CE 1.5 ANCC Contact Hours

Maternity nurses need knowledge about sudden unexpected postnatal collapse and safe newborn positioning to provide safe care for mothers and babies.

MATERNITY NURSES' KNOWLEDGE ABOUT SUDDEN UNEXPECTED POSTNATAL COLLAPSE AND SAFE NEWBORN POSITIONING

Camilla Addison, DNP, RN, C-EFM, and Susan Ludington-Hoe, PhD, RN, CNM, CKC, FAAN

Abstract

Purpose: Sudden unexpected postnatal collapse (SUPC) of healthy newborns in the first 2 days of life is increasing. These types of adverse events are known to be associated with unsafe positioning during skin-to-skin contact and breastfeeding. The purpose of the study was to determine maternity nurses' knowledge about SUPC and safe newborn positioning.

Design: Nurses who participate in a hosted listserv were solicited to complete a questionnaire.

Methods: An email with an embedded link to a 20-item questionnaire, the SUPC and Safe Positioning Knowledge Assessment Tool, and 16 demographic questions was sent to 605 maternity nurses in the United States who are part of a Perinatal Listserv for members of the Association of Women's Health, Obstetric and Neonatal Nurses. Scores were analyzed by mean, standard deviation, and percent correct answers.

Results: Fifty questionnaires were initiated (response rate of 8.2%), and 36 completed questionnaires (response rate of 5.9%) were analyzed. Maternity nurses' knowledge of SUPC was less than their knowledge of safe newborn positioning (61% correct vs. 72% correct; $p < 0.001$).

Clinical Implications: Maternity nurses need more information about SUPC and safe newborn positioning, including risk factors, and effective strategies to reduce risk of preventable newborn harm.

Key words: Nurses' knowledge; Safe newborn positioning; Skin-to-skin contact; Sudden unexpected postnatal collapse.

Rooming-in, skin-to-skin contact (SSC) for healthy newborns, bonding opportunities, and breastfeeding are common practices during the newborn period. Yet, SSC and breastfeeding have been associated with an increase in sudden unexpected postnatal collapse (SUPC) in healthy newborns (Bass, Gartley, Lyczkowski, & Kleinman, 2018) that commonly occurs when the newborn's airway becomes obstructed (Herlenius & Kuhn, 2013). Sudden unexpected postnatal collapse can lead to serious neurologic damage as well as death (Lohr, 2017; Monnelly & Becher, 2018). Unsafe holding during SSC, breastfeeding, and rooming-in are risk factors for SUPC (Davanzo et al., 2015; Garofalo et al., 2018; Ludington-Hoe & Morgan, 2014; Simpson, 2017). Newborn falls during SSC is another risk, particularly when the mother is fatigued or medicated (Feldman-Winter & Goldsmith, 2016).

To improve safety immediately after birth, recent reports have highlighted the need for continuous monitoring and observation of both mother and newborn (Bass et al., 2018; Feldman-Winter & Goldsmith, 2016; The Joint Commission [TJC], 2018) by health personnel during the first 2 hours after birth (which is when a third of SUPCs occur [Herlenius & Kuhn, 2013]) and regularly throughout the postpartum hospitalization (Bass et al.; Becher, Bhushan, & Lyon, 2012; Davanzo et al., 2015; Feldman-Winter & Goldsmith, 2016; Herlenius & Kuhn; Ludington-Hoe & Morgan, 2014; Pejovic & Herlenius, 2013; TJC, 2018). Nurse staffing guidelines from the Association of Women's Health, Obstetric and Neonatal Nurses (AWHONN, 2010), the American Academy of Pediatrics, and the American College of Obstetricians and Gynecologists (AAP & ACOG, 2017) have specific recommendations for one-to-one nursing care for healthy mothers and babies during the first 2 hours immediately postpartum, after the critical elements of care are met (Simpson, 2015). During this time, the nurse should have no other patient care assignments beyond caring for the new mother and her baby (AAP & ACOG, 2017; AWHONN, 2010). During the postpartum and newborn inpatient stay, the maternity nurses should not be assigned more than three healthy mother–baby couplets (AAP & ACOG, 2017; AWHONN, 2010).

