

STEP BY STEP: SAFE IMPLEMENTATION OF SKIN-TO-SKIN CARE

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LEARNING OBJECTIVES

1. Understand the importance of SSC
2. Identify safety concerns regarding Step 4 of the BFHI
3. Use quality improvement to develop a stepwise approach to safe implementation
4. Identify pitfalls and appropriate responses

CASE: 40 WEEK GESTATION NEWBORN, NO RISK FACTORS, BUT THICK “PEA” MECONIUM



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RISK OF SEPARATION DURING THE GOLDEN HOUR

- **Breastfeeding problems and increased neonatal crying**
- **Body Temperature dysregulation-newborn**
- **Physiological instability-newborn**
- **Hypoglycemia-newborn**
- **Interference with Bonding (fMRI)**

- Moore ER, Anderson GC, Bergman N, Dowswell T. Early skin-to-skin contact for mothers and their healthy newborn infants Cochrane Database Sys. Rev. May 2012.
- The Academy of Breastfeeding Medicine Protocol
<http://www.bfmed.org/Media/Files/Protocols/English%20Protocol%207%20Model%20Hospital%20Policy.pdf>
- <http://breastcrawl.org.motherchildtrust.org/pdf/effect-of-early-infant-feeding.pdf>

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STEP 4: HELP MOTHERS INITIATE BREASTFEEDING WITHIN 1 HOUR OF BIRTH

- This step involves putting all healthy infants skin to skin for 1 hour immediately after birth
 - This applies to vaginal or cesarean births
 - It also applies to breastfeeding or formula feeding mother infant dyads



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WHAT IS SAFE & HEALTHY TRANSITION IN THE NORMAL NEWBORN ?

- Heart rate stable, not elevated or depressed during the transition after birth to skin to skin
- Baby's circulation must convert from fetal circulation to newborn pattern after lungs expand and divert blood from heart to lungs to get oxygen, instead of across the foramen in atrium to the left heart (in utero oxygen came from placenta)
- Cord clamping after lungs expand so oxygenated blood goes to the brain (place skin to skin while cord attached and not clamped)

EVIDENCE FOR SKIN TO SKIN: BABY

- Skin to skin contact
 - Stabilizes the newborn body temperature and can help prevent hypothermia
 - Stabilizes blood glucose levels
 - Provides cardio-respiratory stability, especially in the late preterm newborn

Moore ER. Cochrane Database Syst Rev 2012;5.

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EVIDENCE FOR SKIN TO SKIN: BABY

- **Skin to skin contact**
 - Decreases pain in the newborn
 - Improves autonomic and neurobehavioral maturation, gastrointestinal adaptation
 - Leads to more restful sleep patterns, less crying and better growth
- This is the environment for which all care should be provided

Moore ER. Cochrane Database Syst Rev 2012;5.

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EVIDENCE FOR SKIN TO SKIN: MOTHER

- Decreases maternal stress and improves paternal perception of stress in the relationship with baby
- Depression scores and salivary cortisol levels lower over the first month among postpartum mothers providing SSC

Moore ER. Cochrane Database Syst Rev 2012;5.

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EVIDENCE FOR SKIN TO SKIN: MOTHER

- For breastfeeding dyads, enhances opportunity for early first breastfeed, which in turn leads to more readiness to breastfeed, an organized breastfeeding suckling pattern, and more success in exclusive and overall breastfeeding

Moore ER. Cochrane Database Syst Rev 2012;5.

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WHAT IS A NORMAL DELIVERY?

- 85% of babies born at term will initiate spontaneous respirations within 10 to 30 seconds of birth.
- 10% will respond during drying and stimulation
- 3% will initiate respirations following positive pressure ventilation
- 2% will be intubated to support respiratory function
- 0.1% will require chest compressions and/or adrenaline (epinephrine) to achieve this transition

