

PROTECTING DELAWARE'S CHILDREN A MULTIDISCIPLINARY CONFERENCE FOR CHILD WELFARE PROFESSIONALS

THE BACK TO SLEEP MESSAGE: IS IT
ENOUGH?

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Objectives

- ▣ Discuss history of SUID
- ▣ Define United States trends in SIDS and SUID-Related Mortality
- ▣ Define SUID and SIDS
- ▣ Discuss Delaware statistics for SUID and SIDS
- ▣ Discuss Delaware’s Safe Sleeping Practice Subcommittee and its activities, including the “Cribs for Kids” Program
- ▣ List the risk reduction message for parents and caregivers
- ▣ Identify various resources for safe sleep practice information and bereavement

The History of SUID

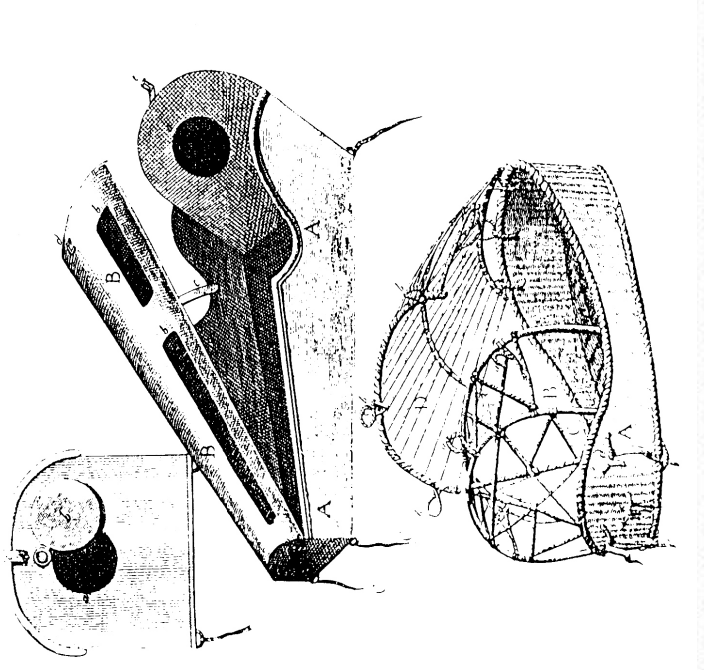
▣ I Kings Chapter 3 vs.16-28: Solomon's Wisdom



- ▣ 14th Century England: Overlay of one's infant regarded as a sin. Punishment may have been bread and water and no chance of absolution
- ▣ 16th Century Florence, Italy: Penalties given to unwed mothers whose infants suffocated in bed.

The Arcuccio

- Florence craftsman created this device:
- If a mother did not use and the infant died they were ex-communicated.





History of SUID

- Transition from punishment for infanticide from ecclesiastical to secular authority gradually evolved in the 19th century.
- Civil and Coroner's courts began investigating cases of overlying and smothering and began to perform autopsies.
- Thymus Theory: Thymus found to be large in infants and thought to have something to do with the deaths of infants. This contributed to Thymic irradiation in the US from 1926-1947.



History of SUID

▣ 1963: NICHD Conference with Conclusion Statement:

“One is startled to find that the number of infants who die of the sudden death syndrome is of a comparable order of magnitude to the number of adults who die from carcinoma of the lung. Despite this fact the information is miniscule in comparison to that on carcinoma of the lung. The many questions raised by this conference should provide a stimulus for more comprehensive and detailed studies from this and other countries”



History of SUID

- ▣ 1969 NICHD Conference:
 - Definition of SIDS crafted
 - Lobbied congress to support SIDS research and provide support for grieving families. This resulted in “Sudden Infant Death Syndrome Act of 1974”
 - ▣ Title 5 Funding which continues today.
 - Mandated that NICHD take responsibility for SIDS research
 - Established the creation of educational and counseling services for families of SIDS victims
 - The number of primary SIDS related research grants soared. Areas focused on , developmental Neurophysiology, respiratory, laryngeal, cardiac, metabolic, endocrine and genetic, immunology and infection, epidemiology, anatomic pathology, and behavioral.



History of SUID

- ▣ 1980's: New Zealand, United Kingdom noted 50% decrease in SIDS when infant sleeping position changed from prone to supine.
- ▣ 1992: The AAP Task Force on SIDS issues recommendation that infants be placed on back or side for sleep.
- ▣ 1994: “Back to Sleep” Campaign: Decrease in SIDS rates in US by 50% by 1999.
- ▣ 1996: revised AAP statement for Back only sleep. CDEC issues Guidelines for Infant Death Scene Investigation; revised in 2008
- ▣ 2005: AAP: *“Every caregiver should use the back sleep position during every sleep period. Bedsharing during sleep is not recommended”*.



The Stillbirth and SUID Prevention, Education, and Awareness Act

- Lautenberg, Pallone introduce bill to help reduce stillbirths and infant deaths. (*July 14, 2009*).
- Bill calls for new research and education on stillbirth and SUID.
 - “This bill will fund investigations to finally provide some answers by creating a national registry to help researchers understand the scope and impact of these tragedies and raising awareness through education campaigns that will help parents decrease risk factors that can contribute to SUID and stillbirths every year” (*Congressman Frank Pallone, Jr. (D-NJ-6)*)

Preventing Stillbirth and Sudden Unexpected Infant Death Act of 2008 continued

- Establishing a standardized classification system for defining subcategories of SIDS and SUID for surveillance and prevention research activities
- Supporting multidisciplinary infant death reviews such as those performed by child death review committees and fetal infant mortality committees to collect and review the standardized information and accurately and consistently classify and characterize SUID
- Improving public reporting of surveillance and descriptive epidemiology of SUID by supplementing vital statistics data



SUID Definition

- SUID = sudden, unexpected infant death
- Infant deaths that:
 - Occur suddenly and unexpectedly
 - Have no obvious manner and cause of death prior to investigation
- Excludes deaths with an obvious cause, e. g., motor vehicle accidents