"Supervising skin-to-skin contact and breastfeeding continuously during the first two hours of life" (Hitchcock & Ruhl, 2019, p. 160), every 30-minute rounding by hospital personnel during nighttime and early morning for high-risk mothers (Feldman-Winter & Goldsmith, 2016), and hourly rounding so that mothers and caregivers noted to be drowsy can be assisted to place their newborn in a bassinette (Feldman-Winter & Goldsmith, 2016; TJC, 2018) have been recommended. Close observations should also occur with fathers and others holding the newborn (Feldman-Winter & Goldsmith, 2016; Ludington-Hoe & Morgan, 2014). Feldman-Winter and Goldsmith (2016) suggested frequent newborn vital signs. Ludington-Hoe and Morgan (2014) recommended frequent newborn assessment using the **R**espiratory, **A**ctivity, **P**erfusion, **P**osition, **T**one **T**ool (RAPPT) during the first 2 hours after birth. Use of the RAPPT was found to be associated with avoiding SUPCs when used as part of a bundled quality improvement project that included oxygen saturation monitoring of the newborn via pulse oximetry for the duration of the initial SSC at birth from 10 minutes of life continuing during postpartum recovery (Paul, Johnson, Goldstein, & Pearlman, 2019). Nurses should teach parents safe positioning so the newborn is always well oxygenated (Feldman-Winter & Goldsmith, 2016; Garofalo et al., 2018; Garofalo, Pellerite, Goodstein, Paul, & Hageman, 2019) as shown by being "pink" in any position (Garofalo et al., 2018). Nurses must know how to monitor for safe newborn positioning for SUPC prevention (Garofalo et al., 2018). Unexpected newborn complications, including SUPC, is now one of The Joint Commission perinatal care performance measures for accredited hospitals with at least 300 live births per year and for hospitals seeking Perinatal Care certification (TJC, 2019).

Few reports involving maternity nurses' knowledge of SUPC have been published (Garofalo et al., 2018; Paul et al., 2019). The AAP is working to establish standardized terminology for healthy term newborns who experience sudden and unexpected cardiorespiratory collapse (Feldman-Winter & Goldsmith, 2016; Lutz, Elliot, & Jeffrey, 2016; Tieder et al., 2016). There is no accepted definition of SUPC, thus nurses may not be familiar with this term (Ludington-Hoe, Morrison-Wilford, DiMarco,

& Lotas, 2018). Other researchers have used an apparent life-threatening event (Tieder et al.) or an asphyxiation or suffocation event (Lutz et al.; Thach, 2014) to describe these types of cases. A safe positioning checklist developed by the United States Institute for Kangaroo Care (Ludington-Hoe & Morgan, 2014) was designed to improve safe positioning of the newborn. ACOG (2018) recommends using a standardized approach to newborn monitoring while breastfeeding including proper positioning and observation to avoid adverse events and includes the safe positioning checklist from Ludington-Hoe and Morgan (2014) as an example in their practice bulletin.

Methods

Design

An email with an embedded link to a 20-item questionnaire, the SUPC and Safe Positioning Knowledge Assessment Tool, and 16 demographic questions was sent to maternity nurses in the United States who are part of a Perinatal Listserv for members of AWHONN. Submitting the questionnaire constituted consent.

Sample

The email with the embedded link to the questionnaire was posted to the Perinatal Listserv that is open to the approximately 22,000 members of AWHONN. When the email was posted, there were 605 participants. Inclusion criteria were maternity nurses who were English-speaking, were permanently assigned to a maternity unit, and had worked for at least 6 months as a maternity nurse. Exclusion criteria were nurses who had floated to the maternity unit on a temporary assignment or who were in orientation as a newly hired maternity nurse.

