


**NO BABY TUMBLES....**  
***An Infant Safety Bundle***

Wednesday, October 7<sup>th</sup> 2015, Session C725, 2:30 pm -3:30 pm  
2015 ANCC Magnet Conference®  
Atlanta, Georgia

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**Disclosure**

- Presenters have no relevant commercial of financial relationships to disclose



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**St Joseph's Hospital Health Center  
Syracuse, N.Y.**





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### Presentation Objectives

- Identify two characteristics of a High-Reliability Perinatal Organization
- Identify three maternal risk factors from the literature placing the infant at risk for harm
- Discuss two interventions that are included in the Infant Safety Bundle at St. Joseph's Hospital




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### Alignment with Magnet®

- Nurses are involved in a system-wide approach focused on proactive risk assessment and error management
- Nurturing innovation in patient care, nursing, and the practice environment to produce better quality and safety for infants and their family
- Incorporating best practice to achieve positive patient outcomes by integrating science-based research
- Knowledge gained through research is disseminated to the community of professional caregivers




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### St. Joseph's Hospital is a Perinatal High-Reliability Organization

- Safety is the attribute of our organizational culture
- Responsibility and duty of every team member is to speak up if the question of safety arises
- Our team approach is collegial rather than hierarchic
- Respectful communication is highly valued and rewarded
- Routine debriefing is practiced for unexpected events
- Emergencies are rehearsed in drills and unexpected events are anticipated
- All of our processes and procedures are standardized and evidence-based

(Knox & Simpson, 2011)




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### Journey Toward Perinatal Safety

- **2004:** First hospital in USA to complete *MOREOb@*
- **2008:** First hospital in USA to complete Advancing with MORE
- **2010:** Received the Patient Safety Award from *MOREOb@*
- **2010:** Joined the NYS Partnership for Patients
- **2013:** Joined the Safe Motherhood Initiative




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### How the Story of Back to Sleep Began at St. Joseph's Hospital...

**1992:**

- Mother-Baby Unit placed infants on their back to sleep
- Nurses role modeled the safe sleep position by placing the infant to sleep on their back in a barren crib
- Parents received SIDS education including safe sleep positioning




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### The Story Continues in the Neonatal Intensive Care Unit

- One of the Neonatal Nurse Practitioners (NNP) who was a member of the American Association of SIDS Prevention Physicians (AASPP) since 2002, was asked to present a nursing topic at their next national conference in 2003
- In 2003, the NNP presented data from a simple, 10-question survey on hospital practices vs home directives
- In 2004, two other NNPs, a Neonatologist and a pediatric CNS collaborated with the NNP and began a quantitative analysis of the survey data




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## Published Survey Results in Advances in Neonatal Care 2006

### Results of Original Research

- Nearly 95% of respondents identified a non-supine sleep position as optimal for hospitalized preterm infants
- Further, only 52% of neonatal nurses routinely provided discharge instructions that promoted supine sleep positions at home
- Nursing knowledge and practice was inconsistent with the current recommendations for supine sleep as the safest position for healthy term and premature infants
- The example set by health care providers was one of the most significant influences on parent practice

Aris, C., Stevens, T. P., LeMura, C., Lipke, B., McMullen, S., Cote-Arsenault, D., Consenstein, L. (2006). NICU nurses' knowledge and discharge teaching related to infant sleep position and risk of SIDS. *Advances in Neonatal Care*, 6, 281-294.




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## What Was the Next Step for the Nurses?

- Developed the SIDS Teaching Tool
- An educational program @ St. Joseph's began which included:
  - ✓ Use of the on-line SIDS teaching tool
  - ✓ Steps-to-Home crib card
  - ✓ No co-sleeping multiples policy
  - ✓ Use of sleep sacks on the unit
  - ✓ Education for parents
  - ✓ Discharge instructions
  - ✓ Parents receive sleep sacks to take home




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## Steps to Home...

Step 1: Baby is placed on back to sleep when in open crib or one week prior to going home. **Do not** put loose bedding, bumper pads or stuffed toys in the crib when home.



Step 2: **Do not** bundle baby while asleep or keep the room too warm. The best temperature is 65-71 degrees. Do not cover head. Never had share with baby. Room sharing is safer.



Step 3: Baby can be on tummy for playtime while always being watched.

Step 4: Parents need to tell all caregivers that baby sleeps on back only.



Step 5: Home should be smoke free.