New Zealand NRP Guidelines 2016

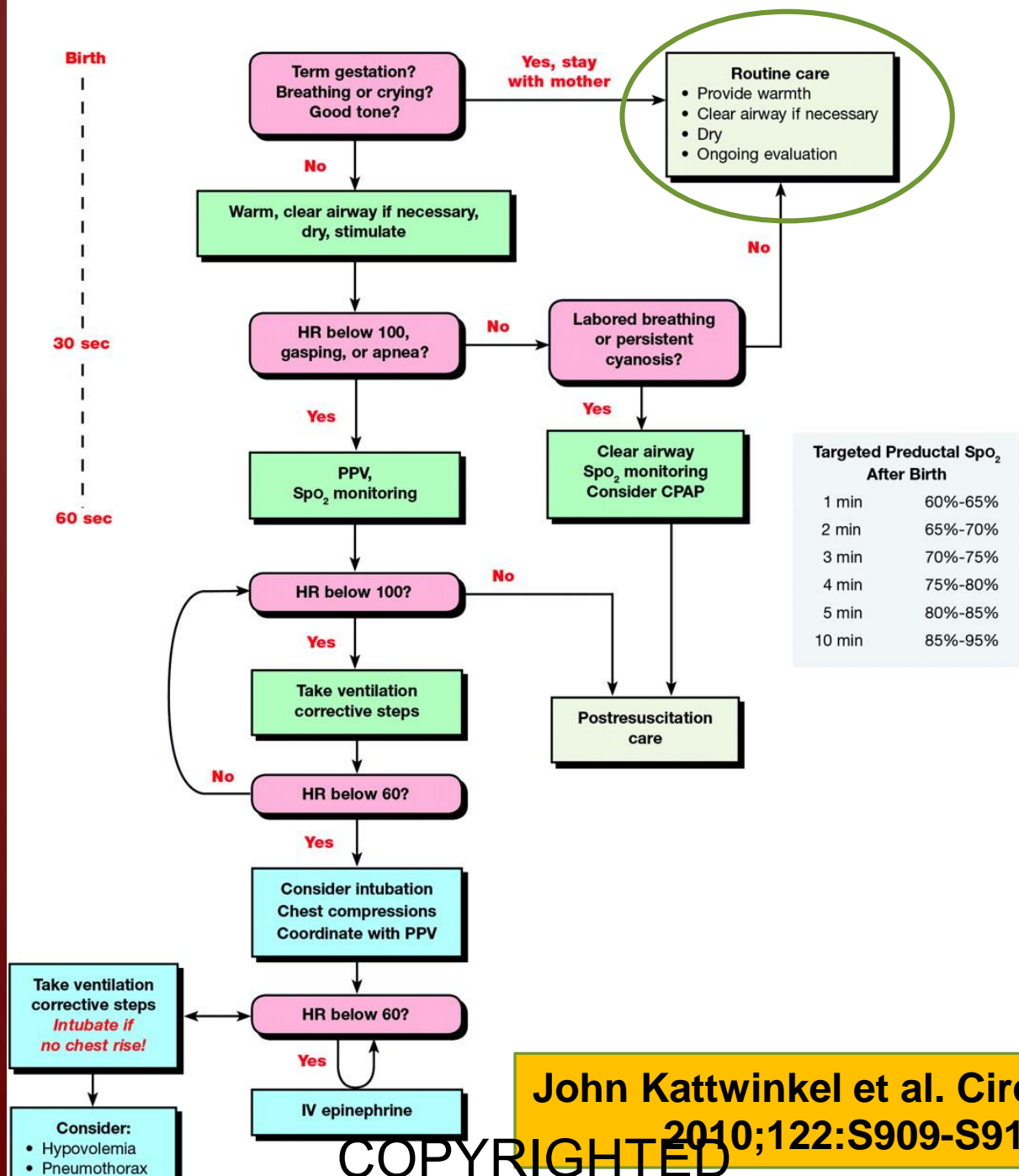
<https://www.nzrc.org.nz/assets/Guidelines/Neonatal-Resus/ANZCOR-Guideline-13.1-Aug16.pdf>

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WHAT ARE THE EXCEPTIONS TO SSC?

