

Creating a Hospital and Community Based Infant Safe Sleep Education and Awareness Program: The York Hospital Experience



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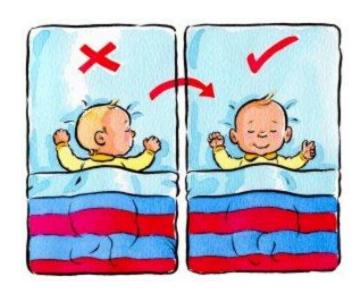


Objectives for Today's Talk

- Review statistics supporting the need for increased family education on infant sleep safety.
- Understand how to organize a hospital-based infant sleep safety program.
- Be aware of the potential deterrents to development of an infant sleep safety program and how to overcome them.
- Be familiar with ongoing research to demonstrate the effectiveness of increased family education efforts.

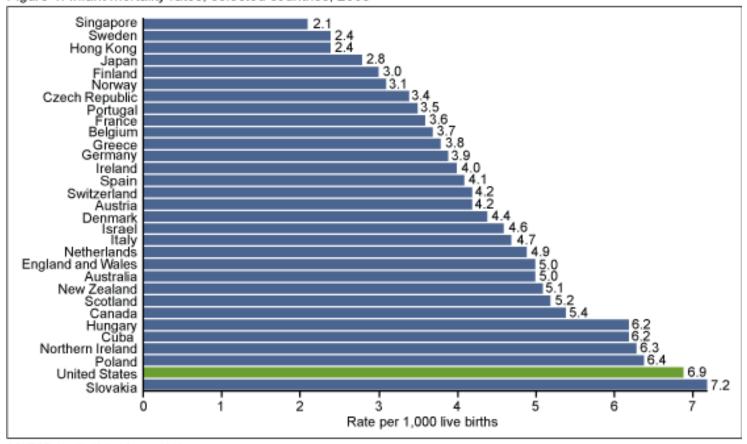
Infant Sleep Safety

Requires a consistent and repetitive message in the community to prevent accidental deaths



Infant Mortality Rates in Industrialized Countries, 2005

Figure 1. Infant mortality rates, selected countries, 2005



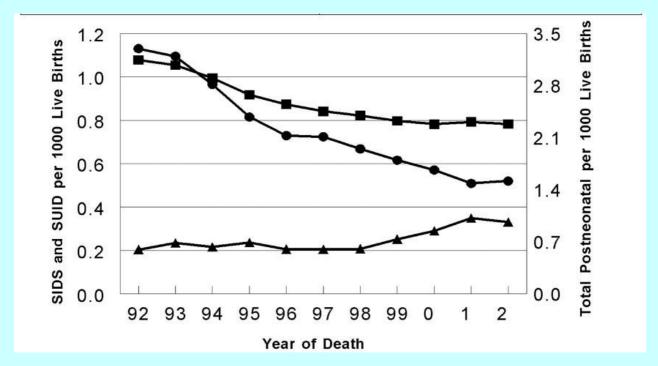
SOURCE: Health, United States, 2008.

Trends in Infant Sleep Safety

- SIDS is still the leading cause of post-neonatal mortality
- Between 13% and 25% of babies still sleep in prone position
- African-American families are twice as likely to put a baby to sleep prone and their SIDS rates are twice as high as the Caucasian population
- Use of the family bed is increasing
- Over 70% of parents have slept with their infant at one time

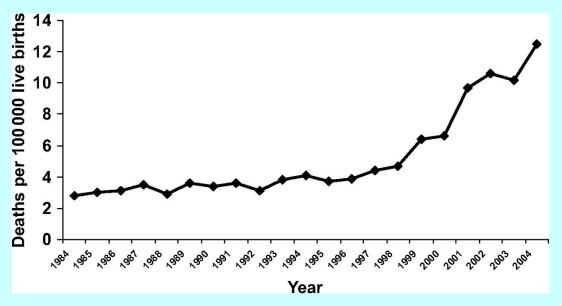
Post-Neonatal Mortality: Have We Hit a Wall?

- 4,500 infants in the US die unexpectedly each year
- Post-neonatal mortality rates have been stagnant since 2002
 - AAP Task Force on SIDS Policy Statement: Nov. 2005



Trends in Infant Sleep Safety

 From 1984 to 2004, infant mortality rates attributed to accidental suffocation and strangulation in bed increased from 2.8 to 12.5 deaths per 100,000 live births



Shapiro-Mendoza CK, Kimball M, Tomashek KM, Anderson RN, Blanding S. US Infant mortality trends attributable to accidental suffocationand strangulation in bed from 1984 through 2004: are rates increasing? Pediatrics 2009; 123:533-539.

Modeling Safe Sleep in the Hospital???













Educating Families? A Failure of Our Hospitals

- Newhouse and Grey: Riverside Methodist Hospital, Franklin County, OH
- Found in their nursery: 54% of babies were not supine, 27% of bassinets had loose blankets, and 15% had toys!





Safe sleep education in PA Birthing Centers

20 question survey to evaluate how well birthing centers in PA provide education on infant sleep safety to new families*





Results

- 119 birthing centers
 - 113 performing deliveries
- Results obtained at 48 hospitals (42%)
 - Accounting for 51,880 deliveries/yr (35.7%)
- Mean deliveries/year: 1081 (50-5000)
- Only 41% of centers had a formal policy on infant sleep safety!

Results: Safe Sleep Program?

- Do you have a program to teach parents infant sleep safety?
 - 67% said yes, BUT...
 - Almost nobody could identify a specific program
 - "We have been teaching 'Back to Sleep' for years"
- Suggests lack of comprehensive teaching, especially since recommendations had significant changes in 11/2005!

Results: Back to Sleep, Really?

- Infants always placed on the back: 81%
- But...48% of sites admitted to using side position sometimes
 - Average: 38% of babies per site kept on the side
 - Some nurseries 100% of babies kept on the side
- Large (>1000 deliveries/yr) vs. small birthing centers:
 - Large centers more likely to state exclusive use of back position (p = 0.002) and to never observe side position (p = 0.04)

Practicing what we preach?

