

# Safe Sleep in the Hospital: From Policy to Every Day Practice

Michael H. Goodstein, MD, FAAP



# Disclosures

I have documented that I have no financial relationships to disclose or Conflicts of Interest (COIs) to resolve.

I have documented that my presentation will not involve discussion of unapproved or off-label, experimental use of a product, drug or device

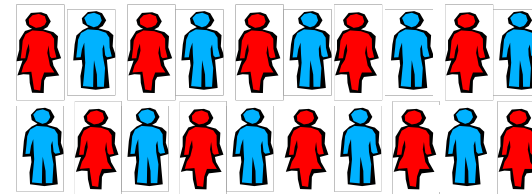
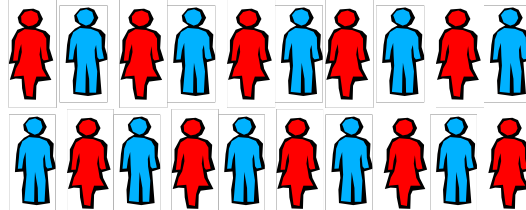
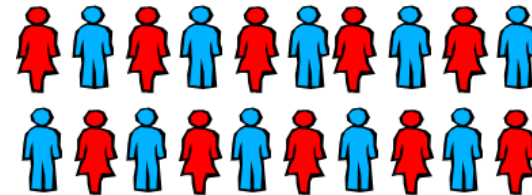
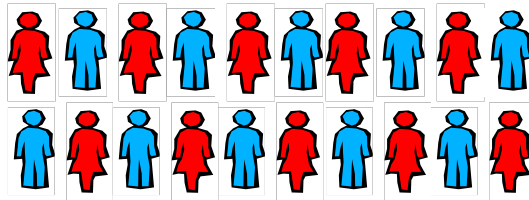


# Objectives

- Understand the requirements for developing and implementing an infant safe sleep hospital program
- Understand behavior change for both the individual and institutional level.
- Be able to use diffusion of innovation theory to identify individuals who can help implement safe sleep policy at their institution

# Impact of Eliminating Sleep-Related Deaths

78 children is equivalent to **FOUR** empty kindergarten classrooms



# The Problem

- 3,700 SUID per year
- Lack of consistent messaging
  - - Verbal
  - - Visual
- Where do you even begin?
  - - Inertia
  - - Helplessness
  - - Disbelief

# Not Following the Evidence

- IOM study: How long for HCP's to incorporate new EBM into practice?
- 2006: 52% routinely provide discharge instructions that promote supine sleep at home
- 2015: 53% strongly agreed recommendations make a difference in preventing SIDS
- 20% strongly agreed that parents would model nurses' behaviors at home.

Aris: Adv Neonatal Care. 2006 Oct;6(5):281-94.

Barsman: Adv Neonatal Care. 2015 Vol. 15(3):209-19.

# How long for HCP's to incorporate new EBM into practice?

17 years!



# Hospital Unsafe Sleep Persists!

- Kuhlmann. Hospital Peds 2016.
- 8 Children's Hospitals Audits Pre/Post
  - Baseline: Safe sleep 4.9% of 264 infants
  - Post: 31.2% of 234 infants ( $P < .001$ )
  - Extra blankets most common
  - Baseline 77% vs. 44% post-intervention.
  - Mean number of unsafe items reduced by 50% ( $P < .001$ ).