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### Expanding Practice into all Maternal–Child Units

In 2006, we no longer allowed:

- ✓ Co-sleeping multiples
- ✓ Bed-sharing
- ✓ Side-sleeping

In 2007, we implemented:

- ✓ Sleep sacks in open cribs
- ✓ Expanded education for parents
- ✓ Discharge instructions that included safe sleep
- ✓ Each family receiving a sleep sack at discharge




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### Discharge Instructions

- Sleep position
- Tummy time
- Sleep sacks




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### Model Program Published in *Neonatal Network* 2009

Findings:

- Healthcare providers' opinions can influence how parents place their infant to sleep
- Program evaluation showed that 98% of infants slept supine and 93% slept in sleep sacks in open cribs

McMullen, S., Lipke, B., & LeMura, C. (2009). Sudden infant death syndrome prevention: A model program for neonatal intensive care units. *Neonatal Network*, 28, 7-12.




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### We Wanted to Continue Our Research in Safe Sleep

In 2009 Onondaga County had a increase in infant deaths; many of which were rollovers.

**We decided to do a** randomized, prospective pilot study in 2012 involving video intervention:

- ✓ By completing a Safe Infant Sleep Pilot Study we hoped to obtain evidence regarding whether a video intervention would enhance learning and improve infant sleep practices

**Results:** Not statistically significant

**Outcome:** We did not publish the data, but in 2014: New York State released a mandatory safe sleep video for parents to watch prior to discharge

McMullen, S., Lipke, B., Dann, D., & Weeks, C. (2012). *Safe infant sleep practice: A pilot study* (Unpublished).




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### The Journey Continued




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### Infant Falls

APRIL 2014	MAY 2014
<ul style="list-style-type: none"> <li>• Mother fell asleep and baby rolled onto floor</li> </ul>	<ul style="list-style-type: none"> <li>• Mother fell asleep and baby rolled onto floor</li> </ul>
<ul style="list-style-type: none"> <li>• Nurse checked on mother and baby was in crib just a few minutes prior to the mother screaming and calling for help</li> </ul>	<ul style="list-style-type: none"> <li>• Mother called nurse</li> </ul>
<ul style="list-style-type: none"> <li>• Baby had negative MRI</li> </ul>	<ul style="list-style-type: none"> <li>• No tests ordered</li> </ul>
<ul style="list-style-type: none"> <li>• No evidence of injury</li> </ul>	<ul style="list-style-type: none"> <li>• No evidence of injury</li> </ul>




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### Infant Falls Taskforce

A group of staff nurses, advanced practice nurses, and physicians from the Women's and Children's service line collaborated with the clinical nurse specialist who coordinates adult falls-prevention initiatives to establish an infant falls bundle.



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### Taskforce Plan

- Review of the literature on infant falls
- Collect baseline data
- Develop a St. Joseph's Infant Safety Bundle for all in-patient maternal-child units
- Educate staff about the new bundle
- Repeat collection of the data 3 months after the start of bundle



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### Literature Review



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**Definition of an Infant Fall:  
National Database of Nursing Quality Indicators  
(NDNQI)**

*"A fall in which a newborn, infant or child being held or carried by a healthcare professional, parent, family member or visitor falls or slips from that person's hands, arms, lap etc. This can occur when a child is being transferred from one person to another. The fall is counted regardless of the surface on which the child lands. e.g. (bed chair or floor) and regardless of the whether or not the fall results in an injury."*

(American Nurses Association NDNQI, 2013)




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**The American Academy of Pediatrics  
Recommendations for Safe Sleep**

- Supine sleep position
- Firm sleep surface
- Room-sharing without bed-sharing
- Avoiding alcohol and illicit drug use prenatally and postpartum
- Using SUIDS risk-reduction recommendations by all

(American Academy of Pediatrics, 2011a)




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**Maternal Risk Factors**

Breastfeeding or combination of bottle and breast	Night-time hours
Delivered by C-section	High level of fatigue
Opioid pain relief in the last 2-4 hours	Women > 2 days post partum
2 <sup>nd</sup> or 3 <sup>rd</sup> postoperative night	Recent pain medication
Age-18-28	Prior near miss (nurses found mother either falling asleep or asleep while holding infant)
Diverse cultural backgrounds	History of substance abuse or methadone treatment program
(Galuska, 2011)	(Slogar, et al., 2013)




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### Infant Falls

- Under-reported
- 600-1,600 infant falls per year in the United States
  - ✓ Over 50% of events occur when a mother or family member falls asleep in bed or in a chair
  - ✓ Most falls occur between midnight and 9 am
  - ✓ Balancing skin to skin and infant feeding with infant safety
  - ✓ Challenges of rooming-in for mother and infant