- Recommendation: Babies should lay flat on the back in the crib.
 - 65% of nurseries prop the bassinet
 - Range 1 to 100%
 - Average 58% per nursery



Practicing what we preach?

- Recommendation: Do not over-bundle.
 Keep blankets away from the face.
 - 73% of nurseries bundle babies up to the chin
 - Range: 5% to 100%
 - Mean: 77% of babies per nursery



Practicing what we preach?

- Recommendation: Nothing in the crib but the baby.
 - 43% of nurseries place a washcloth near the baby's face after feeding to prevent sheets from being dirtied
 - Range: 1% to 100%
 - Average 40% per nursery



On a Positive Note: Bedsharing

- No institution promotes bedsharing
 - When discovered on maternity ward, baby returned to bassinet
 - Family re-educated
- 9% noted some providers promote bedsharing (2 cases were twins in same crib)

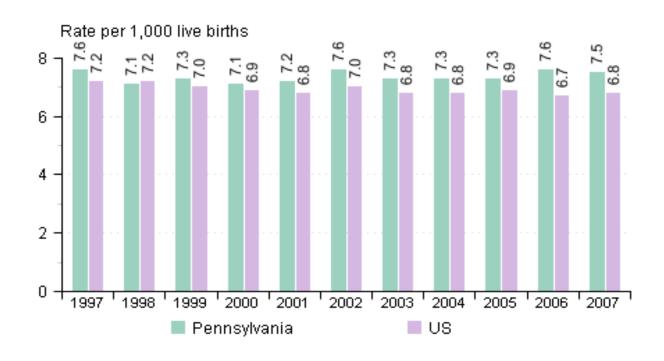


Despite the problems identified in Pennsylvania Nurseries...

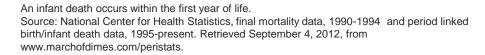
- 94% of those surveyed felt that their staffs were well-educated regarding infant sleep safety!
- Only 21% of the units required regular competencies on infant sleep safety.
- 67% of sites felt their staff would benefit from additional education
- 80% interested in a safe sleep program

Infant mortality rates

Pennsylvania and US, 1997-2007



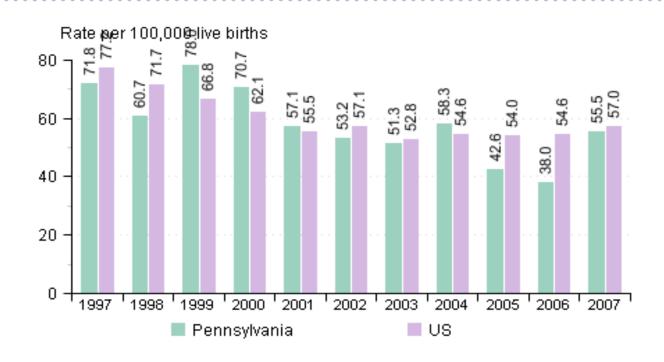
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Infant deaths due to sudden infant death syndrome

Pennsylvania and US, 1997-2007



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Cause of death for 1996-1998 is based on the Ninth Revision, International Classification of Diseases (ICD-9); cause of death for after 1998 is based on the Tenth Revision, International Classification of Diseases (ICD-10).

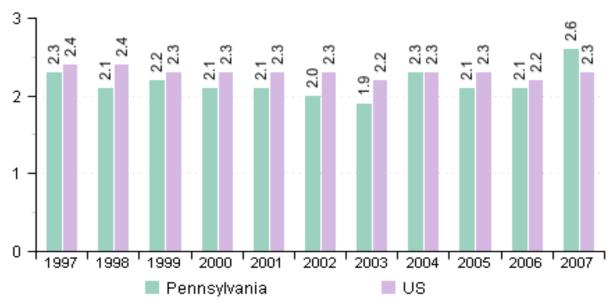
Source: National Center for Health Statistics, period linked birth/infant death data. Retrieved September 4, 2012, from www.marchofdimes.com/peristats.