SUID

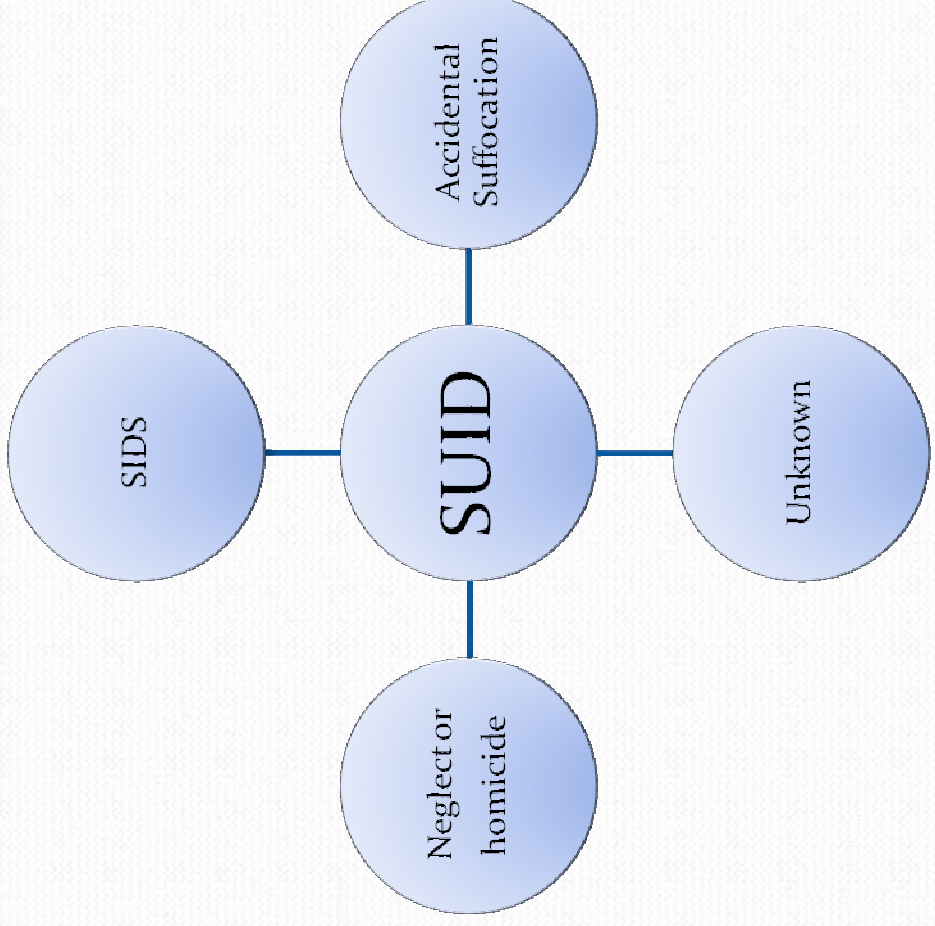
Explained

- Head injury
- Long QT
- MCAD
- Neglect or homicide
- Hypo or hyperthermia
- Poisoning
- Accidental Suffocation?

Unexplained

- SIDS
- Cause unknown or unspecified
- SIDS, but cannot rule out suffocation from unsafe sleep environment

SUID and some subtypes





Impact of SUID and SIDS

- SUID
 - 4600 SUID deaths/year
 - Accidental suffocation and strangulation quadrupled since 1984
- SIDS
 - 2500 SIDS/year
 - Third leading cause of infant mortality
 - Leading cause of postneonatal mortality

Sudden, Unexplained Infant Death

Initiative (SUIDI)

- Is the decline in SIDS rate accurate?
- Deaths previously classified as SIDS are now classified as:
 - Accidental suffocation
 - Unknown/unspecified cause
 - This finding suggests changes in reporting may account for part of the decrease in SIDS rates.

US Infant Mortality Trends Attributable to Accidental Suffocation and Strangulation in Bed From 1984 Through 2004: Are Rates Increasing? Shapiro-Mendoza, C. et. Al. Pediatrics Vol 123, #2 Feb 2009

Sudden Infant Death Syndrome

ICD-9 Definition

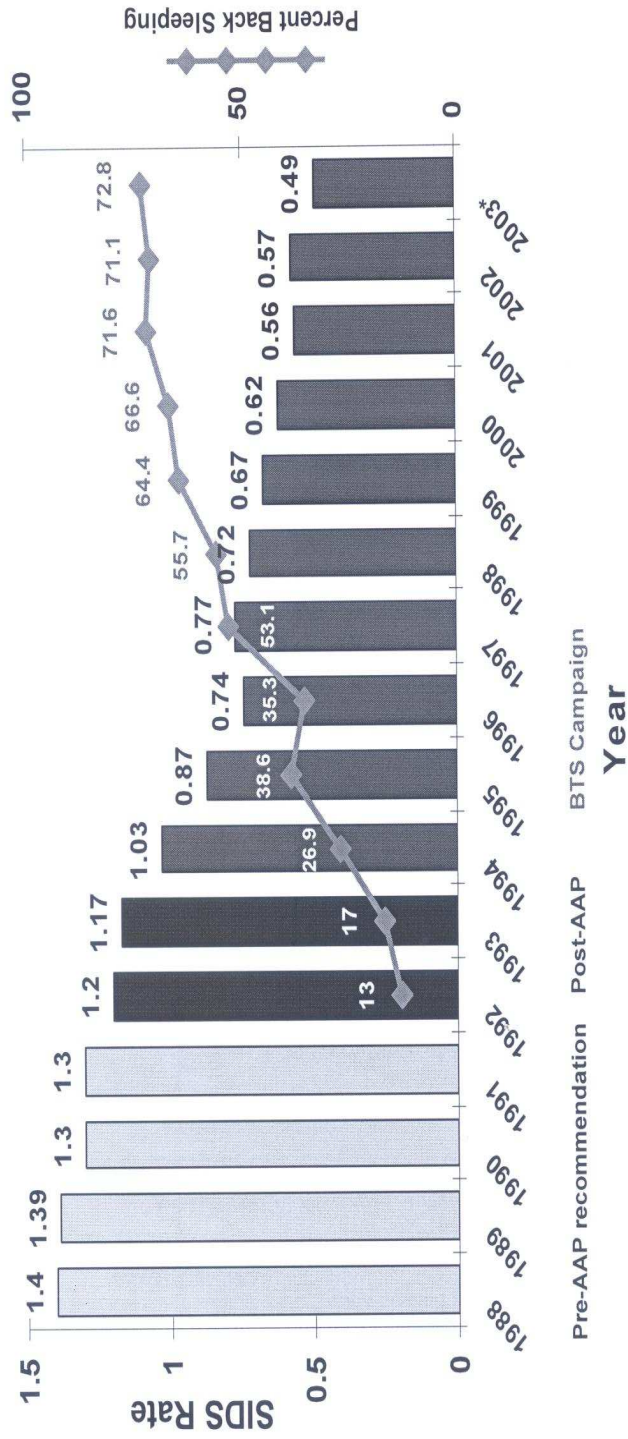
- The sudden death of an infant under one year of age which remains unexplained after the performance of a complete post-mortem investigation including:
 - Autopsy
 - Examination of the scene of death
 - Review of the case history