Instrument

Knowledge was determined by the SUPC and Safe Positioning Knowledge Assessment Tool (available from the researchers). The SUPC and safe newborn positioning portions of the tool have 10 items, each consisting of: multiple choice, fill-in, and true or false questions. A correct answer equals one point and 20 points is the total possible score (i.e., the higher the score, the greater the knowledge). Sixteen demographic questions were included. The SUPC questions were derived from the literature (Becher et al., 2012; Herlenius & Kuhn, 2013; Pejovic & Herlenius, 2013); safe newborn positioning questions were developed from the Skin-to-Skin Contact Checklist (Ludington-Hoe & Morgan, 2014). Three maternity nurse experts who were not part of this study team established content validity of the questionnaire. Internal consistency reliability could not be established because some questions had only "yes/no" answers.

Procedure

After institutional review board approval, the email with an embedding link to the questionnaire was posted to the Perinatal Listserv. Inclusion and exclusion criteria answers determined access to the questionnaire. Response rates were tracked daily and once the 1-month posting period ended, data were analyzed.

Analysis

Data were analyzed via SPSS 24.0. Mean, standard deviation, range, percent of correct answers, as well as normality of distribution by skew and kurtosis, were computed. If data distributed normally, a *t* test was conducted.

Results

Fifty questionnaires were initiated (response rate of 8.2%), and 36 completed questionnaires (response rate of 5.9%) were included in the analysis. Two responses were excluded due to nurse practitioner or certified nurse-midwife status, nine were excluded due to temporary assignment on a maternity unit, and three were omitted due to missing data. Thirty respondents was the target to achieve a normal sampling distribution. See Table 1 for demographic characteristics of participants.

Average SUPC knowledge score was 6.1 correct answers (61.0%, SD = 1.5). Of the 36 respondents, 12 (33.3%) scored above average. For these SUPC data, skew = -0.15, kurtosis = -0.47, indicating normal distribution. On safe newborn positioning, average score for all respondents was 7.2 correct answers (72.0%; SD = 1.4) and the data distributed normally (skew = -0.29 and kurtosis = -0.17). Of the 36 nurses, 15 (41.7%) scored above average. There was a significant difference between the mean scores for SUPC and safe newborn positioning of respondents ($t = 3.7$, $p < 0.001$); respondents had more knowledge of safe newborn positioning than SUPC.

Discussion

Knowledge of SUPC was significantly lower than safe newborn positioning. In several quality improvement projects, there has been an assumption that nurses lacked knowledge about SUPC, which led to providing further education (Garofalo et al., 2018; Ludington-Hoe et al., 2018; Paul et al., 2019; Rodriguez, Pellerite et al., 2018). The extent of maternity nurses' knowledge about SUPC and safe positioning was not quantified nor reported in detail in the quality improvement project reports, including the Ludington-Hoe et al. (2018) report that measured nurses' knowledge about the RAPPT assessment tool, not SUPC. Comparisons of our data to previous reports of nurses' awareness or knowledge about SUPC and safe newborn positioning were not possible.

Our finding of limited knowledge may be due to several reasons. The term SUPC is still relatively new and may not be known to nurses. Consensus that SUPC is a diagnosis has not yet been reached (Bass, Gartley, & Kleinman, 2019; Feldman-Winter & Goldsmith, 2016; Garofalo et al., 2018; Goldsmith, 2013; Tieder et al., 2016). Nurses do not make the diagnosis of SUPC (Goldsmith, 2013), perhaps contributing to limited exposure to SUPC as both a term and as a condition. The term SUPC is not synonymous with asphyxia, suffocation, and strangulation (Tieder et al., 2016), which are the current acceptable diagnoses that nurses use to report healthy newborns experiencing physiologic collapse (TJC, 2018). Even though data are emerging about potential intrinsic causes of SUPC, such as a disorder of the Kolliker-Fuse Nucleus in the brain stem that impairs an accurate response to an episode of hypoxia (Lavezzi, Paradiso, Pusiol, & Piscioli, 2019) or possible high oxidative stress passed from mother to fetus at birth (Kobayashi, Iorio, & Yoshino, 2019; Marseglia, D'Angelo, Manti, Reiter, & Gitto, 2016), these data may not be known by maternity nurses.