Postneonatal deaths

Pennsylvania and US, 1997-2007

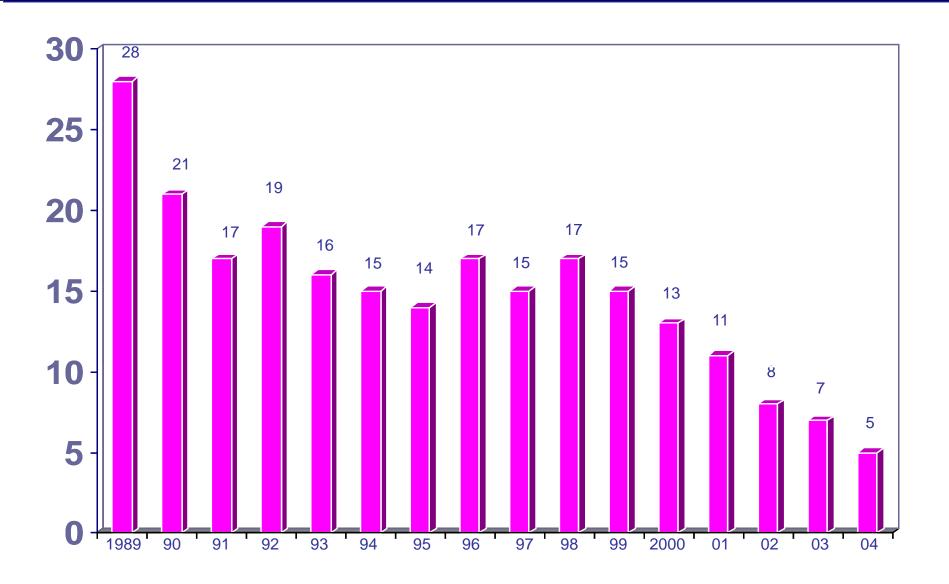




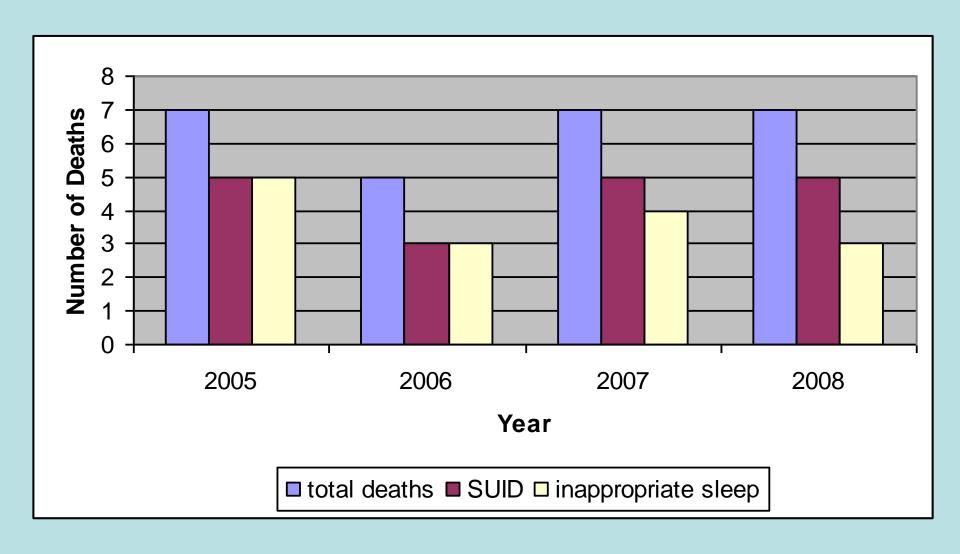
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Allegheny County, PA SIDS/Accidental Suffocation Deaths 1989-2004



Infant Coroner Cases York County 2005-8



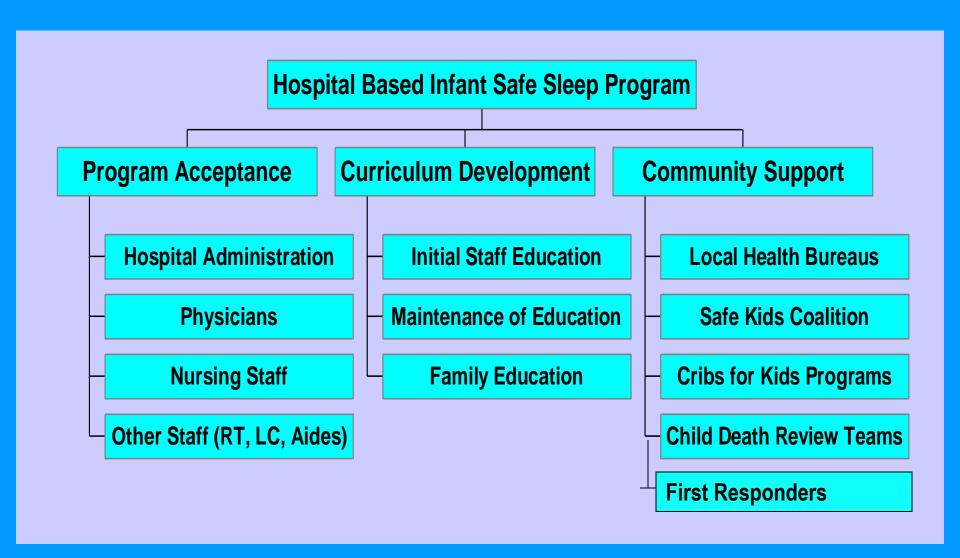
- First Annual Cribs For Kids® National Conference
 - "Breaking the Cycle A Safe Sleep Summit"
 - ...its for the babies
- April 2008 ~ Pittsburgh, PA



Hospital Based Infant Safe Sleep Program

- Goal: Reduce the risk of injury or death to infants while sleeping
 - Provide accurate and consistent infant safe sleep information to hospital personnel
 - Medical, nursing, breastfeeding, child birth education, and nutritional staff
 - Enable hospitals to implement and model infant safe sleep practices throughout the facility
 - Provide direction to health care professionals so parents receive consistent, repetitive safe sleep education

Organizational Chart for an Infant Sleep Safety Program





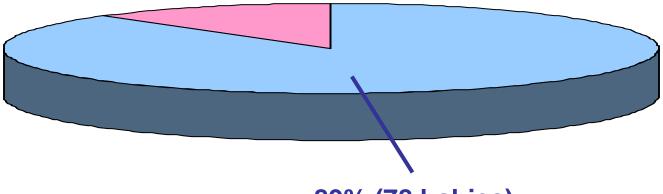
Presentation for Administration



- Support from physicians already knowledgeable about SIDS/SUID (pediatricians, neonatologists, ED docs)
- Scope of problem- including national and local statistics
- Logistics of program- focusing on a successful program model that has produced excellent public health care results
- Cost-effectiveness

Allegheny County, Pa Study of 88 SIDS Deaths, 1994-2000

11% (10 babies)
Found in cribs or bassinets



89% (78 babies)
Found in unsafe sleeping environments

PA CDR 2010 Report

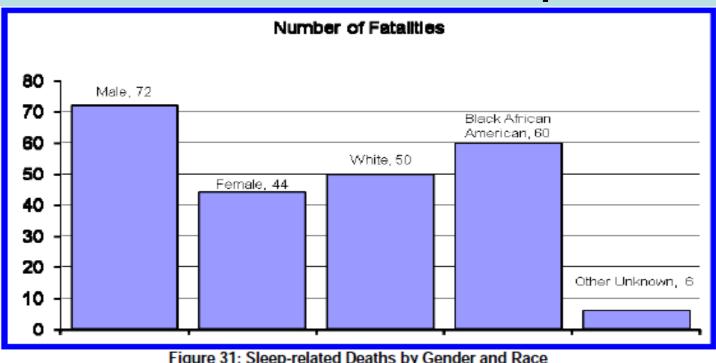


Figure 31: Sleep-related Deaths by Gender and Race

- 116 deaths
- 72% < 3 months age
- 62% male

- 52% African-American
- 67% not in crib
- 47% bed-sharing

Staff Acceptance "Buy-In"

- Pediatric and NBN nurses with knowledge about SIDS make quick allies
- Resistance to "another program" is easily overcome by:
 - Concept of a program to reduce local infant mortality
 - Use of Statistics
 - Use of Evidence-Based Medicine