(Helsley, 2010)




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### Infant Injury

- 9.4% reported serious harm to an infant
  - ✓ Depressed skull fracture
  - ✓ Bruising
  - ✓ Swelling
  - ✓ Traumatic encephalopathy
  - ✓ Death
- Legal and increased cost issues for hospital
- Severe emotional distress for parents and caregivers

(Wallace, 2014)




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## Data Collection




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### Gathering Baseline Data

*Month of March 2015:*

Infant at-risk to fall from:

- ✓ 14% (n=23) of the infants out of 166 deliveries were found to be at risk to fall
- ✓ Over half of the 14% were mothers who were found asleep holding the baby
- ✓ The rest of the reports were unsafe sleep conditions for the infant (on bed or couch alone) or the mother's bed was unlocked in a high position




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## Our Safety Bundle




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### What Did We "Bundle"?

- Maternal risk factors
- Parent safety agreements
- Safety interventions for parents and visitors
- Reporting and debriefing system for infant falls




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### MIDAS/ DEBRIEFING TOOL cont..

**Midas+ Remote Data Entry**  
 INFANT FALL (NEWBORN - 12 MONTHS)

Plan of Care updated? ☐ Yes ☐ No

Debriefing:

1. Did mother have seizure or apical within 24 hours of the fall. Answer NO when greater than 24 hrs and NA when there was no apical or episode. ☐ Yes ☐ No ☐ NA (if unsure)

2. Is mom emotionally ok? ☐ Yes ☐ No

3. Were other adults in the room at the time of the fall? ☐ Yes ☐ No

4. Estimated time between time of last breastfeeding and flow fall in correct rooming. (fill in minutes)

5. Did Mom receive falls prevention education? ☐ Yes ☐ No

6. Additional medications:

7. What Fall Safety Interventions added to care plan:

Bed low	<input type="checkbox"/> Yes <input type="checkbox"/> No
Sid rail	<input type="checkbox"/> Yes <input type="checkbox"/> No
crib locked	<input type="checkbox"/> Yes <input type="checkbox"/> No
Walls raised up	<input type="checkbox"/> Yes <input type="checkbox"/> No
Call bell in reach	<input type="checkbox"/> Yes <input type="checkbox"/> No
Safe sleep reviewed	<input type="checkbox"/> Yes <input type="checkbox"/> No
Umbil	<input type="checkbox"/> Yes <input type="checkbox"/> No

Supervisor Modified:



### So What Happened?



### RCA of an Infant Fall June 2015

- Mother asleep and newborn fell out of her arms, over the bedrail onto the floor
- No apparent harm to the newborn
- Follow up Head CT-negative
- Admitted to NICU for observation
- Parental stress: Mother-Baby separation
- Formula feeding 2nd or 3rd postpartum night



### Changes in the Bundle

- Increased frequency of nursing rounds
- Mothers are educated to contact us when feeding
- Door to patient's room is not closed completely




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### Ongoing Evaluation of the Bundle

- Infant falls and near misses are reviewed monthly in our safety committee
- Safety competency for nurses
- Repeat data collection of infant at risk to fall




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### Program Evaluation Data

*Month of July 2015*

Infant at Risk to Fall Form:

- ✓ 5% (n=9) of the infants out of 180 deliveries were found to be at risk to fall
- ✓ Almost ½ were found in bed asleep in mother's arms
- ✓ The rest of the reports were unsafe sleep conditions for the infant (asleep in bed or a pillow, in crib on side with blanket over them)




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## Summary

- St. Joseph's Hospital is a Perinatal High-Reliability Organization with
  - Evidence-based safety interventions for mother and baby
  - Standardized, evidence-based policy and process and communicated to staff
- Risk factors that place the infant at risk to fall
  - Delivered by C-section
  - Opioid pain relief in the last 2-4 hours
  - 2<sup>nd</sup> or 3<sup>rd</sup> postpartum night
  - High level of fatigue
- Safety Bundle
  - Maternal risk factors are used to identify mothers whose infants are at a high risk to fall
  - Parent safety agreements are reviewed and used to educate parents upon admission
  - Safety interventions for mother and infant are standardized and evidence-based
    - ✓ Crib cards, Parent education bulletin boards
    - ✓ More frequent nursing rounds, leave room door open (especially through the night)
    - ✓ Education about safe sleep practices
    - ✓ Role-model safe sleep position
    - ✓ Debriefing system after an infant fall




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## It Takes a "Bundle" of Interventions to Create a Safe Environment for the Infant and Family




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