# Washington DC



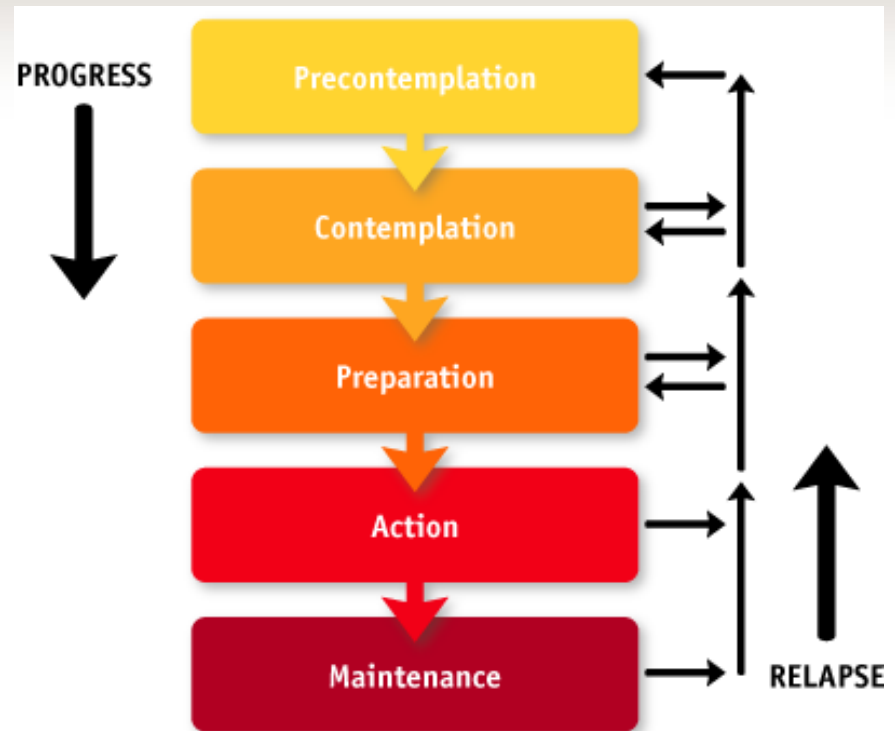
- 2 urban DC nurseries
- 26% did not believe or unsure that infant positioning was associated with SIDS.
- Top 3 factors influencing sleep position:
  - 56% PERSONAL PREFERENCE!
- Why non-supine? Clinical experience: (25%)
  - Increase risk aspiration
  - Decrease sleep and comfort

Bartow KL. Nurses' Knowledge and Adherence To Sudden Infant Death Syndrome Prevention Guidelines. *Pediatr Nurs.* 2016 Jan-Feb;42(1):7-13

# Transtheoretical or Stages of Change Model

- New knowledge/innovations pass through predictable stages:

- Knowledge
  - Exposure/understanding
- Persuasion
  - Favorable attitude
- Decision
  - Commitment to adopt
- Implementation
  - Put it to use
- Confirmation
  - Positive outcome = reinforcement



# Diffusion of Innovation Theory

- Key players:
  - Opinion leaders
    - respected leaders who have influence over others
  - Change agents
    - key people who support change, stabilize adoption, solve problems
  - Change aids
    - trustworthy people on the front lines who help