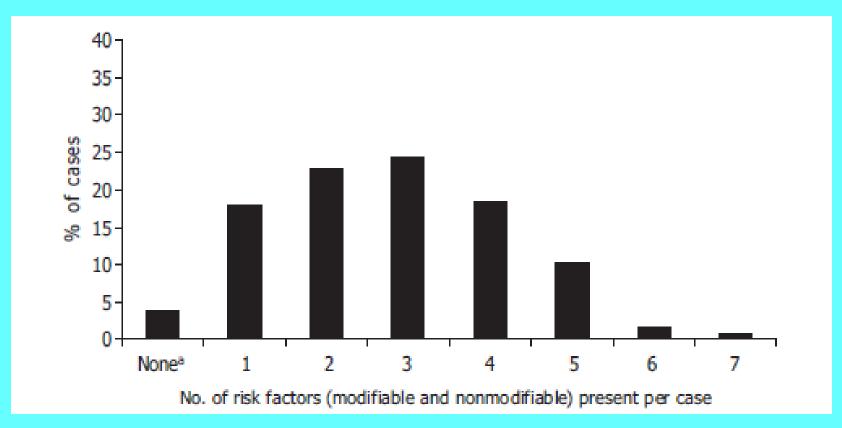
Bed Sharing with Siblings, Soft Bedding Increase SIDS Risk - Chicago Infant Mortality Study, Pediatrics, May, 2003

- Sleeping on soft bedding: increased SIDS risk 5 X
- Sleeping on the stomach: increased SIDS risk 2.4 X



- SIDS victims were 5.4 times more likely to have shared a bed with other children.
- Sleeping on the stomach on soft bedding: increased risk of SIDS 21 times

Multiple Risk Factors in SIDS



Only 1% of 244 cases without risk factors!

(1996-2000)

Pediatrics 2010;125;447; Barbara M. Ostfeld, Linda Esposito, Harold Perl and Thomas Hegyi Concurrent Risks in Sudden Infant Death Syndrome DOI: 10.1542/peds.2009-0038

Nursing Buy-In: Initial Discussions

- Nurse Managers: NBN, ICN, L&D, Pediatrics, ED
- Discussions at staff organizational levels: multidisciplinary committees (neonatal care), nursing counsels (education, practice)
 - Nurse leaders: support dissemination of program concept to general staff
 - Follow-up discussions at nurse staff meetings, reinforcement through e-mail
- Timing is important- do not conflict with other developing nurse programs



Challenge Your Staff!

Why are our babies dying???









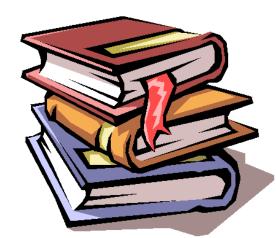


Staff Education

- Intensive education to develop expertise to talk to families
- Nurses are reluctant sleep safety advocates because:
 - Lack of formal training
 - Lack of time to review research
 - Disbelief that changing their behavior will make a difference
 - Discomfort with back to sleep (fear of aspiration)

Curriculum Development

- Created by combining best materials from numerous infant sleep safety groups to develop a comprehensive program with a consistent and repetitive message
- 2 components:
 - Healthcare provider education
 - Public education



Healthcare Provider Education

- Develop an infant sleep safety policy for the hospital:
 - Set the standard of care at the institution
 - Sample policies on the Allegheny County
 Dept of Health and First Candle websites
 - York Hospital policy modified the Allegheny sample and was merged with existing policy
 - Finalized through newborn and pediatric hospital committees

Hospital Nursing Education

- In-service lectures vs. computer-based training
- Lecture compliance may be difficult if not mandatory...non-productive hours
- Computer-based easier to do, but teaching
 - may be less effective
- Provided CME credits



Hospital Nursing Education

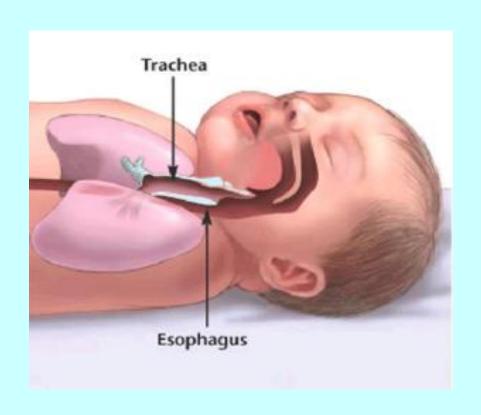
- Core group of volunteers to provide lectures
 - Cribs for Kids® staff (mostly NICU, NBN, and pediatric nurses)
- Developed power point presentation and had practice sessions
 - Materials included: AAP SIDS policy statement,
 NIH materials, Cribs for Kids_® lecture materials
- Supplemental poster boards in clinical areas
- Mandatory viewing of Safe Sleep DVD
 - Reinforce materials, know what parents will see

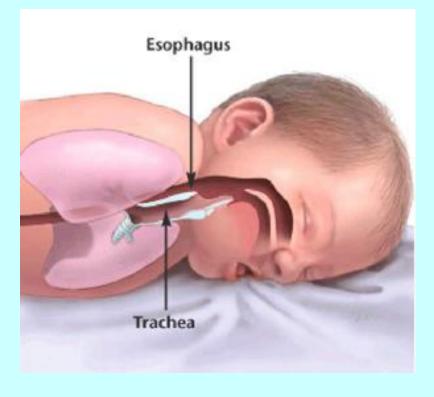
Hospital Nursing Education

- Refined after feedback from initial teaching sessions
 - Anticipation of criticisms (bonding, breastfeeding, bed-sharing)
- Focus on evidence-based medicine
- Focus on back vs. side sleeping and fear of aspiration