Back to Sleep



SIDS Death Rate and Sleep Position 1988 - 2003 (per 1000 Live Births)

SIDS Rate and Sleep Position, 1988-2003
(Deaths per 1,000 Live Births)



*Preliminary Data
Sleep Position Source: NICHD Household Survey
SIDS Rate Source: National Center for Health Statistics, CDC

Sleep Position for Infant (SIDS Deaths in the United States)

1992

Before

8,000 babies died

After

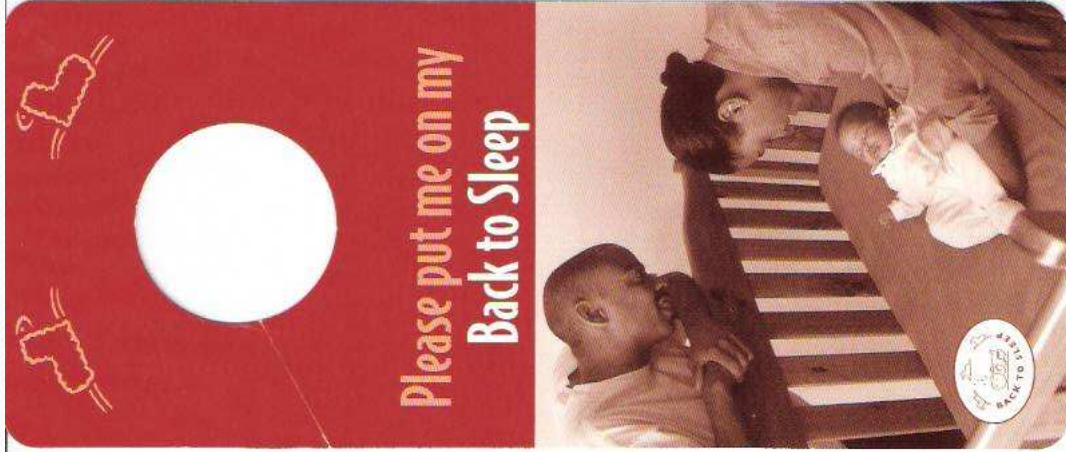
2,500 babies died



25,000 babies' lives have been saved!

Is Back to Sleep Enough?

NO!



Reduce the Risk of Sudden Infant Death Syndrome (SIDS)

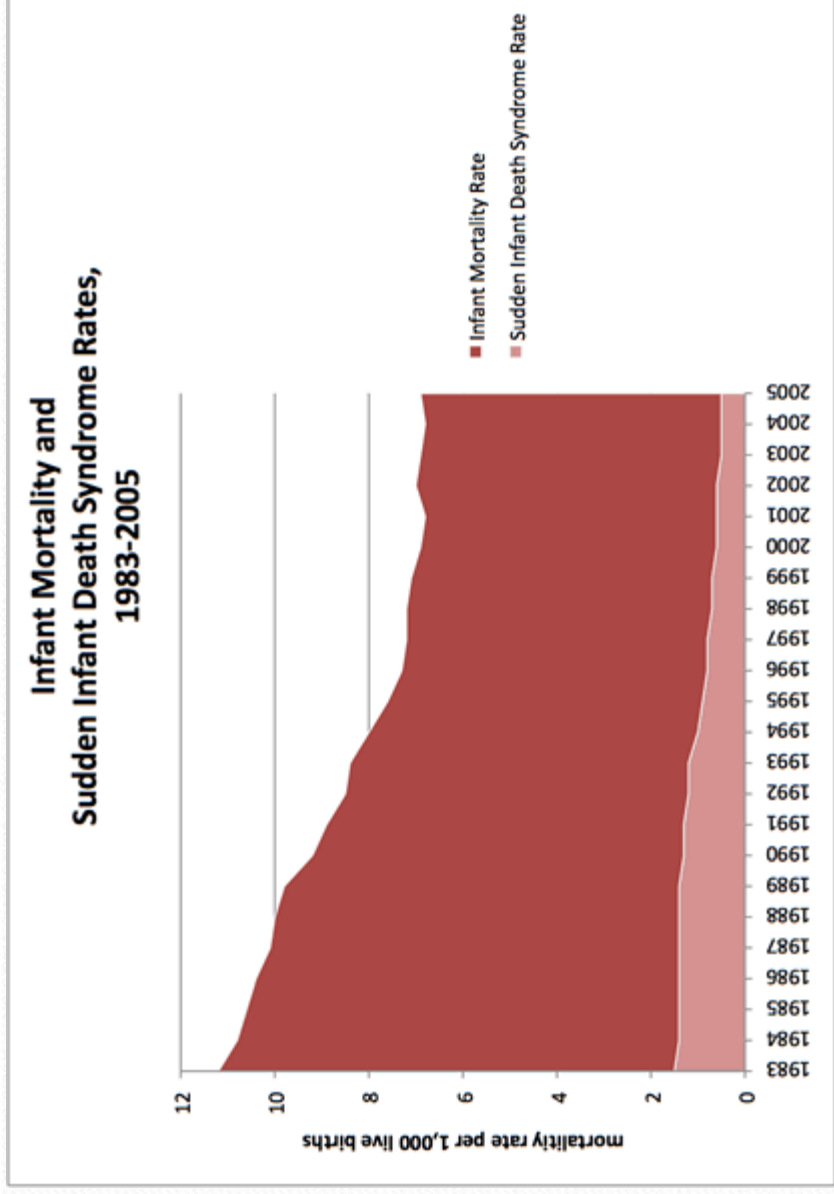
- Always place your baby on his or her back to sleep, for naps and at night.
- Place your baby on a firm sleep surface, such as on a safety-approved crib mattress, covered by a fitted sheet.
- Keep soft objects, toys, and loose bedding out of your baby's sleep area.
- Do not allow smoking around your baby.
- Keep your baby's sleep area close to, but separate from, where you and others sleep.
- Think about using a clean, dry pacifier when placing your infant down to sleep.
- Do not let your baby overheat during sleep.
- Avoid products that claim to reduce the risk of SIDS, and do not use home monitors to reduce the risk of SIDS.
- Reduce the chance that fat spots will develop on your baby's head—provide "tummy time" when your baby is awake and someone is watching and avoid too much time in car seats, carriers, and bouncers.