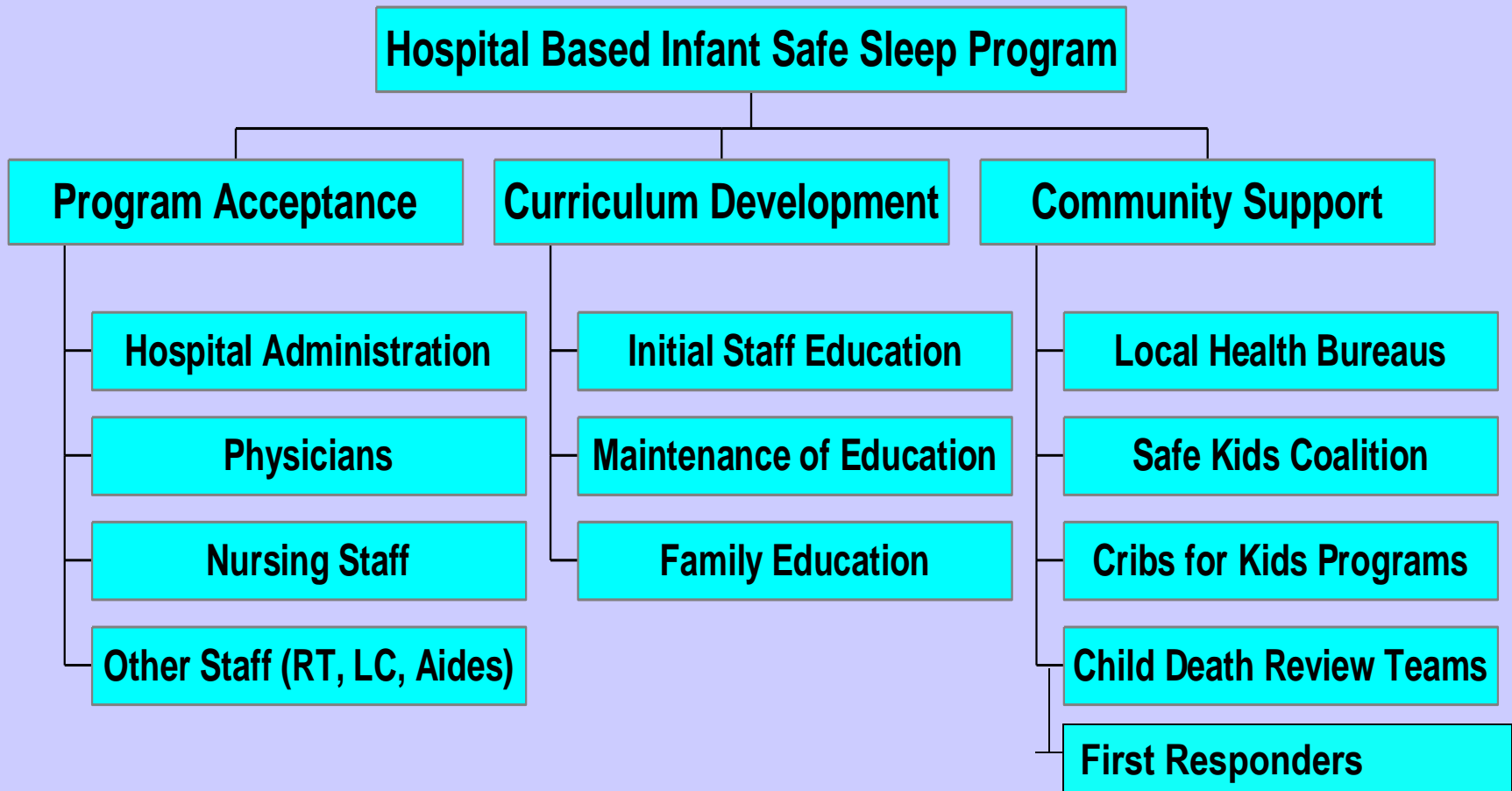
# Diffusion of Innovation Theory

- People respond differently to change:
  - Innovators (risk takers, like new things)
  - Early adopters (accept change readily)
  - Early majority (most people who go along with change after deliberate contemplation)
  - Late majority (skeptical, but come along)
  - Laggards (status quo lovers)

# Patient Safety Issue

- Premise: Do no harm
- Harm in the hospital:
  - Hospital Associated Infections
    - CLABSI, UTI's
  - “Never events” (wrong site surgery, retained foreign bodies)
  - Falls and fall-related injuries
  - Readmissions

