Reducing Sleep-Related Deaths in Maine

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OBJECTIVES/TAKE HOME POINTS

- Death occurring during unsafe sleep is not SIDS
- In Maine, 10-12 babies die in unsafe sleep circumstances every year
- “Back to Sleep” is becoming “Safe to Sleep”
- Instruct families about ways to keep their baby safe during sleep at the first visit, in the newborn nursery, and before birth
- Babies can also be injured during unsafe sleep, including due to falls
- There is not a guaranteed “safe way” to bed share

Nomenclature

- Unsafe sleep:
  - Bed-sharing
  - Prone or side sleep position
  - Unapproved sleep surface (couch)
  - Presence of other items in the sleeping area (pillows, bumper pads, etc).

- Bed-sharing
  - Infant sharing a sleep surface with 1 or more adults or other children

- Co-sleeping
  - Infant sleeping proximate but not with others
  - Confusing, removed from AAP statement

SUID

- SUID: “Sudden Unexpected Infant Death”
  - Primarily overlay injury
  - Died during unsafe sleep conditions:
    - Bed-sharing
    - Sleeping on couch
    - Over-bundled/over-heated
    - Inappropriate items in sleep area

- “Maine: The way life should be, but infant sleep shouldn’t”
- Joint review by physicians at MMC, MidCoast and State Medical Examiners Office
  - To evaluate the association between sudden, unexpected infant deaths and unsafe sleeping in Maine
  - Inform public policy and clinical practice

Maine

State of Maine
"LIFE SHOULD BE, BUT INFERIOR SLEEP SHOULDN’T"
Tip of the iceberg

- Blair, et al, BMJ 2009
  - Bed sharing
    - 5.23 times more likely to die while asleep (vs sleeping in crib)
  - Bed sharing + drug/alcohol
    - 53.26 times more likely to die while asleep (vs sleeping in crib)
  - Drug/alcohol alone = no increased risk

- Interesting:
  - 150% more deaths in Maine than in the study area
  - Median age 66 days

“Safe” Bed-sharing

- “High risk” situations:
  - Alcohol intoxication
  - Drug use (prescription and over-the-counter)
  - Tobacco use
  - Fatigue (!!!)
  - Couch

“Safe Bed-sharing?”

- Canada Child Death Review, 2009
  - None of deaths met “safe” criteria
- Ateah, Hamelin, 2008
  - 212 people who bed-share regularly or occasionally
  - 13% report rolling onto infant

Why is this happening?

- Influence of media
  - Moon, Pediatrics 2009
    - 36% meet AAP safe-sleep criteria
- Breast feeding
  - Santos, J Peds, 2009
    - Perception that bed sharing begets breastfeeding
    - High level of infant death

AAP Sleep Task Force, 2011

- Level A recommendations
  - Back to sleep for every sleep
  - Use a firm sleep surface
  - Room-sharing without bed-sharing is recommended
  - Keep soft objects and loose bedding out of the crib
  - Pregnant women should receive regular prenatal care
  - Avoid smoke exposure, and alcohol and illicit drug use during pregnancy and after birth

Adults\(^1\)
- Unbelted rear OR = 2.7
- Child Unbelted rear OR = 2.6
- In Taiwan\(^2\) OR= 1.54

\(^1\)Halman, BMJ, 11May2002; \(^2\)Asian Institute of Technology

170\% more deaths in Maine than in the study area
Median age 66 days

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- Alcohol intoxication
- Drug use (prescription and over-the-counter)
- Tobacco use
- Fatigue (!!!)
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**Level A, continued**
- Breastfeeding is recommended
- Consider offering a pacifier at nap time and bedtime
- Avoid overheating
- Do not use home cardiorespiratory monitors as a strategy for reducing the risk of SIDS
- Expand the national campaign to reduce the risks of SIDS to include a major focus on the safe sleep environment
  - pediatricians, family physicians, and other primary care providers should actively participate in this campaign

AAP Sleep Task Force, 2011

**Level B recommendations**
- Infants should be immunized
- Avoid commercial devices marketed to reduce the risk of SIDS
- Supervised, awake tummy time is recommended

Pediatric Gastroesophageal Reflux Clinical Practice Guidelines, 2009

- Supine with head elevated = OR > supine and flat
- Semi-supine position INCREASES reflux
  - Car seat........
- Prone positioning decreases reflux
  - At a cost.....

