

CLINICAL REPORT Guidance for the Clinician in Rendering Pediatric Care

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Safe Sleep and Skin-to-Skin Care in the Neonatal Period for Healthy Term Newborns

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AND NEWBORN, TASK FORCE ON SUDDEN INFANT DEATH SYNDROME

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Sudden Unexpected Postnatal Collapse (SUPC)

Skin-to-skin care (SSC) is defined as the practice of **placing infants in direct contact with their mothers** or other caregivers with the ventral skin of the infant facing and touching the ventral skin of the mother.

The infant is typically **naked** or dressed only in a diaper to maximize the surface-to surface contact between mother/ caregiver and the infant, and the **dyad is covered with prewarmed blankets, leaving the infant's head exposed.**



SSC is recommended for all mothers and newborns, regardless of feeding or delivery method, immediately after birth (as soon as the mother is medically stable, awake, and able to respond to her newborn) and to continue for at least 1 hour, as defined by WHO's "Ten Steps to Successful Breastfeeding."

Routine **procedures** such as assessments and **Apgar** scores are conducted while SSC is underway, and procedures that may be painful or require separation should be delayed until after the first hour; if breastfeeding, these procedures should occur after the first breastfeeding is completed. The AAP further delineates that the administration of **vitamin K and ophthalmic prophylaxis** can be delayed for at least 1 hour and **up to 4 hours after delivery**

SSC for healthy newborns shall be distinguished from “**kangaroo care**” because the latter applies to preterm newborns or infants cared for in the NICU.

Rooming-in is defined as allowing **mothers and infants to remain together 24 hours** per day while in the delivery hospital



SSC ADVANTAGES

- stabilizes the newborn body temperature
- can help prevent hypothermia.
- can help stabilize blood glucose concentrations,
- decreases crying,
- provides cardiorespiratory stability,
- decrease pain in newborns.
- reduce postpartum hemorrhage
- decreases maternal stress
- improves paternal perception of stress in their relationship
- for mothers after cesarean deliveries :
 - decreased time to the first breastfeeding,
 - reduced formula supplementation,
 - increased bonding and maternal satisfaction.

SSC and rooming-in: **2 of the important** WHO's "Ten Steps to Successful Breastfeeding" and serve as the basic tenets for a baby-friendly–designated delivery hospital.

SSC: Contraindications

- A newborn requiring positive-pressure resuscitation
- low Apgar scores (less than 7 at 5 minutes)
- medical complications

Safety concerns regarding SSC

- 1.lack of standardization in the approach,
- 2.discontinuous observation of the mother-infant dyad (with lapses exceeding 10 to 15 minutes during the first few hours of life),
- 3.lack of education and skills among staff supporting the dyad during transition while skin-to-skin,
- 4.unfamiliarity with the potential risks of unsafe positioning and methods of assessment that may avert problems.

SUPC

Sudden Unexpected Postnatal Collapse

Includes any condition resulting in temporary or permanent cessation of breathing, cardiorespiratory failure, suffocation or entrapment. In addition, falls may occur during SSC, particularly if unobserved

SUPC is a rare but potentially fatal event in otherwise healthy-appearing term newborns

SUPC - DEFINITION

British Association of Perinatal Medicine: any term or near-term (defined as >35 weeks' gestation in this review) infant who meets the following criteria:

- (1) is well at birth (normal 5-minute Apgar and deemed well enough for routine care),
- (2) collapses unexpectedly in a state of cardiorespiratory extremis such that resuscitation with intermittent positive-pressure ventilation is required,
- (3) collapses within the first 7 days of life,
- (4) either dies, goes on to require intensive care, or develops encephalopathy

SUPC – EXCLUSION CRITERIA

Other potential medical conditions should be excluded (eg, sepsis, cardiac disease).

The incidence of SUPC in the first hours to days of life varies widely because of different definitions, inclusion and exclusion criteria

SUPC, in some definitions, includes acute life-threatening episodes; however, the latter is presumed to be more benign

SUPC - INCIDENCE

The incidence is estimated to be 2.6 to 133 cases per 100 000 newborns.

In 1 case series

1/3 occurring in the first 2 hours of life,

1/3 one-third between 2 and 24 hours of life

1/3 between 1 and 7 days of life.

Other authors suggested that 73% of SUPC events occur in the first 2 hours of life.

Spain: SUPC increased from 0.06/1000 to 0.74/1000 live births after introduction of early SSC

mortality as high as 50%, and among survivors, 50% had neurologic sequelae.

SUPC – RISK FACTORS

- prone position
- primiparous mothers
- unsupervised breastfeeding
- Infants requiring any positive-pressure ventilation
- those with low Apgar scores,
- late preterm and early term (37–39 weeks' gestation) infants,
- difficult delivery,
- mother receiving codeine 60 or other medications that may affect the newborn (eg, general anesthesia or magnesium sulfate), sedated mother,
- excessively sleepy mothers and/or newborns.
- Low ambient temperature,
- Low lighting
- No support persons

SUGGESTIONS TO IMPROVE SAFETY IMMEDIATELY AFTER DELIVERY

- standardizing the procedure of immediate postnatal SSC to prevent sentinel events;
- none of the checklists or procedures developed have been proven to reduce the risk.
- Frequent and repetitive assessments, including observation of newborn breathing, activity, color, tone, and position,
- may avert positions that obstruct breathing or events leading to sudden collapse,
- continuous monitoring by trained staff members
- use of checklists may improve safety.
- continuous pulse oximetry;
- staffing the delivery unit to permit continuous staff observation with frequent recording of neonatal vital signs