- Newborn requiring positive-pressure resuscitation (postpone SSC and provide with continuous monitoring)
- Low Apgar scores (HR <100 at 1 min, less than 7 at 5 minutes)
- Medical complications (respiratory distress, cardiac compromise)
- **Meconium-stained amniotic fluid:** If the newly born infant has absent or depressed respirations, heart rate <100 beats per minute (bpm), or poor muscle tone
- Mom unstable- hemorrhage, requiring resuscitation, not alert and awake and able to respond to baby

Newborn Resuscitation



Targeted Productal Sp _o ₂ After Birth	
1 min	60%-65%
2 min	65%-70%
3 min	70%-75%
4 min	75%-80%
5 min	80%-85%
10 min	85%-95%

John Kattwinkel et al. Circulation. 2010;122:S909-S919

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WHAT ARE UNNECESSARY “EXCEPTIONS”

- Newborn
 - IDM
 - Hypoglycemia protocol
 - Suspicion of Chorioamnionitis (foul smelling)
 - Prematurity??
- Maternal
 - Febrile
 - +/- consideration for mothers giving their newborns up for adoption, determine mother's wishes
 - Consider other support persons who may provide SSC

WHAT ARE THE RISKS?

- SUPC (?) or coincidental (?)
- Airway obstruction
- Falls
- Delay in care
 - Weights (not a problem)
 - Response to changes in status
 - hypoglycemia

STEP BY STEP...THE APPROACH 10,000 FOOT VIEW

- Determine as an institution that Step 4 (skin-to-skin care) will be the philosophy of practice
 - Administration buy-in
 - Determine best methods of communication
 - Unit council, departmental meetings, residency education, portal with learning network and required education
 - Disseminate education
 - Create ppt, materials, use your hospital logos, prepare for the push back
- Marketing
 - Tell stories of success



WHAT HAPPENS IF THERE IS A SENTINEL EVENT? PLAN AHEAD!

- What is the institutional response?
- Who is responsible?
- Morbidity and Mortality Review Committee
 - Root cause analysis
 - Failure Mode Effects Analysis
 - Clinical case conference



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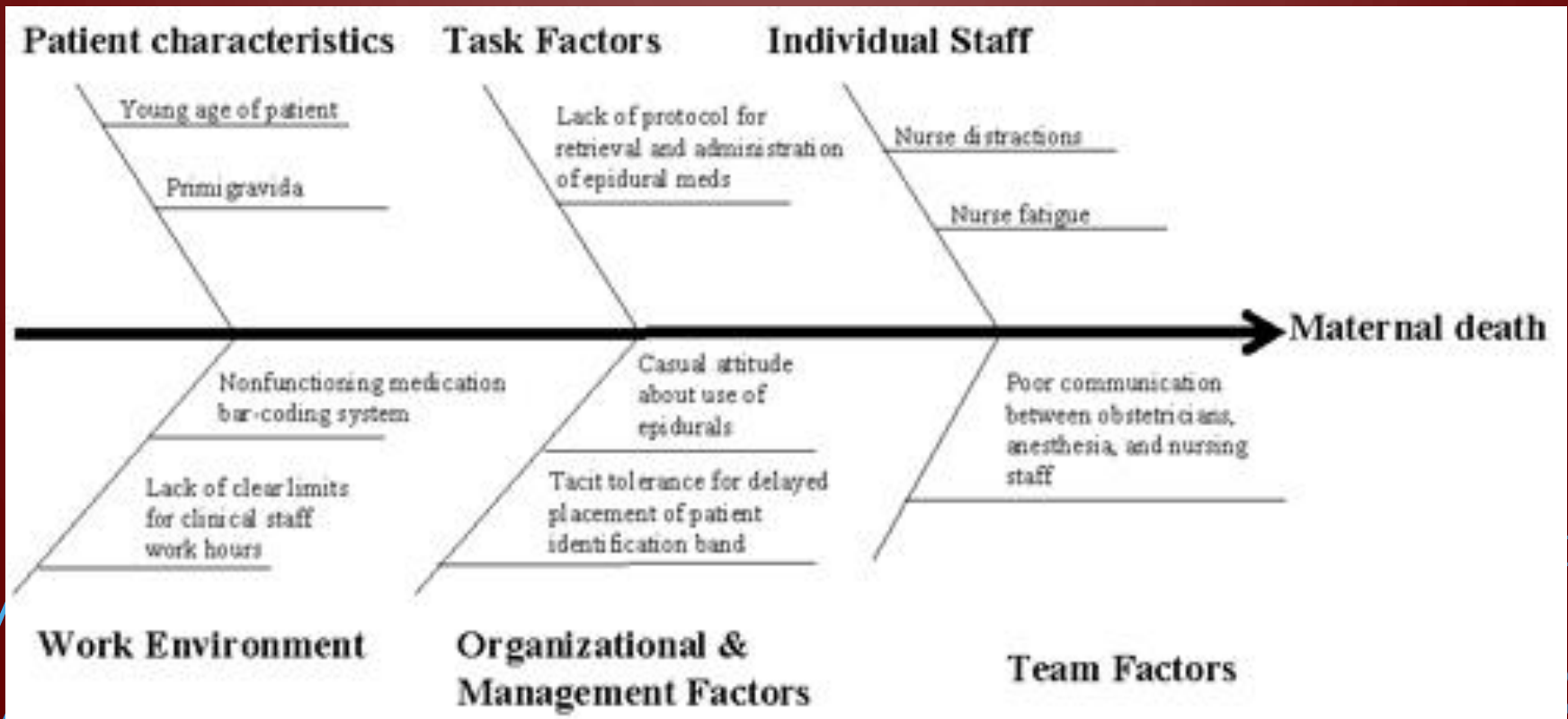
WHY WOULD SUPC BE CONSIDERED A SENTINEL EVENT?