For more information about SIDS, contact the **Back to Sleep Campaign** at 1-800-505-CRIB (2742) or at www.nichd.nih.gov/SIDS/

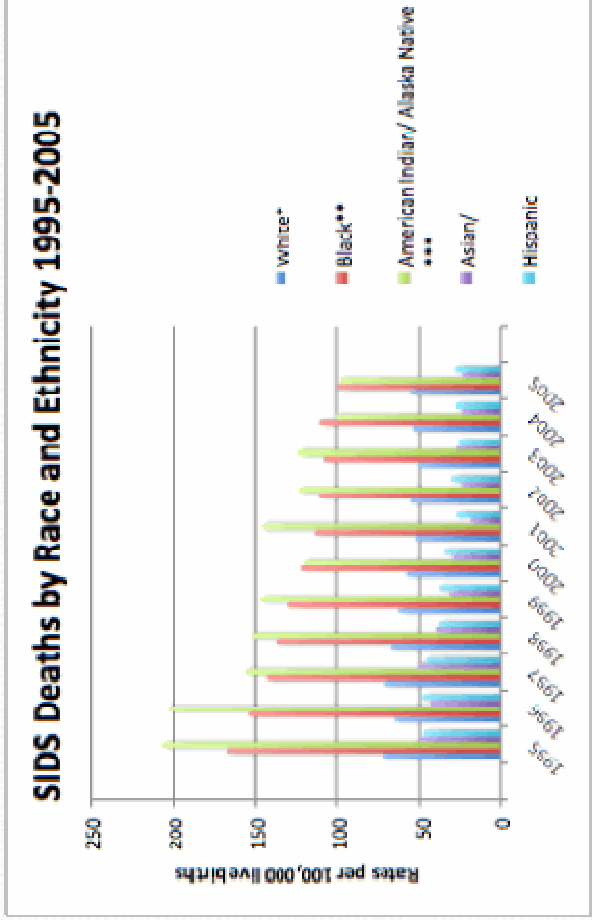
if National Institutes of Child Health and Human Development

U.S. Department of Health and Human Services • National Institutes of Health

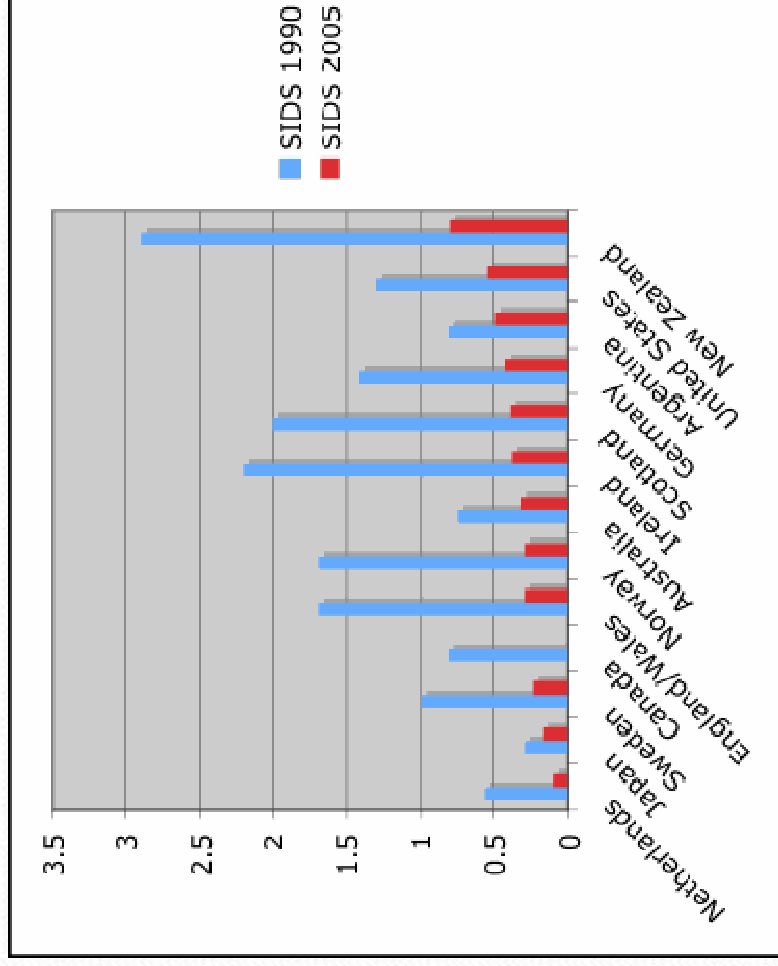
SIDS and Infant Mortality



SIDS by Race and Ethnicity



International SIDS Rates



Statewide Childhood Injury Deaths 2001 compared to 2008 report Rates per 100,000

Leading Causes of Injury Deaths
Delaware 1979-1998

Manner of Injury/poisoning	Number	Percent	Rate
Motor Vehicle Traffic	476	47.2	12.5
Firearm	113	11.2	3.0
Fire/burn	105	10.4	2.7
Drowning/submersion	80	7.9	2.1
Suffocation	69	6.8	1.8
Poisoning	42	4.2	1.1
All other Injuries	123	12.2	3.2
Total	1,008	100.0	26.4

Leading Causes of Injury Deaths
Delaware 1996-2005

Manner of Injury/poisoning	Number	Percent	Rate
Motor Vehicle Traffic	212	46.1	9.75 ↓
Firearm	63	13.7	2.90 ↓
Suffocation	40	8.7	1.84 ↑
Drowning/Submersion	35	7.7	1.61 ↓
Fire/burn	30	6.5	1.38 ↓
Poisoning	24	5.2	1.10 =
All other Injuries	56	12.1	*
Total	460	100.0	21.15 ↓