Nurses knew more about safe newborn positioning than about SUPC, perhaps due to wide awareness of safe sleep positions to prevent sudden infant death syndrome (SIDS) in older infants. Applying awareness of SIDS interventions with the knowledge of how to help a newborn breathe may have contributed to the higher scores. The majority of nurses had some knowledge about SUPC and safe newborn positioning, suggesting that nurses have familiarity with current published information (Davanzo et al., 2015; Ferrarello & Carmichael, 2016; Garofalo et al., 2018; Ludington-Hoe & Morgan, 2014; Paul et al., 2019; Rodriguez, Hageman, & Pellerite, 2018). However, more than the minimal knowledge is needed to promote newborn safety. The high number of maternity nurses with advanced education in our study most likely reflects nurses who were nurse managers, clinical nurse specialists, or clinical educators as well as bedside nurses.

A study limitation was that our data represent a small sample of maternity nurses who are AWHONN members, the majority of whom had a master's degree. The email with the link to the questionnaire was moved down onto subsequent pages as new postings were made, preventing it from being immediately seen, possibly contributing to

TABLE 1.
Demographic Characteristics of Respondents

Variable	*n*	%
Formal education about SUPC or safe newborn positioning		
Yes	28	77.8
No	8	22.2
Informal education about SUPC or safe newborn positioning		
Yes	35	97.2
No	1	2.8
Highest nursing education		
Diploma in Nursing	1	2.8
Bachelor of Science in Nursing	7	19.4
Master of Science in Nursing	25	69.4
DNP in Nursing	2	5.6
MS	1	2.8
In-patient obstetrics certification		
Yes	25	69.4
No	11	30.6
Hospital type		
Academic medical center	11	30.6
Community hospital	24	66.6
Birth center	1	1.8
Institution location		
Rural	6	16.7
Urban	30	83.3
Institution annual births		
200 or fewer	2	5.6
201–500	3	8.3
501–1,000	4	11.1
1,001–5,000	21	58.3
>5,000	6	16.7
Years of experience as a nurse		
0–10 years	8	22.2
11–20 years	11	30.6
21–30 years	6	16.6
31+ years	11	30.6

Note. DNP = Doctorate of Nursing Practice; MS = Master of Science; SUPC = sudden unexpected postnatal collapse.

Suggested Clinical Implications

- Maternity nurses need more education about SUPC and safe newborn positioning.
- Breastfeeding and SSC care require nursing support of safe positioning and attention to newborn wellbeing.
- The immediate postpartum recovery is a time of increased risk for SUPC.
- Maternity nurses play a key role in educating mothers and parents to understand risks of unsafe newborn positioning and to prevent SUPC.
- Unit policies and practices should be consistent with recommendations from national professional organizations such as AAP, ACOG, AWHONN, and TJC for safe care during hospitalization for childbirth.
- Maternity nurses need to be aware of and follow unit procedures for vigilant monitoring and observation of newborns.
- Educational campaigns and hospital initiatives have been shown to be effective in helping nurses learn and follow safe practices; therefore, formal and informal educational techniques can assist nurses in reducing SUPC events.
- Maternal fatigue, pain status, pain medication taken, mobility, and support person availability should be part of nursing assessment for rooming-in.
- Knowledge of SUPCs and safe newborn positioning should be applied throughout the hospital stay and not just the first 2 hours post birth.
- Nurse staffing based on national standards and guidelines as per AWHONN, AAP, and ACOG, and periodic rounding on mother–baby couplets as per AAP and TJC can promote newborn safety in the hospital.

low response rate. Sending the email only once and asking for completion of a questionnaire may have contributed to the low response rate, as may have the relatively new topic and term of SUPC.