- We don't really know if it is preventable
- We don't really know why it happens
- It is a sentinel event when there is a delay in treatment
- Thus continuous observation needed to respond
- ...just in case....



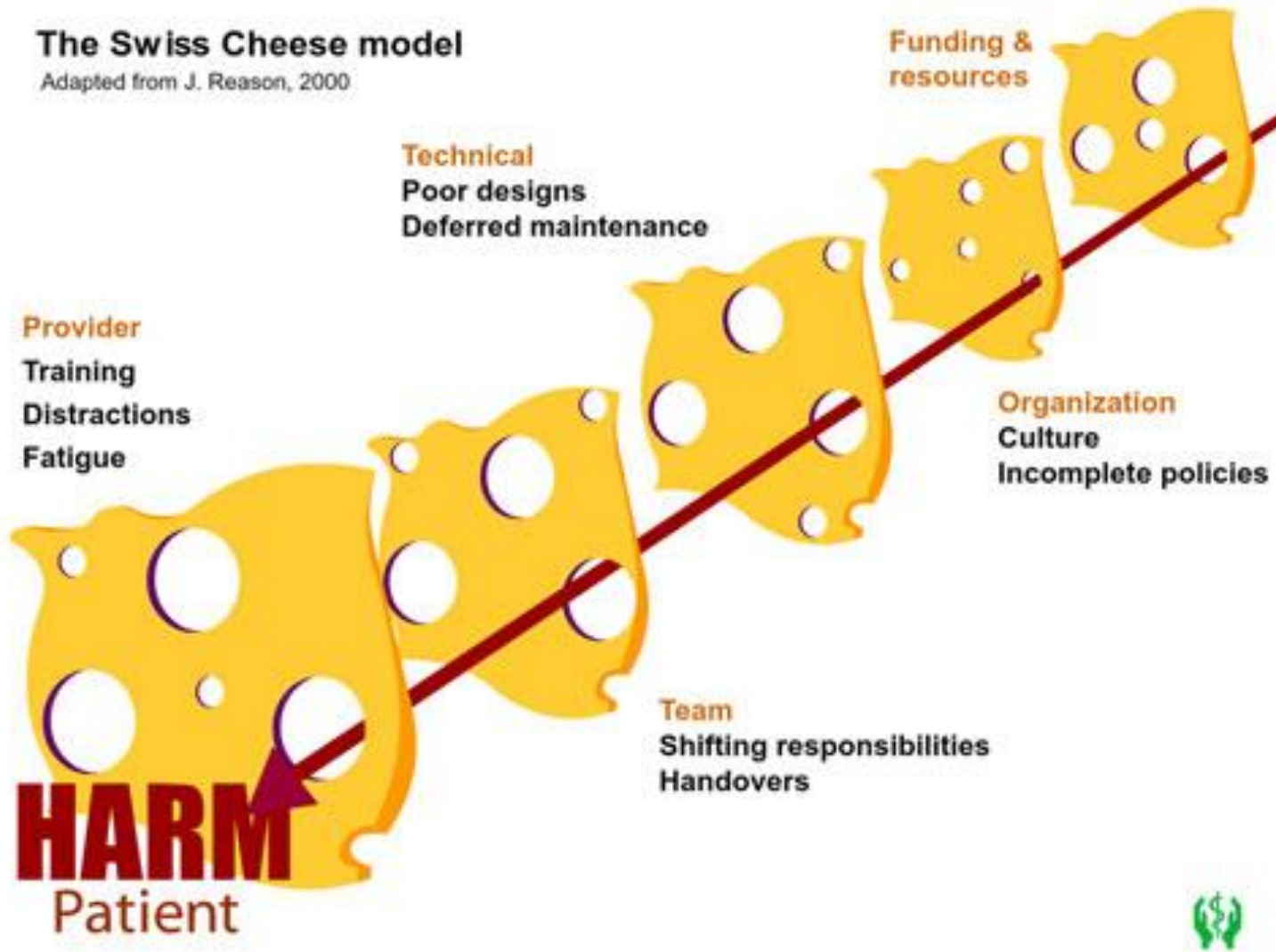
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ROOT CAUSE ANALYSIS EXAMPLE