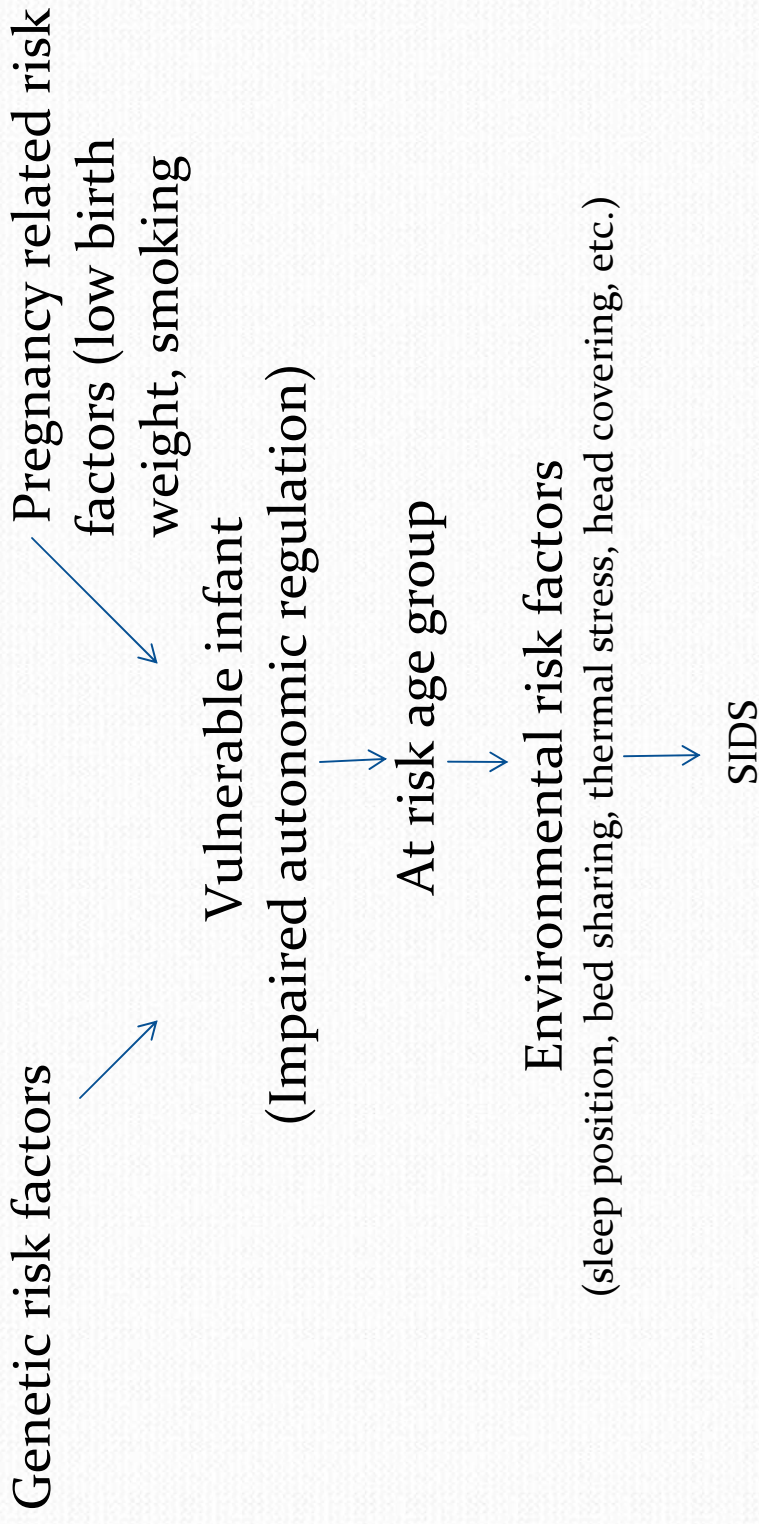


Research

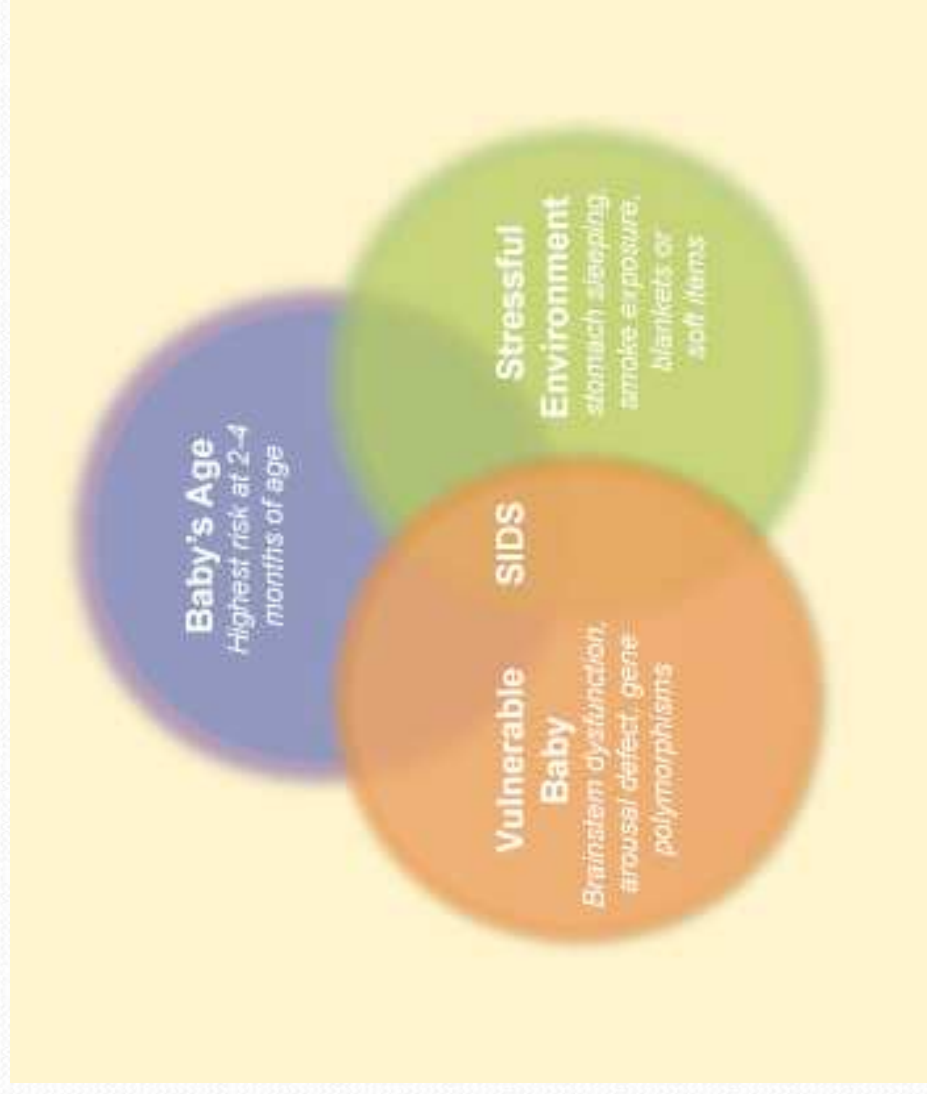
- Abnormalities in serotonin system (Serotonogenic (5HT) neurons in the medulla of the brain stem)
- Kinney Hypothesis: Medullary serotonin system dysfunction results in a failure of autonomic and respiratory responses to hypoxia or hypercapnia and leads to sudden death in at least a subset of SIDS cases. *Kinney et al. J Neuropathol Exp Neurol. 2003*)
- Regulation of heart rate, respiration, blood pressure and temperature
- Babies have abnormal response to hypoxia
- Smoking compounds the problem