Clinical Implications

Maternity nurses need more education about SUPC and safe newborn positioning. Hitchcock and Ruhl (2019) reviewed sudden unexpected infant death, which includes SUPCs resulting in death, and recommended that perinatal nurses need to understand and tell parents how SUPCs and safe newborn positioning can contribute to neonatal death. Their recommendation is consistent with ours that maternity nurses may need education about SUPCs and safe newborn positioning. Educational campaigns and hospital initiatives (posters, staff handouts, bulletin board, and huddle messages), as well as teaching videos are known to be effective in helping nurses learn and follow safe practices (Carlin & Moon, 2017, Lipke et al., 2018; Salm Ward & Balfour, 2016). Rodriguez, Pellerite et al. (2018) offer a video with an SUPC event to teach nurses and physicians about SUPC. The United States Institute of Kangaroo Care (2018; www.kangaroocare usa.org) offers resources for education. Professional association events also provide information about both topics. Making SUPC management and safe newborn positioning items part of orientation may be helpful for nurse education and knowledge building. All maternity nurses need to be aware of risk factors for SUPC, how to support safe newborn positioning during SSC and breastfeeding, and what to tell new mothers and parents, so newborns can be as safe as possible (Killion, 2017). Nurse staffing as per AWHONN (2010) and AAP and ACOG (2017), and rounding on mother–baby couplets as per AAP (Feldman-Winter & Goldsmith, 2016) and TJC (2018) should be routine in all maternity units. ✣

Camilla Addison is Program Director, Patient Education & Nursing Practice, Center for Professional Nursing Practice, New York Presbyterian Hospital, New York, NY. Dr. Addison can be reached via e-mail at cbiney@nyp.org

Dr. Susan Ludington-Hoe is a Professor and Carl W. & Margaret Davis Walters Professor of Pediatric Nursing, Frances Payne Bolton School of Nursing, Case Western Reserve University, Cleveland, OH.

The authors declare no conflicts of interest.

DOI:10.1097/NMC.0000000000000597

References

American Academy of Pediatrics & American College of Obstetricians and Gynecologists. (2017). *Guidelines for perinatal care* (8th ed.). Elk Grove Village, IL: Author.

American College of Obstetricians and Gynecologists. (2018). *Optimizing support for breastfeeding as part of obstetric practice* (Committee Opinion No. 756). Washington, DC: Author.

Association of Women's Health, Obstetric and Neonatal Nurses. (2010). *Guidelines for professional registered nurse staffing for perinatal units*. Washington, DC: Author.

Bass, J. L., Gartley, T., & Kleinman, R. (2019). World Health Organization Baby-Friendly Hospital Initiative guideline and 2018 implementation guidance. *JAMA Pediatrics, 173*(1), 93-94. doi:10.1001/jamapediatrics.2018.3808

Bass, J. L., Gartley, T., Lyczkowski, D. A., & Kleinman, R. (2018). Trends in the incidence of sudden unexpected infant death in the newborn: 1995-2014. *The Journal of Pediatrics, 196*(5), 104-108. doi:10.1016/j.jpeds.2017.12.045

Becher, J. C., Bhushan, S. S., & Lyon, A. J. (2012). Unexpected collapse in apparently healthy newborns: A prospective national study of a missing cohort of neonatal deaths and near-death events. *Archives of Disease in Childhood. Fetal and Neonatal Edition, 97*(1), F30-F34. doi:10.1136/adc.2010.208736

Carlin, R. F., & Moon, R. Y. (2017). Risk factors, protective factors, and current recommendations to reduce sudden infant death syndrome: A review. *JAMA Pediatrics, 171*(2), 175-180. doi:10.1001/jamapediatrics.2016.3345

Davanzo, R., De Cunto, A., Paviotti, G., Travan, L., Inglese, S., Brovedani, P., …, Demarini, S. (2015). Making the first days of life safer: Preventing sudden unexpected postnatal collapse while promoting breastfeeding. *Journal of Human Lactation, 31*(1), 47-52. doi:10.1177/0890334414554927

Feldman-Winter, L., Goldsmith, J. P., & Committee on Fetus and Newborn, Task Force on Sudden Infant Death Syndrome. (2016). Safe sleep and skin-to-skin care in the neonatal period for healthy term newborns. *Pediatrics, 138*(3), e20161889. doi:10.1542/peds.2016-1889

Ferrarello, D., & Carmichael, T. (2016). Sudden unexpected postnatal collapse of the newborn. *Nursing for Women's Health, 20*(3), 268-275. doi:10.1016/j.nwh.2016.03.005

Garofalo, N. A., Newkirk, E. A., Noto, J. L., Filler, L. E., Smith, M. M., & Hageman, J. R. (2018). An innovative educational program for the prevention of sudden unexpected postnatal collapse (SUPC) of newborns. *Neonatology Today, 13*(11), 3-15.

