Sleep-Related Infant Deaths: Too Many in SC

Sarah Taylor, Kandy Kelley, Michelle Narayanan
and the SC BOI Baby Friendly Work Group
Causes of Death in SC 2008-2014

• 2014 Infant Mortality of 6.5 deaths per 1,000 live births is the lowest ever in SC!!
• Most causes of mortality are decreasing...
But
• Rise in death due to accidents
And
• Of 240 deaths due to accidents (2008-2014)
  • 196 (82%) due to accidental suffocation and strangulation in bed
    • Average death of 28 babies per year
    • Over 2 per month!

This is not SIDS,
These are completely external factors
What can SC do to decrease these?
**Sudden Unexpected Infant Death**: Any sudden and unexpected death, whether explained or unexplained.

**Sudden Infant Death Syndrome**: Infant deaths that cannot be explained after a thorough case investigation.

*Graph:*

- Combined SUID Death Rate
- Sudden Infant Death Syndrome
- Unknown Cause
- Accidental Suffocation and Strangulation in Bed

From CDC and 2016 AAP
Sudden Unexpected Postnatal Collapse

- Any condition resulting in temporary or permanent cessation of breathing or cardiorespiratory failure in a well term or late preterm newborn within the first 7 postnatal days
- >35 weeks’ gestation
- Well is defined as normal 5-minute APGAR, no requirement of resuscitation
- Outcome of death, requiring intensive care, or encephalopathy

AAP and British Association of Perinatal Medicine
Breastfeeding and Sudden Infant Death

• ↓ SIDS
  • Odds ratio decreased 0.64 (95% CI 0.51, 0.81) times

• ↑ Breastfeeding rates with Skin-to-Skin and Rooming-in
  • Baby Friendly significantly increases 1.2 (95% CI 1.11, 1.28) times
  • Skin-to-Skin Care also improves temperature, stability, and maternal stress
  • Rooming-in also improves satisfaction, safety, & education opportunities

• ↑ SUPC with Hospital Skin-to-Skin and Rooming-in
  • Case reports
  • Also, infant falls now 3.94 per 10,000 birth rather than 1.6 per 100,000 births (may have been under-reported in the past)

Feldman-Winter L et al 2016 AAP report
Prevent SUPC

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

Lori Feldman-Winter, MD, MPH, FAAP, Jay P. Goldsmith, MD, FAAP, COMMITTEE ON FETUS AND NEWBORN, TASK FORCE ON SUDDEN INFANT DEATH SYNDROME

- Fairly new identification, so no ideal intervention yet

Types of Change

Assess

Educate

Incorporate

Observe

Understand
Assess

• Maternal Fatigue
• Maternal Unsteadiness

• Take advantage of current hospital focus on Fall Prevention
  • Make sure available process improvement includes postpartum mothers

• At-risk infant currently defined as
  • Requiring resuscitation
  • Low 5-minute Apgar score
  • Later preterm (35-36 weeks) AND Early term (37-39 weeks)
  • Difficult delivery

Feldman-Winter L et al 2016 AAP report
Maternal Fatigue

- “Second Night Syndrome”
- Early morning hours
- Opioid administration within 2 hours
- Maternal history of substance abuse
- Breastfeeding
- Hospital equipment
- Co-sleeping

Exhausted, medicated post-partum mothers will fall asleep while breastfeeding

Helsley et al 2010; Janiszewski and Lee 2014; Monson et al 2008; Hodges and Gilbert 2015
Assess

• SUPC Timeline
  • 30-73% will occur in first 2 hours
  • 30% in first 2 days
  • 30% in 2-7 days

• Frequent assessment in first 2 hours to include
  • Nose and mouth not covered
  • Head turned to one side

• Plan for assessments after the first 2 hours
  • Concentrate on high-mothers and infants
  • At baseline follow AWHONN guidelines for staffing
  • Consider extra observers-
    • In United Kingdom, hired nursing students to keep an eye on mother/infant dyads in early morning

Helsley et al 2010; Janiszewski and Lee 2014; Monson et al 2008; Hodges and Gilbert 2015
Educate, Educate, Educate

• Staff
  • Know SUPC is a risk and know risk factors

• Mother and family
  • Know SUPC is a risk and know risk factors
  • Use patient safety contract as a means for education
Incorporate

- Scoring for maternal fatigue
  - Not developed YET
- Maternal fatigue as an indication for removal of infant from room
- Safe equipment
- Number of people observing
- Increased assessments
- Methods to reduce fatigue
  - Avoid sleep disturbance
  - Afternoon nap time
Why Do All of This Work to Protect Skin-to-Skin and Rooming-In?
Cost of **NOT** Breastfeeding

- **Financial**
  - 302 billion annually
  - 0.49% of world gross national income

- **Mortality**
  - 823,000 annual deaths in children < 5 years
  - 20,000 annual deaths in women caused by breast cancer

- A 10% increased rate of breastfeeding in U.S. exclusively for 6 months or continued up to 1-2 years translates to 312 million reduction in childhood disorder treatment costs

Rollins NC et al *Lancet* 2016
SC Baby Friendly Work Group Action Plan

• Continue to improve Breastfeeding Rates
• Continue to assist hospitals to achieve Baby Friendly Hospital Designation
• Help hospitals add education and procedures to avoid SUPC
• Develop maternal fatigue recognition plan and potentially a scoring system