The Proposed Causal Pathway to

SIDS



Triple Risk Theory



Theories

- Rebreathing Theory
 - Infants in certain sleep environments are more likely to trap exhaled carbon dioxide around their face:
 - Prone with near or face-down position
 - Soft bedding
 - Exposure to tobacco smoke
 - Infants rebreathe exhaled CO₂: CO₂↑ & O₂↓
 - Infants die if they cannot arouse/respond appropriately

SIDS Facts

- Leading cause of post neonatal infant death
- No way of predicating which babies will die of SIDS
- Infants who die from SIDS often appear in good health. (some may have a mild URI, but nothing found on autopsy)
- 91% of SIDS deaths occur before 6 months of age
- Peak time for SIDS deaths is 2-4 months
- African American infants are nearly twice as likely to die of SIDS than Caucasian infants.
- Occurs when the infant is asleep.



SIDS Facts

SIDS is a diagnosis of exclusion!

Established Risk Factors

- Prone/side sleep
- Maternal smoking during pregnancy
- Maternal drug use during pregnancy
- Environmental tobacco smoke
- Overheating
- Soft sleep surface
- Unaccustomed tummy sleep
- Bed Sharing
- Late or no prenatal care
- Young maternal age
- Prematurity and /or low birth weight
- Male sex
- African and Native Americans



Myths of SIDS

- Causes by immunizations
- Contagious
- The result of neglect or abuse
- Cribs cause “crib deaths”
- Suffocation is SIDS



SIDS is NOT Suffocation

- Although SIDS is different from suffocation, all the measures we use for SIDS risk reduction, also help to prevent accidental deaths such as positional asphyxia, overlay, and entrapment.
- These are **100% PREVENTABLE** deaths!!!

What about Delaware Babies





Delaware Statistics

- From 2003 to 2007:
 - SIDS: 18
- However:*
- Number of sleep related deaths (SUID) from 2003 to 2007: 57
 - Third leading cause of death (same as National statistics)
 - Number of Males: 29 Number of Females: 28
 - Most common age at time of death: 0 to 1 month: 22
 - 2 to 3 months: 20
 - Race: AA: 31 (54%); White: 23 (40%)

Delaware Infant Mortality from

2000-2004

Cause of Infant Death in Counties		New Castle, DE	Kent/Sussex, DE
SIDS	27	8 75.00%	8 72.73%
Ill-Defined	4	3 11.11%	3 27.27%
Threat to breathing	5	0 13.89%	0 0.00%



Unsafe Sleep Practices

- Most Common Factors involved in Delaware deaths:
 - Not in a crib or bassinette = 37 (32%)
 - Sleeping with other people = 29 (25%)
 - Not sleeping on back = 26 (23%)
 - Unsafe bedding or toys = 16 (14%)
 - Obese adult with infant = 3 (3%)
 - Adult with alcohol impairment = 1 (1%)
 - Adult with drug impairment = 2 (2%)

Where Should Infants Sleep?

- Infants < 8 months, risk of death in crib:
 - .63 deaths/100,000 infants
- Infants < 8 months, risk of death in adult beds:
 - 25.5 deaths /100,000 infants
- Risk for SIDS:
 - Greatest if sharing a sleep surface.
 - Intermediate if sleeping in another room.
 - Least if infant sleeps in same room without bedsharing.



Race and Infant Mortality

Infant Mortality in the United States:

African American Infants:

13.5 deaths/1,000 live births

Caucasian Infants:

6.7 deaths/1,000 live births

% of Infants Bedsharing in an Adult Bed:

African American Infants:

41.8%

Caucasian Infants:

12%

Sleep Practices and Sleep

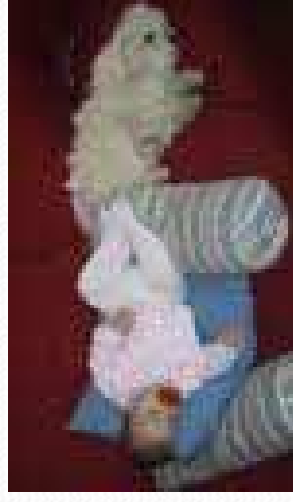
Environment

- Survey by CPSC and Gerber Products Co.
 - “Most families still place their babies to sleep in ways that increase the risk of SIDS”.
 - Unsafe practices included:
 - Prone or side position
 - Soft bedding
 - African-American are more likely to have infants in situations that increase their risk of SIDS
 - 39% of AA parents got their information about sleep position from grandparents

What's Wrong With This Picture?