The Truth About Supine Sleep and Aspiration: Ending the fallacy

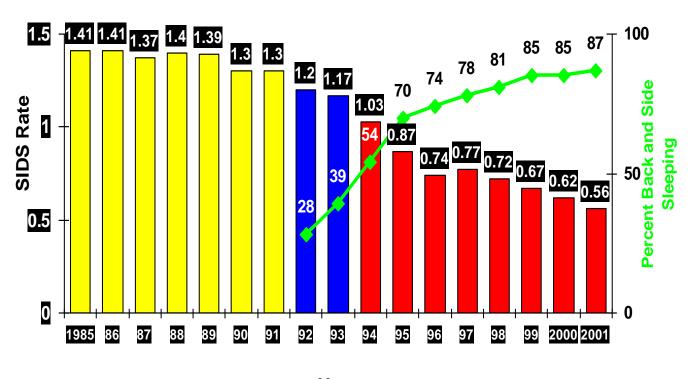
Orientation of the Trachea to the Esophagus



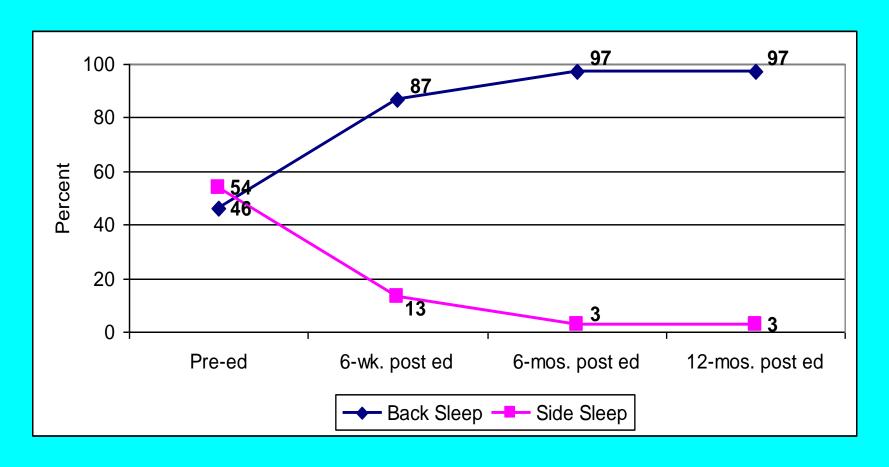


The Back to Sleep Campaign resulted in a 53% decrease in SIDS-related deaths over 10 years

SIDS Rate and Sleep Position, 1985-2000 (Deaths per 1,000 Live Births)

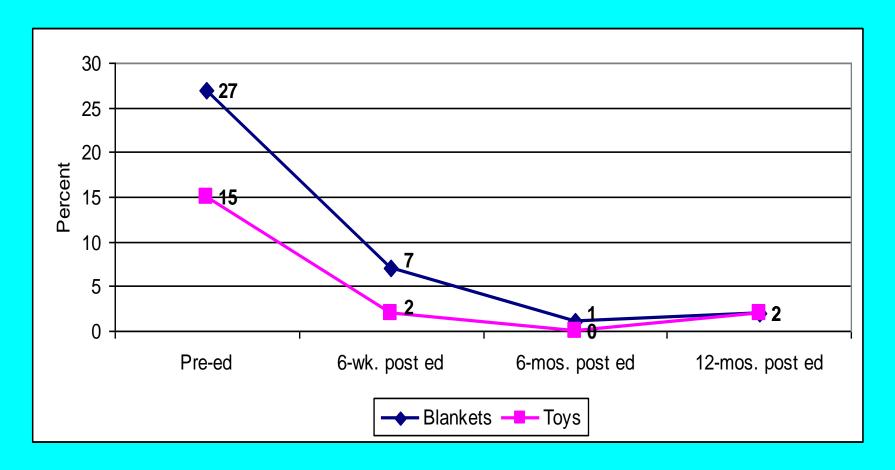


Position of Baby – Riverside Methodist Hospital



Franklin County Infant Safe Sleep and SIDS Risk Reduction Task Force Linda Newhouse, MSN, RNC, WHNP; Karen Gray, MS, CHES

Non-Essential Items in Crib – Riverside Methodist Hospital



Franklin County Infant Safe Sleep and SIDS Risk Reduction Task Force Linda Newhouse, MSN, RNC, WHNP; Karen Gray, MS, CHES

Who Do You Trust???

A MATTER OF TRUST

Occupations and how they ranked for honesty and ethics in an opinion poll.

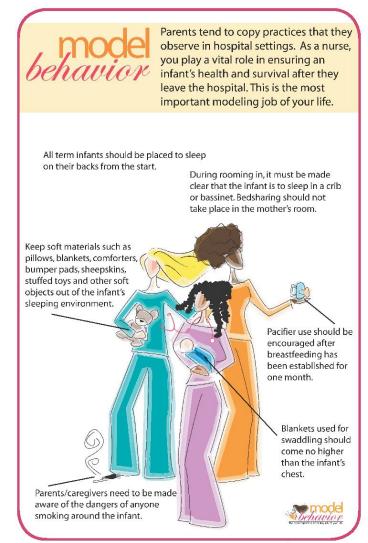
Occupation	%
1. Nurses	94
2. Pharmacists	87
3. Doctors	80
9. Police	64
11. Accountants	50
12. Religious ministers	48
14. Bank managers	35
15. Lawyers	31
26. Print journalists	12
27. Real estate agents	11
28. Car dealers	5
SOURCE: ROY MORGAN RE	SEARCH





Safe Sleep Nurse Modeling

- People trust nurses
- Whatever the nurse does must be correct and it will be imitated in the home
- Fact: supine positioning in the nursery can almost **DOUBLE** its use in the home!





Physician Advocacy

- Srivatsa 1997: HCP education to new families...34% reduction in prone sleeping
- Eron 2009: Study of Central NY state physicians...30% identified incorrect safest sleep position...30% do not discuss with families
- Colson 2009: Only 1/3 mothers advised by MD to use supine position ...3 times more likely to position the baby properly

Avoiding Potential Pitfalls

- Fear of Aspiration
- Claims made against the program:
 - Anti-bonding
 - Anti-breastfeeding



Claim: This is anti-Breastfeeding

- Answer: Untrue! AAP completely supports breastfeeding through the first year of life
- Only became a SIDS Task Force recommendation in 2011 because earlier data were conflicting about benefit in SIDS risk reduction.
- Claim that it will reduce breastfeeding...