The Swiss Cheese model

Adapted from J. Reason, 2000





“To address this mistake we need to utilise our thorough system of root cause analysis. I will begin, if I may, by pointing out that it’s not my fault”

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AHRQ- TEAMSTEPS® 2.0

- TeamSTEPS is a teamwork system developed jointly by the Department of Defense (DoD) and the Agency for Healthcare Research and Quality (AHRQ) to improve institutional collaboration and communication relating to patient safety.
- *Team Strategies and Tools to Enhance Performance and Patient Safety.*



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Key Principles

Team Structure

Identification of the components of a multi-team system that must work together effectively to ensure patient safety

Communication

Structured process by which information is clearly and accurately exchanged among team members

Leadership

Ability to maximize the activities of team members by ensuring that team actions are understood, changes in information are shared, and team members have the necessary resources

Situation Monitoring

Process of actively scanning and assessing situational elements to gain information or understanding, or to maintain awareness to support team functioning

Mutual Support

Ability to anticipate and support team members' needs through accurate knowledge about their responsibilities and workload

Communicate and Share Information Using SBAR

S

Situation

Briefly describe the current situation.
Give a clear, succinct overview of pertinent issues.

B

Background

Briefly state the pertinent history.
What got us to this point?

A

Assessment

Summarize the facts and give your best assessment.
What is going on? Use your best judgement.

R

Recommendation

What actions are you asking for?
What do you want to happen next?

The SBAR technique provides a standardized framework for communication between members of the healthcare team about a patient's condition. SBAR is an easy-to-remember mechanism useful for framing conversations, especially critical ones, requiring immediate attention and action.

Using the SBAR model allows for an easy and focused way to set expectations for what will be communicated between members of the team, which is essential for developing effective teamwork and fostering a culture of patient safety.