PROCEDURE FOR IMMEDIATE SKIN-TO-SKIN CARE

1. Delivery of newborn
2. Dry and stimulate for first breath/cry, and assess newborn
3. If the newborn is stable, place skin to skin with cord attached (with option to milk cord), clamp cord after 1 minute or after placenta delivered, and reassess newborn to permit physiological circulatory transition
4. Continue to dry entire newborn except hands to allow the infant to suckle hands bathed in amniotic fluid (which smells and tastes similar to colostrum), which facilitates rooting and first breastfeeding
5. Cover head with cap (optional) and place prewarmed blankets to cover body of newborn on mother's chest, leaving face exposed
6. Assess Apgar scores at 1 and 5 minutes
7. Replace wet blankets and cap with dry warm blankets and cap
8. Assist and support to breastfeed

COMPONENTS OF SAFE POSITIONING FOR THE NEWBORN WHILE SKIN-TO-SKIN

1. Infant's face can be seen
2. Infant's head is in "sniffing" position
3. Infant's nose and mouth are not covered
4. Infant's head is turned to one side
5. Infant's neck is straight, not bent
6. Infant's shoulders and chest face mother
7. Infant's legs are flexed
8. Infant's back is covered with blankets
9. Mother-infant dyad is monitored continuously by staff in the delivery environment and regularly on the postpartum unit
10. When mother wants to sleep, infant is placed in bassinet or with another support person who is awake and alert

SAFETY CONCERNS REGARDING ROOMING-IN

- mother and infant are sleeping together
- breastfeeding mothers may fall asleep unintentionally while breastfeeding in bed, which can result in suffocation.
- infant falls may be more common in the postpartum setting because of less frequent monitoring and increased time that a potentially fatigued mother is alone with her newborn(s)
- be unable to adjust their position or ambulate safely while carrying a newborn. The postpartum period provides unique challenges regarding falls/drops and is understudied compared with falls in the neurologically impaired or elderly patient
- short term disability from numbness or pain, sleepiness or lethargy related to pregnancy and delivery, and effects from medication.

Falls

- lightheadedness,
- fatigue,
- incoordination
- a hospital staff member is not immediately available to take over,
- newborns may fall to the floor or may be positioned in a manner that obstructs their airway
- RATE:**1.6-3.94 falls per 10 000 births (Actual increase? Better reporting?)

SUGGESTIONS TO IMPROVE SAFETY WHILE ROOMING-IN

- The Association of Women's Health, Obstetric and Neonatal Nurses' recommendations are to have **no more than 3 dyads assigned to 1 nurse** to avoid situations in which nursing staff are not immediately available and able to regularly monitor the mother-infant dyads throughout the postpartum period
- Even though mothers and family members may be educated about the avoidance of bed-sharing, falling asleep while breastfeeding or holding the newborn during SSC is common.
- Cesarean deliveries are particularly at risk because of limited mobility and effects of anesthesia and warrant closer monitoring.



SUGGESTIONS FOR ROOMING-IN

1. Use a patient safety contract with a particular focus on high-risk situations (see parent handout Newborn Safety Information for Parents and sample contract).
2. Monitor mothers according to their risk assessment: for example, observing every 30 minutes during nighttime and early morning hours for higher-risk dyads.
3. Use fall risk assessment tools.
4. Implement maternal egress testing (a modification of a tool originally designed to transfer obese patients from bed to stand, chair, or ambulation by using repetition to verify stability), especially if the mother is using medications that may affect stability in ambulating.
5. Review mother-infant equipment to ensure proper function and demonstrate the appropriate use of equipment, such as bed rails and call bells, with mothers and families.
6. Publicize information about how to prevent newborn falls throughout the hospital system.
7. Use risk assessment to avoid hazards of SSC and rooming-in practices.

CONCLUSIONS 1

1. Develop standardized methods and procedures of providing immediate and continued SSC with attention to continuous monitoring and assessment.
2. Standardize the sequence of events immediately after delivery to promote safe transition, thermoregulation, uninterrupted SSC, and direct observation of the first breastfeeding session.
3. Document maternal and newborn assessments and any changes in conditions.
4. Provide direct observation of the mother-infant dyad while in the delivery room setting.
5. Position the newborn in a manner that provides an unobstructed airway.

CONCLUSIONS 2

6. Conduct frequent assessments and monitoring of the mother-infant dyad during postpartum rooming-in settings, with particular attention to high-risk situations such as nighttime and early morning hours
7. Assess the level of maternal fatigue periodically. If the mother is tired or sleepy, move the infant to a separate sleep surface (eg, side-car or bassinet) next to the mother's bed.
8. Avoid bed-sharing in the immediate postpartum period by assisting mothers to use a separate sleep surface for the infant.

CONCLUSIONS 3

9. Promote supine sleep for all infants. SSC may involve the prone or side position of the newborn, especially if the dyad is recumbent; therefore, it is imperative that the mother/ caregiver who is providing SSC be awake and alert.

10. Train all health care personnel in standardized methods of providing immediate SSC after delivery, transitioning the mother-infant dyad, and monitoring the dyad during SSC and rooming-in throughout the delivery hospital period.