Garofalo, N. A., Pellerite, M., Goodstein, M., Paul, D. A., & Hageman, J. R. (2019). Sudden unexpected postnatal collapse (SUPC): One newborn death is one too many: Current concepts. *NeonatologyToday, 14*(2), 55-58.
Goldsmith, J. P. (2013). Hospitals should balance skin-to-skin contact with safe sleep policies. *AAP News, 34*(11), 22.
Herlenius, E., & Kuhn, P. (2013). Sudden unexpected postnatal collapse of newborn infants: A review of cases, definitions, risks, and preventive measures. *Translational Stroke Research, 4*(2), 236-247. doi:10.1007/s12975-013-0255-4
Hitchcock, S. C., & Ruhl, C. (2019). Nurses leading safe infant sleep initiatives in the hospital setting. *Nursing for Women's Health, 23*(2), 148-162. doi:10.1016/j.nwh.2019.02.003
Killion, M. M. (2017). Skin-to-skin care and rooming-in: Safety considerations. *MCN. The American Journal of Maternal Child Nursing, 42*(2), 115. doi:10.1097/NMC.0000000000000320
Kobayashi, H., Iorio, E. L., & Yoshino, A. (2019). Effects of mode of delivery on prooxidant/antioxidant balance in fetal circulation. *Journal of Maternal-Fetal & Neonatal Medicine, 32*(19), 3294-3299. doi:10.1080/14767058.2018.1526911
Lavezzi, A. M., Paradiso, B., Pusiol, T., & Piscioli, F. (2019). Letter to the editor: Neuropathology of sudden unexpected postnatal collapse. *Early Human Development, 130*, 121. doi:10.1016/j.earlhumdev.2018.12.011
Lipke, B., Gilbert, G., Shimer, H., Consenstein, L., Aris, C., Ponto, L., ..., Kowal, C. (2018). Newborn safety bundle to prevent falls and promote safe sleep. *MCN. The American Journal of Maternal Child Nursing, 43*(1), 32-37. doi:10.1097/NMC.0000000000000402
Lohr, D. (2017, August 11). Mom says hospital's negligence made her accidentally smother newborn. *HuffPost*. Retrieved from www.huffingtonpost.com/entry/mother-sues-hospital-newborn-infant-death_us_598e11b6e4b09071f699be3e
Ludington-Hoe, S. M., & Morgan, K. (2014). Infant assessment and reduction of sudden unexpected postnatal collapse risk during skin-to-skin contact. *Newborn and Infant Nursing Reviews, 14*(1), 28-33. doi:10.1053/j.nainr.2013.12.009
Ludington-Hoe, S. M., Morrison-Wilford, B. L., DiMarco, M., & Lotas, M. (2018). Promoting newborn safety using the RAPPT assessment and considering Apgar criteria: A quality improvement project. *Neonatal Network, 37*(2), 85-95. doi:10.1891/0730-0832.37.2.85
Lutz, T. L., Elliot, E. J., & Jeffrey, H. E. (2016). Sudden unexplained early neonatal death or collapse: A national surveillance study. *Pediatric Research, 80*(4), 493-498. doi:10.1038/pr.2016.110
Marseglia, L., D'Angelo, G., Manti, S., Reiter, R. J., & Gitto, E. (2016). Potential utility of melatonin in preeclampsia, intrauterine fetal growth retardation, and perinatal asphyxia. *Reproductive Sciences, 23*(8), 970-977. doi:10.1177/1933719115612132
Monnelly, V., & Becher, J. C. (2018). Sudden unexpected postnatal collapse. *Early Human Development, 126,* 28-31. doi:10.1016/j.earlhumdev.2018.09.001
Paul, D. A., Johnson, D., Goldstein, N. D., & Pearlman, S. A. (2019). Development of a single-center quality bundle to prevent sudden unexpected postnatal collapse. *Journal of Perinatology, 39*(7), 1008-1013. doi:10.1038/s41372-019-0393-y
Pejovic, N. J., & Herlenius, E. (2013). Unexpected collapse of healthy newborn infants: Risk factors, supervision and hypothermia treatment. *Acta Paediatrica, 102*(7), 680-688. doi:10.1111/apa.12244
Rodriguez, N. A., Hageman, J. R., & Pellerite, M. (2018). Maternal distraction from smartphone use: A potential risk factor for sudden unexpected postnatal collapse of the newborn. *The Journal of Pediatrics, 200,* 298-299. doi:10.1016/j.jpeds.2018.04.031
Rodriguez, N., Pellerite, M., Hughes, P., Wild, B., Joseph, M., & Hageman, J. R. (2018). An acute event in a newborn. Video Corner. *NeoReviews, 18*(12), e717-e720. doi:10.1542/neo.18-12-e717
Salm Ward, T. C., & Balfour, G. M. (2016). Infant safe sleep interventions, 1990-2015: A review. *Journal of Community Health, 41*(1), 180-196. doi:10.1007/s10900-015-0060-y
Simpson, K. R. (2015). Nurse staffing and care during the immediate postpartum recovery period. *MCN. The American Journal of Maternal Child Nursing, 40*(6), 403. doi:10.1097/NMC.0000000000000182
Simpson, K. R. (2017). Sudden unexpected postnatal collapse and sudden unexpected infant death. *MCN. The American Journal of Maternal Child Nursing, 42*(6), 368. doi:10.1097/NMC.0000000000000376
Thach, B. T. (2014). Deaths and near deaths of healthy newborn infants while bed sharing on maternity wards. *Journal of Perinatology, 34*(4), 275-279. doi:10.1038/jp.2013.184
The Joint Commission. (2018). *Preventing newborn falls and drops* (Quick Safety Issue No. 40). Oakbrook Terrace, IL: Author.
The Joint Commission. (2019). *Specifications manual for Joint Commission national quality measures* (v2019A1). Oakbrook Terrace, IL: Author.
Tieder, J. S., Bonkowsky, J. L., Etzel, R. A., Franklin, W. H., Gremse, D. A., Herman, B., ..., Smith, M. B. (2016). Brief resolved unexplained events (formerly apparent life-threatening events) and evaluation of lower-risk infants: Executive summary. *Pediatrics, 137*(5), e20160591. doi:10.1542/peds.2016-0591
United States Institute for Kangaroo Care. (2018). *Learner's manual for kangaroo care certification 2018*. Cleveland, OH: Author.