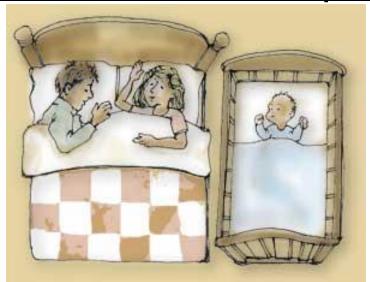
Factors Associated with Breastfeeding at 6 months

- International Breast Feeding Journal (2006)
- Strong desire to breastfeed
- Mothers who had been breastfed as infants
- Maternal birth in an Asian country
- Older Maternal Age



Breastfeeding and Infant Sleep Safety

- Bedsharing has NEVER been shown to be essential to the success of breastfeeding or the establishment of parental bonding.
- This is all about the SAFETY of the baby, NOT the convenience of the parents!





The Bedsharing Advocates



- Dr. James McKenna, Dr. Bill Sears,
 Academy of Breastfeeding Medicine
- Many of their recommendations = AAP
- They do NOT advocate other children in the bed
- List many caveats to bedsharing:
 - Smoking, drinking, medications causing drowsiness, obesity
 - Don't if you are excessively tired!!!!



Epidemiological Studies and the Hazard of Bed Sharing

- Blair et al: BMJ 1999
- McGarvey et al: Arch Dis Child 2003
- Carpenter et al: Sudden unexplained infant death in 20 regions in Europe: case control study. Lancet 2004
- Tappin et al: Bedsharing, roomsharing and SIDS in Scotland. A case-control study. J Pediatrics 2005.

Bedsharing and Infant Death

- FACT: Half of the infants in the U.S. who die from Sudden Unexpected Death do so while sleeping with their parents
 - U.S. experience with bedsharing and infant death is very different from other cultures
 - Cultures where babies routinely sleep with their parents:
 - Use firm mats on the floor
 - Have separate mats for the infant
 - Do not use soft bedding



Maintenance of Education

- Safe sleep toolkit at nurses' stations (modified from Allegheny county)
 - Hospital safe sleep policy
 - Review of appropriate practices
 - Discussion points to review with families
- Informational flip charts (scripted prompts, stats)
- Computer-based review course with test as part of yearly competencies

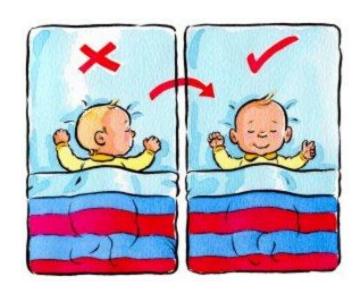
Healthcare Provider Education: In the Community

- Went into local physician offices to lecture during staff meetings
 - Pediatric and obstetrical
 - OB offices focused on prenatal educators
 - Provided posters and teaching materials
 - Discussed bad information in free magazines
- Family Practice Grand Rounds
- Emergency Department education
- VNA
- Red Cross Educators
- Prenatal Class Educators



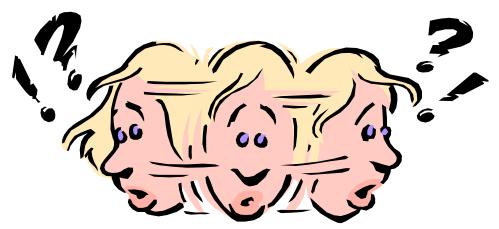
Infant Sleep Safety

 Requires a consistent and repetitive message in the community to prevent accidental deaths



Advice on Infant Sleep Safety: Who Do You Listen to...

- Family and Friends
- Doctors, Nurses, Lactation Counselors
- Magazines, Newspapers, Internet
- Oprah, Dr. Phil, Dr. Spock, Dr. Sears
- Grandma!!!



"It Will Never Happen to Me..."

There are scores of bereaved parents who saw themselves as low risk; who didn't smoke, received early prenatal care, were middle class, Caucasian, and breastfed their infant and although they knew the recommendations for "Back to Sleep", they ignored them....WHY????

"Because it will never happen to me!"

"It Won't Happen to Me"

AND IT DID!!!



Bereaved Parent...

"Why didn't anyone tell me it was dangerous to sleep with my baby?"



Why Develop a Hospital-Based Program?

- It is the only way to capture 100% of the birthing population for education
- It is the point of intersection for all the members of the health care team including obstetrician, pediatrician, nursing, and lactation counselor with family members
- Nurses are critical role models
- It is efficient and cost-effective



A Model Program

- Replicate Shaken Baby Program (now called abusive head trauma)
- 50% reduction in shaken baby injuries reported by Dr. Dias (Peds April 2005)
- Program Components:
 - DVD presentation on infant sleep safety
 - Face to face review with nursing staff
 - Sign voluntary acknowledgement statement



Infant Safe Sleep DVDs





Infant Safe Sleep Program: Supplemental Components

- Posters placed prominently in every labor, maternity, and pediatric room, offered to all OB, Peds, FP offices
- Sleep sacks available for purchase at discount at gift shop and lactation center
- Display nursery at entrance to Maternity
- Hospital phone service (on-hold message)



Voluntary Acknowledgement Statement

By signing this statement I agree that I have received this information and understand that:

my baby should sleep on the back; sleeping on the side or tummy is dangerous.

sleeping with my baby increases the risk of my baby dying from suffocation or SIDS.

- An acknowledgement form <u>only</u>
- Focuses family on the importance of the information
- Not for legal purposes
- Protects the hospital from potential legal action in event of a later SUID event at home

Voluntary Acknowledgment Statement

- An acknowledgement form <u>only</u>
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home

Safe Sleep Posters





Four ways to help reduce the risk of Sudden Infant Death Syndrome



Face up to wake up - healthy babies sleep safest on their back.



Place baby in a crib meeting Consumer Product Safety Commission crib safety standards; do not place pillows, quilts, bumpers, toys, or anything in the crib.



If a light blanket is needed, securely tuck all sides along bottom half of crib, below baby's arms. Make sure baby's feet are at bottom of crib.



