Infant Safe Sleep Update: Trends, Traumas, and Tragedies

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Disclosures

• The presenters have no significant dualities of interest to disclose.
Objectives

• Define risk factors and trends in US infant sleep-related deaths

• Describe safe and unsafe infant sleep practices and environments

• List steps that individuals, practices, and hospitals can take to make an impact on unsafe sleep deaths in their community
In the Room

• What’s your role?
• Impression of trends?
• What’s going on in your community?
• Do you know someone who lost an infant to “SIDS”?
History

1969
Early definition of SIDS established

1992
AAP recommends non-prone sleeping position

1994
NICHD/NIH initiates Back to Sleep Campaign

2012
NICHD expands and renames campaign Safe to Sleep
Celebrating Success

In the past 20 years,* the U.S. SIDS rate has dropped by more than 50% of infants are placed to sleep on their backs,** the position with the lowest SIDS risk.

Still Work to Do

About 3,400 infants die of Sudden Infant Death Syndrome (SIDS) and other sleep-related causes of infant death each year.*

*Centers for Disease Control and Prevention **NICHD National Infant Sleep Position Study

Safe to Sleep® teaches communities how to reduce risk.

Get Involved!

http://safetosleep.nichd.nih.gov
National SIDS Rate and Sleep Position, 1988-2008

Sleep Position Source: NICHD Household Survey
SIDS Rate Source: National Center for Health Statistics, CDC
SUID and SIDS

- SUID: sudden and unexpected death of an infant under 12 months of age, explained or unexplained

- SIDS: the death cannot be explained after a thorough investigation is conducted, including a complete autopsy, examination of the death scene, and review of the clinical history

- Apparent asphyxiations due to unsafe sleep are no longer called SIDS

- SIDS remains the leading cause of death for infants aged 1-12 months
SIDS Statistics

• SIDS claims the lives of almost **2,500** infants in the US each year; *nearly 7 babies every day*

• Most SIDS and other unsafe sleep deaths occur between 2-4 months of age

• Sleeping prone puts an infant at 13x risk for SIDS

• African American and American Indian infants have triple SIDS risk compared with Caucasians
  – Families are twice as likely to put their infants to sleep in the prone position
Factors Contributing to SIDS

- Sleeping prone or in stress position
- Prematurity and low birth weight
- Overheating
- Respiratory illness
- Formula feeding
- Sleep environment
- Lack of prenatal care
- Fetal exposure to nicotine, alcohol, drugs
- Postnatal exposure to second-hand smoke
Factors Protective Against SIDS

- Breastfeeding
- Pacifier use
- Active air movement in room
- Supine sleeping and safe sleeping environment
SIDS is NOT

• Caused by suffocation, choking, or immunizations
• Child abuse
• Contagious
• Hereditary
• Predictable or completely preventable
Cause of Death

• SIDS is a diagnosis of exclusion
• Wide variation in protocols to perform autopsy and investigate death scene
• Difficulty determining cause of death by autopsy alone
• Surveyed medical examiners and coroners admit that they previously attributed infant deaths to SIDS that were likely unsafe sleep related
• International consensus on a classification scheme for sleep-related deaths is needed
Triple-Risk Model

Intrinsic Risk Factors
- male gender
- prematurity
- genetic polymorphisms
- prenatal exposure to cigarettes, drugs, alcohol

Extrinsic Risk Factors
- prone or side sleep
- bed sharing
- over-bundling
- sleep environment
- infection
- second-hand smoke

Vulnerable Infant

Critical Developmental Period

Exogenous Stressor
Figure 2.
Five Year Infant Mortality Rates by County
South Carolina
2010-2014
(Residence Data)

NOTE: Counties with rates calculated with 20 or fewer deaths are unreliable and should be used cautiously.

Above State Average indicates a rate greater than 7.4.
State Average indicates a rate between 6.8 and 7.4 inclusive.
Below State Average indicates a rate lower than 6.8.
Rate per 1,000 live births
### Table 10.
**Breakdown of Sudden Unexplained Infant Deaths**
South Carolina, 2008-2014
(Residence Data)