For additional continuing nursing education activities related to maternal child nursing, go to nursingcenter.com.

Instructions for Taking the CE Test Online

Maternity Nurses' Knowledge about Sudden Unexpected Postnatal Collapse and Safe Newborn Positioning

- Read the article. The test for this CE activity can be taken online at www.nursingcenter.com. Tests can no longer be mailed or faxed.
- You will need to create a free login to your personal CE Planner account before taking online tests. Your planner will keep track of all your Lippincott Professional Development (LPD) online CE activities for you.
- There is only one correct answer for each question. A passing score for this test is 14 correct answers. If you pass, you can print your certificate of earned contact hours and the answer key. If you fail, you have the option of taking the test again at no additional cost.
- For questions, contact LPD: 1-800-787-8985.

Registration Deadline: March 4, 2022.

Disclosure Statement:

The authors and planners have disclosed no potential conflicts of interest, financial or otherwise.

Provider Accreditation:

LPD will award 1.5 contact hours for this continuing nursing education activity.

LPD is accredited as a provider of continuing nursing education by the American Nurses Credentialing Center's Commission on Accreditation.

This activity is also provider approved by the California Board of Registered Nursing, Provider Number CEP 11749 for 1.5 contact hours. LPD is also an approved provider of continuing nursing education by the District of Columbia, Georgia, Florida, West Virginia, New Mexico, and South Carolina, CE Broker #50-1223.

Payment:

- The registration fee for this test is $17.95.