Supervised tummy time during play is important to baby's healthy development.

Face up to wake up™

York County Cribs for Kids

812-7427 or 81-CRIBS

Created as a public service by Della Femina Rothschild Jeany and Partners.





Cuatro maneras para ayudar a reducir el riesgo del Síndrome de Muerte Súbita del Lactante



Boca arriba para despertar - los bebés saludables duermen con mayor seguridad al ponerlos boca arriba.



Ponga al bebé en una cuna que cumpla con las normas de seguridad de las cunas dictadas por la Comisión de Seguridad de Productos al Consumidor; no ponga almohadas, colchas, topes, juguetes ni nada en la cuna.



Si se necesita una manta liviana, inserte firmemente todos los lados a lo largo de la mitad inferior de la cuna, pasándola por debajo de los brazos del bebé. Revise que los pies del bebé queden al final de la cuna.



El tiempo boca abajo con supervisión al jugar es importante para el desarrollo saludable del bebé.

Boca arriba para despertar™

York County Cribs for Kids

812-7427 or 81-CRIBS

Creado como servicio público por Della Fernina Rothschild Jeary and Partners.

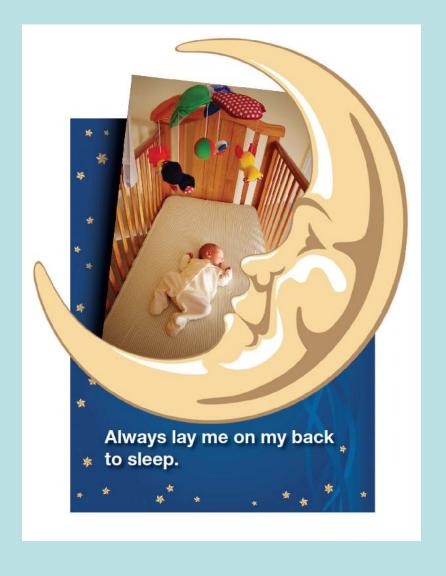
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Model Nursery/Infant Sleep Safety Center



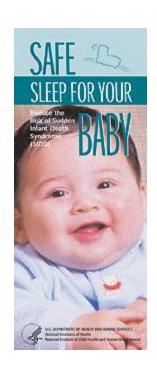
Model Nursery





Parent Education

- Prior to discharge, all parents should be informed!
- Review the "Safe Sleep for your Baby" pamphlet. Parents should also be taught what SIDS is, risk factors, and how to prevent SIDS at home.
- Ask parents if they have a safe place for their baby to sleep. If not, help them get one! Contact social service to be referred for a Pack-n-Play.
- Parents should view the new DVD and sign the SIDS Educational Voluntary Acknowledgement Statement (like Shaken Baby). This will become a part of the patient's permanent medical record.



Anticipated Outcomes

- Back to Sleep Campaign- 50% reduction in SIDS (compliance 87%)
- Shaken Baby Program- 50% reduction in abusive head trauma injuries
- Some SIDS experts estimate up to 90% of these deaths are related to suffocation (Theresa Covington-National Child Death Review)
- Reasonable expectation of up to 50% reduction in SIDS/SUID events

\$\$\$ Cost of Program \$\$\$

- DVD- Safe sleep for your baby- right from the start- \$20
- Voluntary acknowledgement statementpaper supplies
- Safe sleep toolkit- more paper supplies
- Safe sleep educational brochures- free from NIH
- Computer based training- no charge
- Volunteerism- to assist with in-services

\$\$\$ Cost of Program \$\$\$

 Saving one baby from a preventable suffocation death.....PRICELESS!







Safe Sleep Program Evaluation

- Sleep safety questionnaire filled out before delivery and repeated at discharge
- Baseline data collected for 6 months
- Safe sleep program started Oct. 2008
- Intervention data collected for 6 months, completed April 2009

Safe Sleep Program Evaluation: Results

- 2725 healthy deliveries, 2256 surveys
- No differences in age, race, education
- Excellent knowledge base about sleep environment (94-9% supine, 99% crib)
- Knowledge does not equal intent (15% drop)
- Reasons for sleeping with baby:
 - Improve bonding
 - Easier feeding
 - Desire to do it

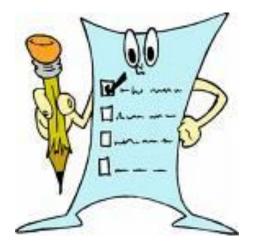


Safe Sleep Program Evaluation: Results

- Improvement after program intervention
- Intention to follow through with:
 - Supine sleep position increased from 82% to 97% (p < .01)
 - Crib or bassinette use increased from 81% to 92% (p < .01)
- First time mothers equally likely as experienced mothers to keep baby supine
- Experienced mothers less likely to use the crib! (p < .05)

HCP Knowledge, Attitudes, and Practice on ISS: Results

- Number of surveys completed:
 - > Baseline: 358 (190 RNs, 21 pediatricians)
 - ➤ Post-ed (6-9 months): 153
- Prior to education: Only 25% of respondents felt very familiar with AAP recommendations



Results of HCP Education

- Understanding of the AAP guidelines increased from 75% to 99% (p < 0.01)
- Agreement with all of the AAP guidelines increased from 88% to 94% (p = 0.049)
- Staff education on ISS increased from 47% to 99% (p < 0.01)
- Staff adequately trained about ISS increased from 43% to 99% (p < 0.01)

Results of HCP Education

- Supine position stated as safest by 98%
- Proponents of bedsharing decreased from 7.6% to 2.6% AND 100% of respondents noted bedsharing as a risk factor for SIDS
- Improved awareness of SIDS risk factors:
 - Side sleeping (from 65% to 82%)
 - Overheating (83% to 97%)
 - Cigarette use in pregnancy (79% to 93%)
 - Second hand smoke (86% to 97%)

- Further study on parental knowledge of other infant safe sleep issues such as pacifier use and appropriate room temperature could be useful in guiding future educational efforts
- Additional follow-up on actual sleep conditions in the home would be useful for assessing the impact of intensive education on long-term behavior modification

Where do we go from here???