 SaferHealthcare

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SIMULATION

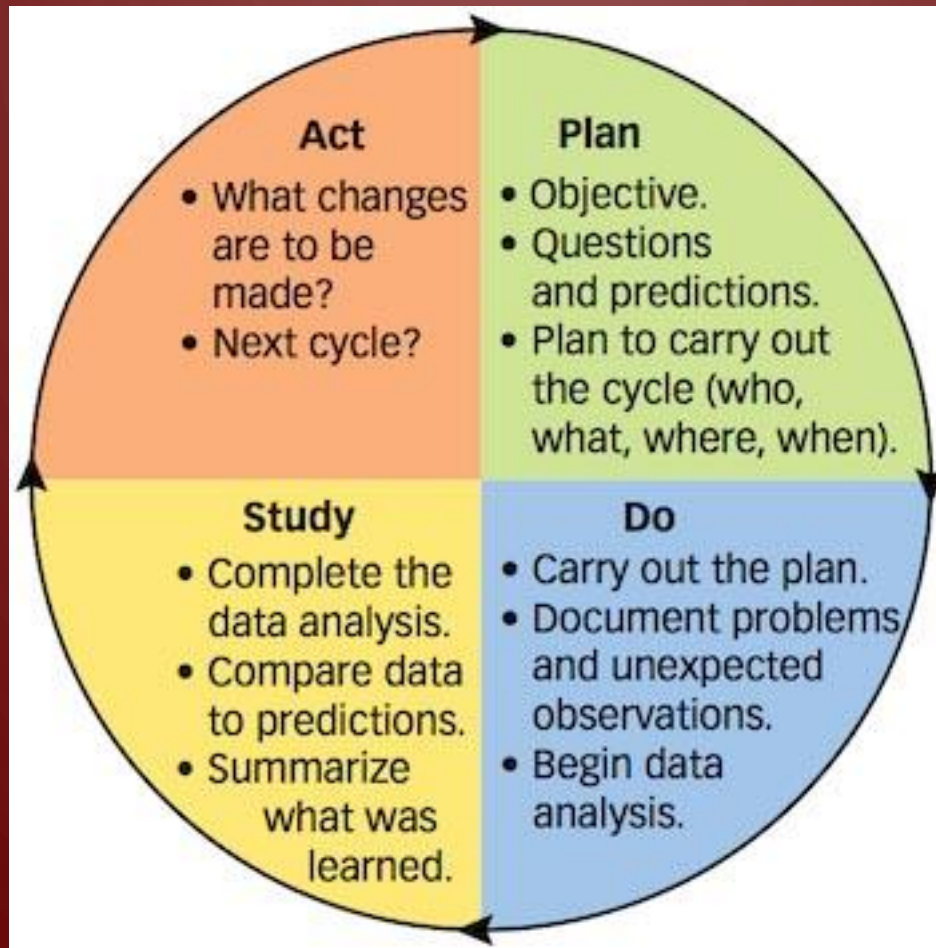
Sim MOM and Sim NewB



Hendricks-Munoz KD, Mayers RM. A neonatal nurse training program in kangaroo mother care (KMC) decreases barriers to KMC utilization in the NICU. *Am J Perinatol.* 2014;31(11):987–992

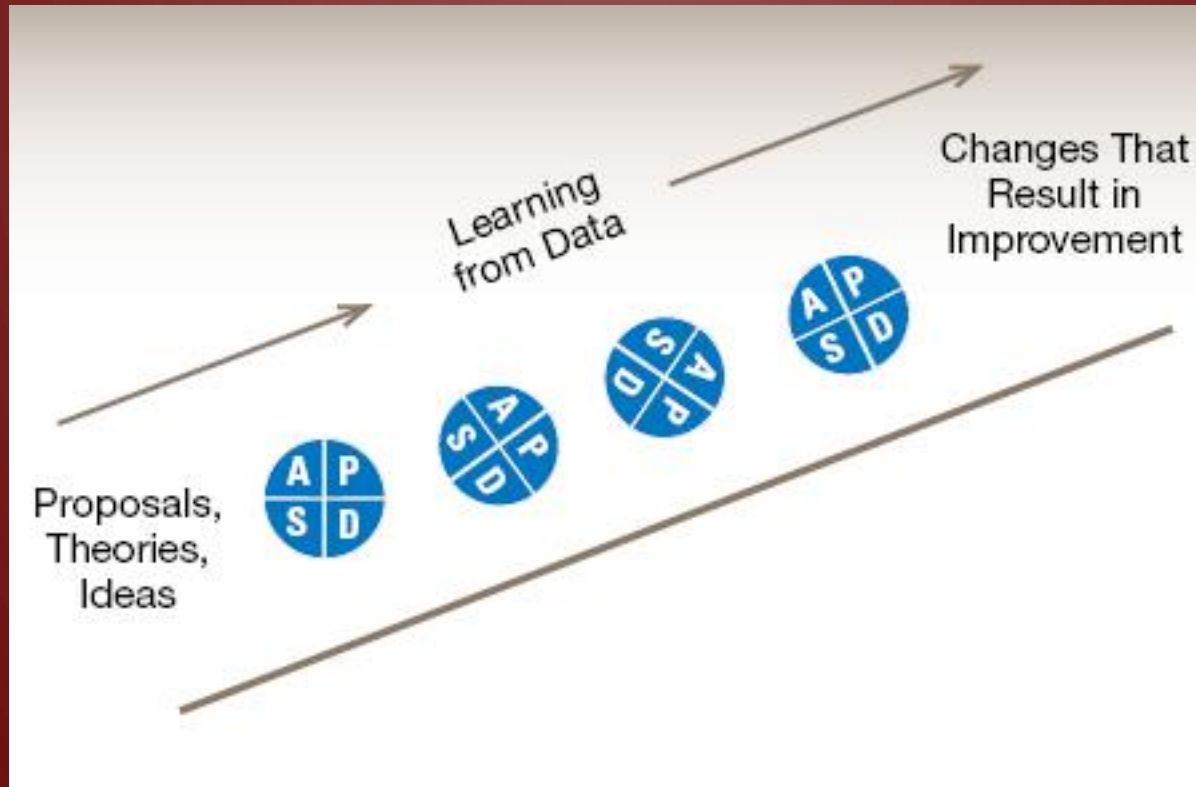
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QI MODEL: PLAN DO STUDY ACT



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RAMPING UP IMPROVEMENTS



J Obstet Gynecol Neonatal Nurs. 2014 Jul; 43(4): 488–496.

