serious circumstances.
- Science supports holistic treatment of the family after birth.
- Obstacles are huge. We need allies within maternity care and those who distribute payment. Be persistent!

63 **Conclusions**

- The gap between knowledge and its application is huge.
- Newborn families must overcome the roadblocks to a smooth transition imposed by well-meaning but misguided experts.
- We are needed! Stay the course!

64 **Special Offer – Final Thoughts**

- Special Offer for those who listened live.
- Watch for our next webinar on:

- Need a certificate of attendance? Email lwilson@injoyvideos.com
- Short survey

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Hereby states that

Completed the webinar program:

The Mother-Baby Transition—Management of the 3rd and 4th Stages

Facilitated by Penny Simkin, PT, on November 22, 2013.

This webinar was the equivalent of one contact hour of continuing education.

Laurel Wilson, IBCLC, CLE, CCCE, CLD