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<td>Accidental suffocation and strangulation in bed (W75, W84)</td>
<td>37</td>
<td>22</td>
<td>25</td>
<td>21</td>
<td>39</td>
<td>21</td>
<td>31</td>
<td>196</td>
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<tr>
<td>Sudden Infant Death Syndrome (R95)</td>
<td>57</td>
<td>44</td>
<td>49</td>
<td>45</td>
<td>33</td>
<td>35</td>
<td>31</td>
<td>294</td>
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<tr>
<td>Hanging, strangulation, and suffocation, undetermined intent (Y20)</td>
<td>4</td>
<td>5</td>
<td>4</td>
<td>2</td>
<td>1</td>
<td>9</td>
<td>4</td>
<td>29</td>
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<tr>
<td>Other ill-defined and unspecified causes of mortality (R99)</td>
<td>5</td>
<td>8</td>
<td>8</td>
<td>10</td>
<td>12</td>
<td>6</td>
<td>11</td>
<td>60</td>
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<tr>
<td><strong>Total</strong></td>
<td>103</td>
<td>79</td>
<td>86</td>
<td>78</td>
<td>85</td>
<td>71</td>
<td>77</td>
<td>579</td>
</tr>
</tbody>
</table>
AAP Safe Sleep Policy, 2011

- Pregnant women should receive regular prenatal care
- Avoid smoke exposure, alcohol and illicit drug use during pregnancy and after birth
- Breastfeeding and immunizations are recommended
- Back to sleep for every sleep; supervised awake tummy time
- Use a firm sleep surface; keep soft objects and loose bedding out of crib
- Consider offering a pacifier at nap time and bedtime
- Room-sharing without bed-sharing is recommended
- Avoid overheating
- Do not use home cardiorespiratory monitors as a strategy for reducing SIDS
AAP Safe Sleep Policy, 2011

- Sitting devices should not be used for unsupervised sleep
- In-bed co-sleepers are not recommended
- No soft objects should be in the sleeping environment at any time
- Elevating the head of the bed while infant is sleeping supine is not recommended
- Bumper pads and similar products are not recommended
AAP Safe Sleep Policy, 2011

- Health care professionals, hospitals, and community family support services should endorse SIDS reduction recommendations from birth
- Media and manufacturers should follow safe sleep guidelines in product development, messaging and advertising
- SIDS prevention efforts should expand to include prevention of all infant sleep-related deaths
- Research and surveillance efforts must continue
Academy of Breastfeeding Medicine

- Guideline on Co-Sleeping and Breastfeeding, 2007
- Breastfeeding is recommended
- Don’t assume that families are using one sleep arrangement during entire night and day
- Sensitivity to cultural differences is necessary when obtaining sleep histories
- There is currently not enough evidence to routinely recommend against co-sleeping
- Parents should be educated about the risks and benefits of co-sleeping and unsafe co-sleeping practices and allowed to make their own informed decisions

Work supported in part by funding from US DHHS and MCH Bureau
Lead reference and author: James McKenna, PhD
James McKenna

- PhD in Biological Anthropology
- Foundation studying social behaviors in primates and human evolution
- Runs the “Mother-Baby Behavioral Sleep Laboratory”
- Promotes “risk-free” co-sleeping and bed-sharing environments
Audience Poll

• Have you personally slept with an infant under the age of 1?

• Why do parents sleep with their babies?

Mother

[muhth-er] -noun

1. One person who does the work of twenty. For free.

(See also: ‘masochist’, ‘loony’, ‘saint’.)
Challenges

• Desire to be close to baby for bonding, feeding, comfort, crying, other needs
• Lack of effective sleep training methods and crying coping strategies for families
• Increased risk after bad habits are in place
• Optimism bias

Egocentric thinking is normal

Causes a person to believe that they are less at risk of experiencing a negative event compared to others

Corrected through personal experience only
The Family Bed Layout

- Izzy sleeps here with owl
- Zach sleeps here
- Elijah sleeps here with mom & dad
- Owen sleeps here on a shorter toddler mattress
- Ben sleeps here with bear
Challenges

- Parental concern about sleep quality in supine position
- Infants DO sleep better prone
- Designed to sleep on mother’s chest
- Those inexperienced in prone sleeping lack ability to effectively correct a position risky for asphyxiation
Challenges

• Parental stress and lack of resources
• Low education and parenting experience
• Lack of role-models
• Improvised parenting on-the-fly
Challenges

- Parental concern about choking in supine position
- Influence of grandparents and older family members who successfully raised children sleeping prone
Challenges

• Poor safety choices by parents that result in child death are usually not criminalized, though this may change...

Unsafe sleep deaths result in criminal charges

By Crocker Stephenson of the Journal Sentinel

Aug. 2, 2013

In Milwaukee County, the death of a child in an unsafe situation is usually ruled accidental. Criminal charges are very rare.

This is true throughout the United States.

In Detroit, however, Wayne County Prosecutor Kym Worthy is taking a more aggressive position.

In announcing charges in five cases in which children died or were nearly killed, Worthy said:

"Leaving your very young babies or children in unsafe sleep situations or unsupervised in swimming pools, houses, hotels and hot cars can result in dead children and criminal charges. These are difficult cases, but these children are just as dead as a child shot by a stray bullet or one battered to death."