- Legislation: PA ACT 73 and National
- Expand State-wide efforts on safe sleep
- Additional efforts at the community level:
 - Day Care
 - Religious Community
 - High Schools
- Research
- Manufacturers and Advertising



Media: Unsafe Sleep



Advertisement: Unsafe Sleep



- Community-wide Education:
 - Franklin County, OH
 - York County, PA
 - N. Carolina Healthy Start
- Public Awareness
 - Floor Talker program (LA)
 - Informational Kiosk (MD)
 - Model Nursery (PA)
- Project IMPACT
 - http://www.suid-improjectimpact.org/index.php?option=com_content&view=article&id=19&Itemid=4



- Louisiana_Dept of Health
 - "Floor Talker" program
 - Decals placed on floors in grocery stores









 Promote safe sleep education for healthcare providers



By Karen Paik and Leslie Iwerks
Foreward by John Lasseter Steve Jobs and Ed Carmill

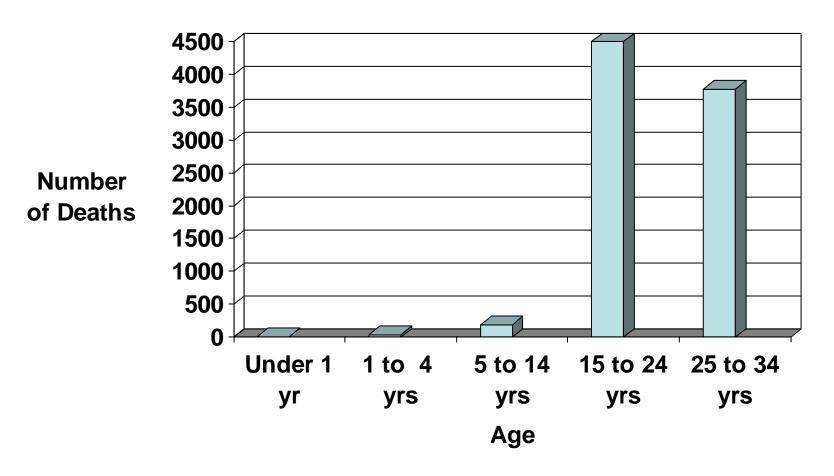
- Continuing education for nurses
 - http://www.nichd.nih.gov/SIDS/sidsnursesce.cfm
- Improved education for physicians
 - AAP, ACOG, AAFP



Promote education in the media and advertising

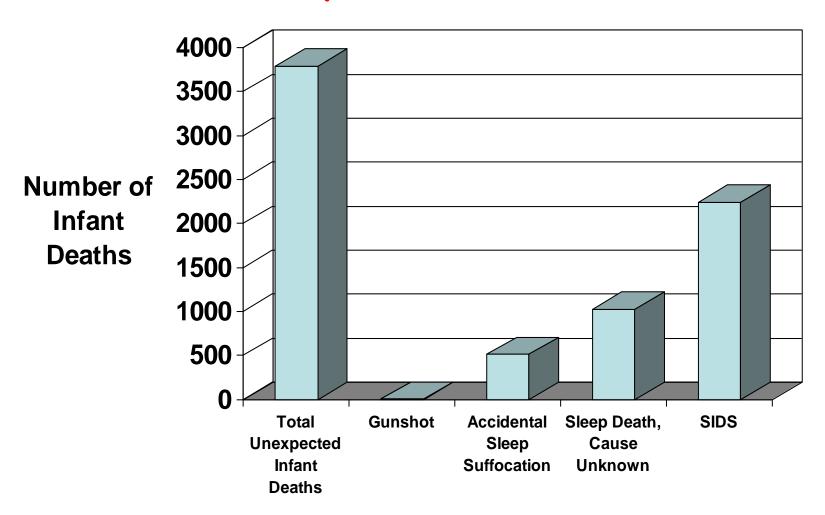
- Think outside the box...
 - Research by Rachel Moon
 - SIDS: not preventable..."It's in God's hands"
 - Accidental sleep death..."Okay, I don't want the baby to suffocate. What can help?"

Q. How many babies die of gunshot wounds each year?

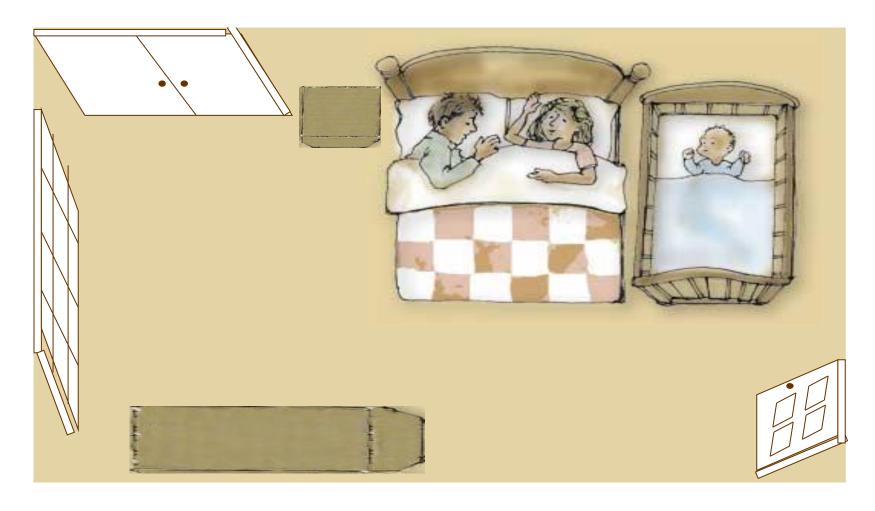


Answer: ALMOST NONE!!

Q: Why are our babies dying? A: Sleep-related deaths!



Q. How can I arrange the room for safety?



Give Parents Tools for

Fussy Babies!



SIDE CARRY



SWINGING





SUCKING



SWADDLING

According to the Institute of Medicine, it takes HCPs 17 years to accept a new research-based recommendation!!!

If we don't believe our own research, why would we expect the public to?

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THANK YOU!!!





Any Questions??