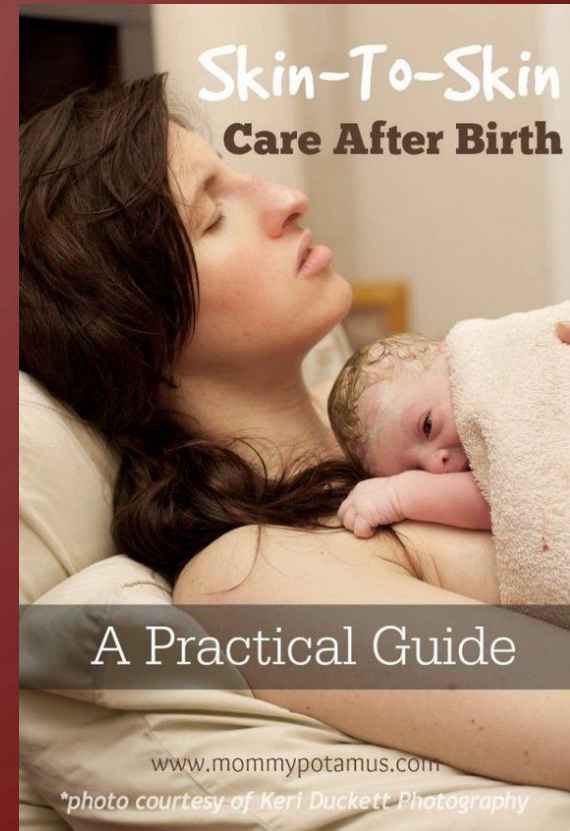
Published online 2014 Jun 30. doi: [10.1111/1552-6909.12469](https://doi.org/10.1111/1552-6909.12469)

**An Interprofessional Quality Improvement Project to
Implement Maternal/Infant Skin-to-Skin Contact During Cesarean Delivery**