Pediatric Gastroesophageal Reflux Clinical Practice Guidelines, 2009

protein formula that has been evaluated in controlled trials. Use of a thickened formula (or commercial anti-regurgitation formulae, if available) may decrease visible regurgitation but does not result in a measurable decrease in the frequency of esophageal reflux episodes. Prone positioning decreases the amount of acid esophageal exposure measured by pH probe compared with that measured in the supine position. However, prone and lateral positions are associated with an increased incidence of sudden infant death syndrome (SIDS). The risk of SIDS outweighs the benefit of prone or lateral sleep position on GER; therefore, in most infants from birth to 12 months of age, supine positioning during sleep is recommended.

What about the hospital?

-“We” are role models
  - Natl Assn Neonatal Nurses
  - First Candle (SIDS Alliance)
  - AAP: “parents should be encouraged to follow safe-sleep practices for infants”

In-Hospital Falls of Newborn Infants: Data From a Multihospital Health Care System

- 18 hospitals 3 year time frame
- 88,774 live births
- 14 in hospital falls
  - 1.6/10,000
- Potentially 600-700 falls per year in the US
Safe to Sleep

De-bunk the myths

- Positional plagiocephaly
- Head stuck in crib slats
  - Importance of industry standard cribs
- Choking
- “Safe bed-sharing”

In the supine position, the trachea lies on top of the esophagus. Anything regurgitated or refluxed from the esophagus has to go against gravity to be aspirated into the trachea.

http://www.nichd.nih.gov/sids

Conversely, when a baby is in the prone position, anything regurgitated will pool at the opening of the trachea. This makes it much easier for the baby to aspirate.

http://www.nichd.nih.gov/sids

Academy of Breastfeeding Medicine Protocol #6: Guideline on Co-Sleeping and Breast Feeding (March 2008)

1. Some potentially unsafe practices related to bed sharing/co-sleeping have been identified either in the peer-reviewed literature or as a consensus of expert opinion:
   - Environmental smoke exposure and maternal smoking
   - Sharing sofas, couches, or daybeds with infants
   - Sharing waterbeds or the use of soft bedding materials
   - Sharing beds with adjacent spaces that could trap an infant
   - Placement of the infant in the adult bed in the prone or side position
   - The use of alcohol or mind-altering drugs by the adult(s) who is bed sharing
   - Infants bed sharing with other children
   - Bed sharing with younger babies (<8-14 weeks of age) may be more strongly associated with SIDS

Academy of Breastfeeding Medicine Protocol #6: Guideline on Co-Sleeping and Breast Feeding (March 2008)

- Inform families that adult beds have potential risks and are not designed to meet federal safety standards for infants.
- Ensure that there are no spaces between the mattress and headboard, walls, and other surfaces, which may entrap the infant and lead to suffocation.
What can you do?!?!

- Staff education that safe sleep is more than “Back to Sleep”
- Follow up to hospital discharge teaching
  - NICHD pamphlet
  - “Safe Sleep Top 10” based on AAP recommendations

Free materials from NICHD

New NIH Campaign

New Materials

For Child Care Providers

- Always place your baby on his or her back to sleep, for naps and at night, to reduce the risk of SIDS.
- Use a firm sleep surface, covered by a fitted sheet, to reduce the risk of SIDS and other sleep-related causes of infant death.
- Your baby should not sleep in an adult bed, on a couch, or on a chair alone, with you, or with anyone else.
- Keep soft objects, toys, and loose bedding out of your baby’s sleep area to reduce the risk of SIDS and other sleep-related causes of infant death.
- To reduce the risk of SIDS, women should: Get regular health care during pregnancy, and
  - Not smoke, drink alcohol, or use illegal drugs during pregnancy or after the baby is born.
  - To reduce the risk of SIDS, do not smoke during pregnancy, and do not smoke or allow smoking around your baby.
  - Always give your baby a dry pacifier that is not attached to a string for naps and at night to reduce the risk of SIDS.
  - Give your baby plenty of Tummy Time when he or she is awake and when someone is watching.
  - Follow health care provider guidance on your baby’s vaccines and regular health checkups.
  - Avoid products that claim to reduce the risk of SIDS and other sleep-related causes of infant death.
  - Do not use home heart or breathing monitors to reduce the risk of SIDS.
  - Give your baby plenty of Tummy Time when he or she is awake and when someone is watching.
Free On-line training
http://www.nichd.nih.gov/SIDS/nursececourse/Welcome.aspx

Resources

• NICHD
  – http://www.nichd.nih.gov/SIDS/
• SIDS Alliance  www.firstcandle.org
• “Cribs for Kids” http://www.cribsforkids.org/
  – Contact info:
    • Maine Children's Trust at 623-5120
    • OR
    • Maine Home Visiting Program; website:
      www.mainefamilies.org

Additional Resources

• To report un-safe products:
  – www.saferproducts.gov
• Safe sleep list serv
  – Infantsafesleep-request@listserv.com

Safe Sleep Video-Free on website

www.safesoundbabies.com

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