Unsafe Sleeping Environments



How an Infant SHOULD NOT be Sleeping:



Keenan, JS et al. PEDIATRICS.106(3), 2000



Soft Bedding:

- Inappropriate bedding:
 - Pillows/Comforters
 - Soft mattresses
 - Bean bags
 - Sheepskins

Condition Odds Ratio

Pillow 2.5

Soft bedding 5.1

**Risk of prone
position is
synergistic with
soft bedding**



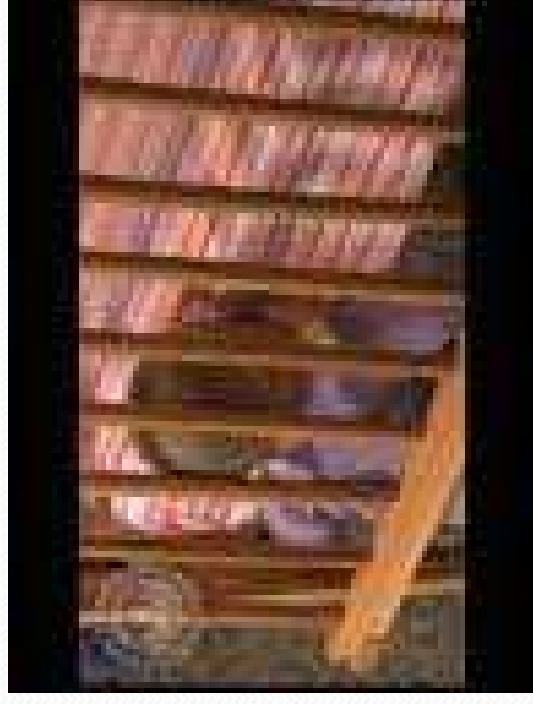
Kemp, JS et al. PEDIATRICS:106(3), 2000

Doll Re-enactment of infant

trapped



Doll Reenactment of infant entrapped between crib side rails





Barriers to Back to Sleep

- Regurgitation/aspiration concerns
- Deep sleep
- Plagiocephaly
- Contrary advice from a relative or caregiver



Barriers to “Back to Sleep”

- Study done by Colson, et al (2005) looked at African American caregivers in the inner city. Found 4 themes related to barriers:
 - Safety: fear of choking
 - Advice: More experience female family members
 - Comfort: Perception of whether the infant looked comfortable
 - Knowledge: limited or erroneous knowledge

Media Influence





Media Influences

- Media Influences:
 - Study published in PEDIATRICS:
 - “Infant Sleep Environments Depicted in Magazines Targeted to Women of Childbearing Age”
 - Pictures of infant sleep environments and sleeping infants that appeared in articles and advertisements in issues of 28 magazines published in 2008 were analyzed for adherence to AAP guidelines for decreasing SIDS risk.
 - Conclusions: Two thirds of pictures on infant sleep environments were not consistent with AAP recommendations.
 - Joyner, BL, Gill-Bailey, C, and Moon, RY: Pediatrics Vol: 124. No3: (September 2009)

Photo used from hospital advertising their OB department



So what is Delaware Doing?

- Joint CPAC/CDNDSC established the Safe Sleeping Practice Subcommittee in 1996
- *Original Mission: To evaluate programs, task forces and educational campaigns around safe sleeping practice education in Delaware and make a recommendation for creation, improvement or merging of initiatives to address the current number of SIDS deaths with sleeping practice factors.*
- Membership has grown to 16 and is multi-disciplinary

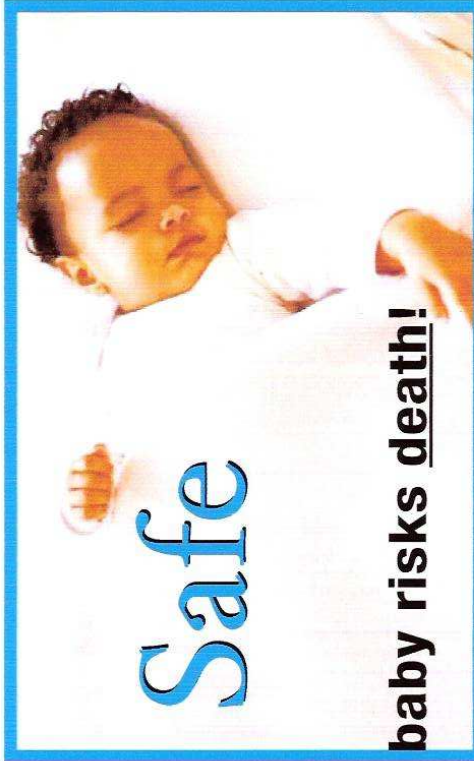
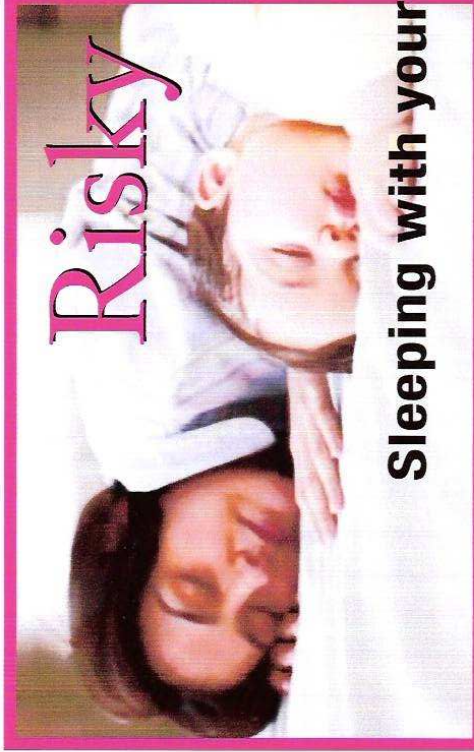
Safe Sleeping Subcommittee

Activities

- Action Steps:
 - Grant for DART transit campaign
 - Participations in community fairs
 - Lecture to: lay public, daycare providers, health care professionals including nursing students, hospital and primary care nurses and doctors
 - Implementation of Mandatory education on safe sleeping practices at duPont Hospital for Children
 - Articles in DE AAP newsletter, and in News Journal
 - Updating Growing Together Calendar
 - Distribution of 4,000 posters on safe sleeping
 - Communication with advertisers
 - Cribs for Kids
 - Stroller Walk
 - Billboards for October which is SIDS awareness month
 - Re-drafting the unsafe sleeping section of the Maternal Child Health, National Data Tool
 - Future publications

DART Campaign

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DART Campaign

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I want to

Don't sleep with me in a bed, sofa or chair.