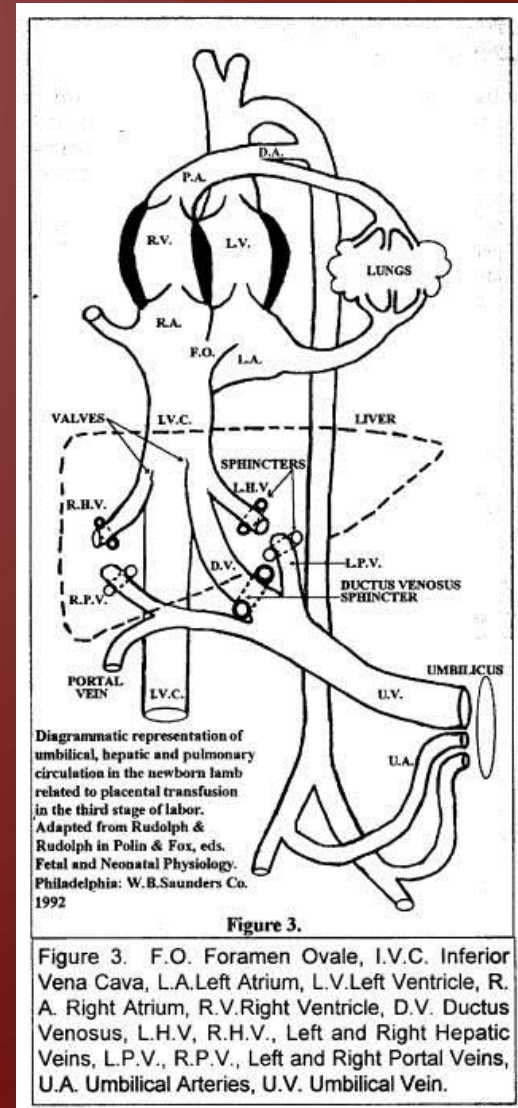
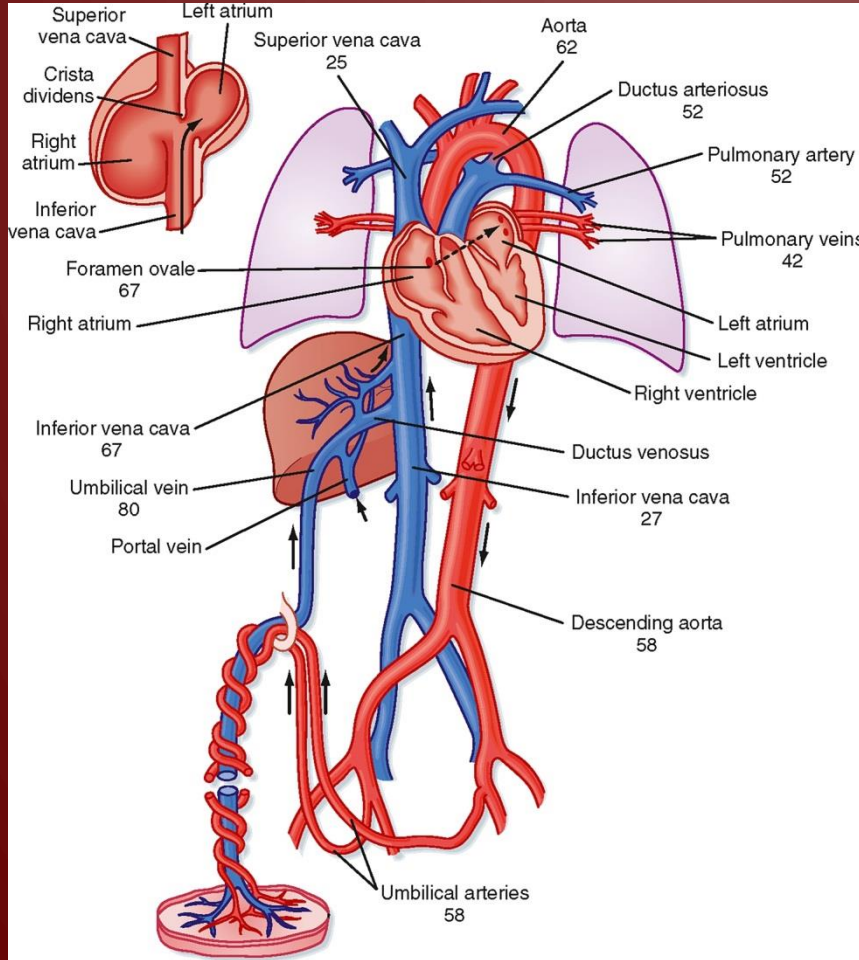
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STEP BY STEP

1. Delivery
2. Dry newborn and immediately assess
3. If stable and no contraindication place immediately skin to skin with mother, cord attached
4. Continue to dry and assess, replace wet blankets with pre-warmed dry blankets
5. Assign 1 minute APGAR



RELATIONSHIP TO CORD CLAMPING



Clamping too soon ⇒ cerebral hypoxia & increase ALTE's

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STEP BY STEP (CONTINUED)

6. Continue to dry except hands
7. Cover head with cap (optional), diaper optional
8. Place prewarmed blankets to cover body of newborn on mother's chest, leave face exposed
9. Assess 5 minute Apgar score
10. Replace wet blankets with dry warm blankets
11. Assist and support to breastfeed

SAFE POSITIONING FOR SKIN TO SKIN CONTACT



- Face can be seen
- Head turned to one side
- Nose unobstructed
- Airway clear, neck straight
- Legs flexed
- Infants will crawl towards the breast – skin to skin is a dynamic, not a static, state

SAFE SKIN TO SKIN CONTACT

- Ensure that mother and infant are prepared for movement and mother is alert and both are monitored
- Ensure that infants don't get “stuck” if mother is distracted
- When mother wants to sleep, infant is placed in bassinet or with another support person who is awake and alert

Feldman-Winter L. Pediatrics 2016

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CHANGE

is hard at first,
messy in the middle
and gorgeous at
the end.

~Robin Sharma

Q U O T E D I A R Y . M E