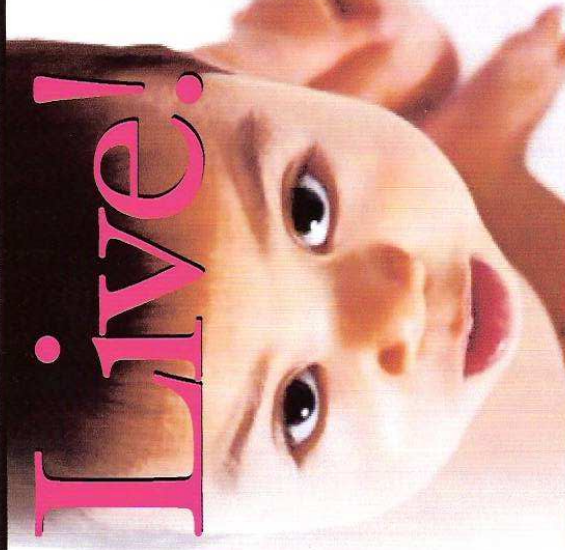
I need to sleep alone!

Don't smoke anywhere near me.

I need clean air.

Share only your love.

Live!



“Cribs for Kids Program”

Delaware Chapter

Partnership with A.I. duPont Hospital for Children; Division of Public Health and CDNDSC



“Cribs for Kids”®

- Originated in Pittsburgh in Nov. 1998 through the combined efforts of District Attorney Stephen Zappala, Mayor Bob O’Connor, Cmdr. Gwen Elliott, and Judy Bannon (SIDS of PA)
- Steering committee consisting of public health, political and business leaders and child death review teams was formed
- Has expanded to 252 locations in 44 states
- Goal: combat infant mortality resulting from SIDS and accidental suffocation in Allegheny County, PA
 - Includes:
 - Education
 - Provides safe sleeping environment for infants
 - Follow up evaluation

Components of the National “Cribs for Kids®” Program





Components

- Standardized materials
 - Safe-sleep brochures, posters, etc
 - Training manuals
 - Standardized forms
 - Grant writing language
 - Current safe-sleep literature review
 - Power-point presentations
- National fundraising initiatives
- Networking opportunities
- Ongoing support



Cribs for Kids

- Research results from initial study:
 - 70% response rate
 - Questions related to each risk reduction point.
 - 89% reported that they read information on Back to Sleep
 - 60% could not correctly explain the unpreventable nature of SIDS.
 - 100% reported that they used the crib as a safe sleeping environment for their infant.



Cribs for Kids

- Comparing names of all 320 families who received cribs & education through the Cribs for Kids Campaign to the public record of infant deaths, **NO** names were found to match.
- SIDS deaths in Allegheny County, PA dropped by 63% from 1992 until 2003. (National average: 50%)

Unsafe Sleep Practices

- Most Common Factors involved in Delaware deaths:
 - Not in a crib or bassinette = 37 (32%)
 - Sleeping with other people = 29 (25%)
 - Not sleeping on back = 26 (23%)
 - Unsafe bedding or toys = 16 (14%)
 - Obese adult with infant = (3%)
 - Adult with alcohol impairment = (1%)
 - Adult with drug impairment = (2%)

“Cribs for Kids”

Delaware Chapter

- As a Chapter we will provide:
 - Standardized materials
 - Doorknob hangers
 - Brochures
 - Crib: Graco Pack N Play
 - Form: Hold Harmless Agreement that parent signs
 - National fundraising initiatives
 - Crib distribution system
 - Networking opportunities
 - Ongoing support

Cribs for Kids: Delaware Chapter

- Doorknob Holder



Cribs for Kids

- **Process:**
 - Referral made: Social worker from referring hospital or prenatal care provider.
 - Qualifications: Infant is due in 6 weeks or less then 6 months of age.
 - Division of Public Health
 - Social worker from duPont hospital
- **Completion of demographic form with risk factors**
 - E-mailed to Maryanne Bourque at duPont (mbourque@nemours.org)
 - Robin Fantl: Division of Public Health Milford (robin.fantl@state.de.us)
- Fax to DPH to arrange for public health nurse visit



Cribs for Kids (continued)

- Public Health Nurse sets up appointment:
 - Education/Checklist/Documentation
 - Safe sleep questionnaire is completed by participant
 - Participant signs the “Cribs for Kids” Hold Harmless Agreement
 - Participant is given related brochures and door hanger
 - Crib is given and demonstration back is performed.
- The participant will be contacted around the time of the child’s three month birthday to complete a questionnaire over the phone.



Attachment C

'Cribs for Kids'® Hold Harmless Agreement

In exchange for the grant of a "Pack-N-Play" portable baby crib, receipt of which is hereby acknowledged, I, _____, agree to indemnify, defend and hold harmless the Cribs for Kids program, as well as officers, agents and employees of the above from all claims or losses accruing or resulting to any person, firm, or corporation who may claim to be injured or damaged as a result of acts or omissions involving the placement and/or use of the portable cribs provided within this "Cribs for Kids" program.

Signed: _____

Date: _____

Witness: _____

Date: _____

Resources





Resources

- First Candle
- Back to Sleep Campaign
- US Department of Health and Human Services/NICHD
- National MCH Center for Child Death Review
- Cribs for Kids
- Sweet Dreams: Safe Sleep for Babies
- SIDS Network
- AAP Task Force on Sudden Infant Death Syndrome
- CJ Foundation for SIDS
- Safe Kids Worldwide
- National SIDS/Infant Death Resource Center
- National Safe Kids Campaign
- Delaware SIDS Affiliate
- Compassionate Friends

SAFE INFANT SLEEP PRACTICES:

- “Back to Sleep”
- Safe Crib:
 - Designed for infants
- “Feet to Foot”
- No Smoking
- No soft bedding
- Comfortable temperature
- No co-sleeping but rooming in for first 6 months
- Use of Pacifier after 1 month of age
- Devices to keep babies on their back are not recommended
- No home monitors
- Provide supervised “Tummy Time”



Safe Sleep Practice Is More Than

“Back To Sleep”



And They Lived Happily Every After