# Organizational Chart for an Infant Sleep Safety Program

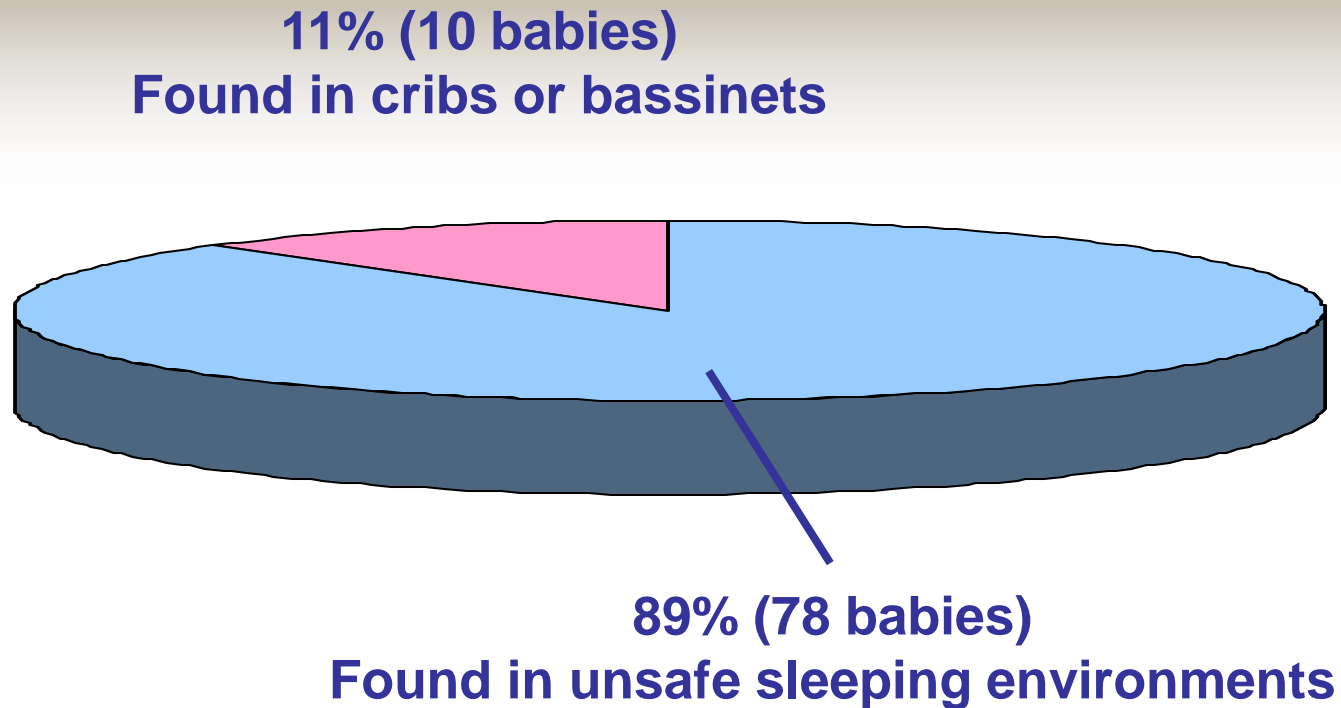


# Presentation for Administration

- Support from physicians already knowledgeable about SIDS/SUID  
(Opinion Leaders)
- Scope of problem
  - 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



Source: Allegheny County Coroner's Office, Stephen Koehler, Ph. D., Forensic Epidemiologist



# PA CDR 2010 Report

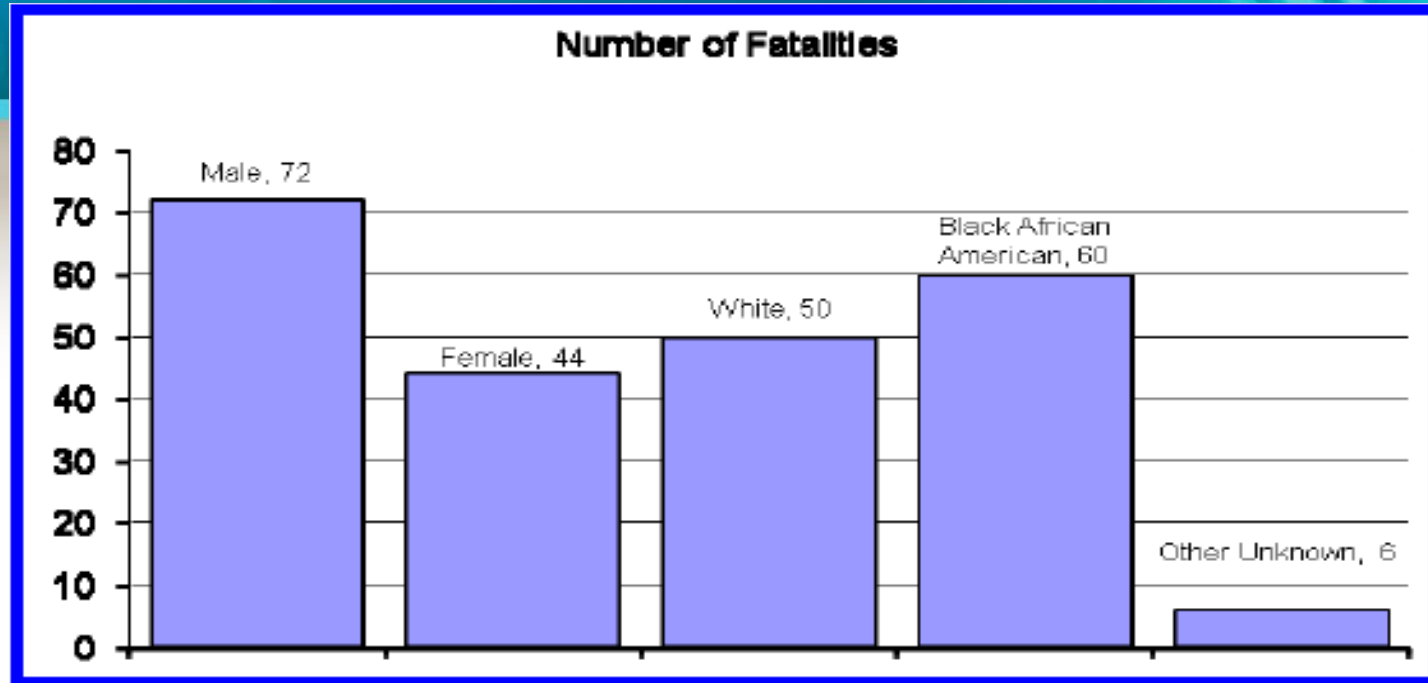


Figure 31: Sleep-related Deaths by Gender and Race

- 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 (change agents)
- 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

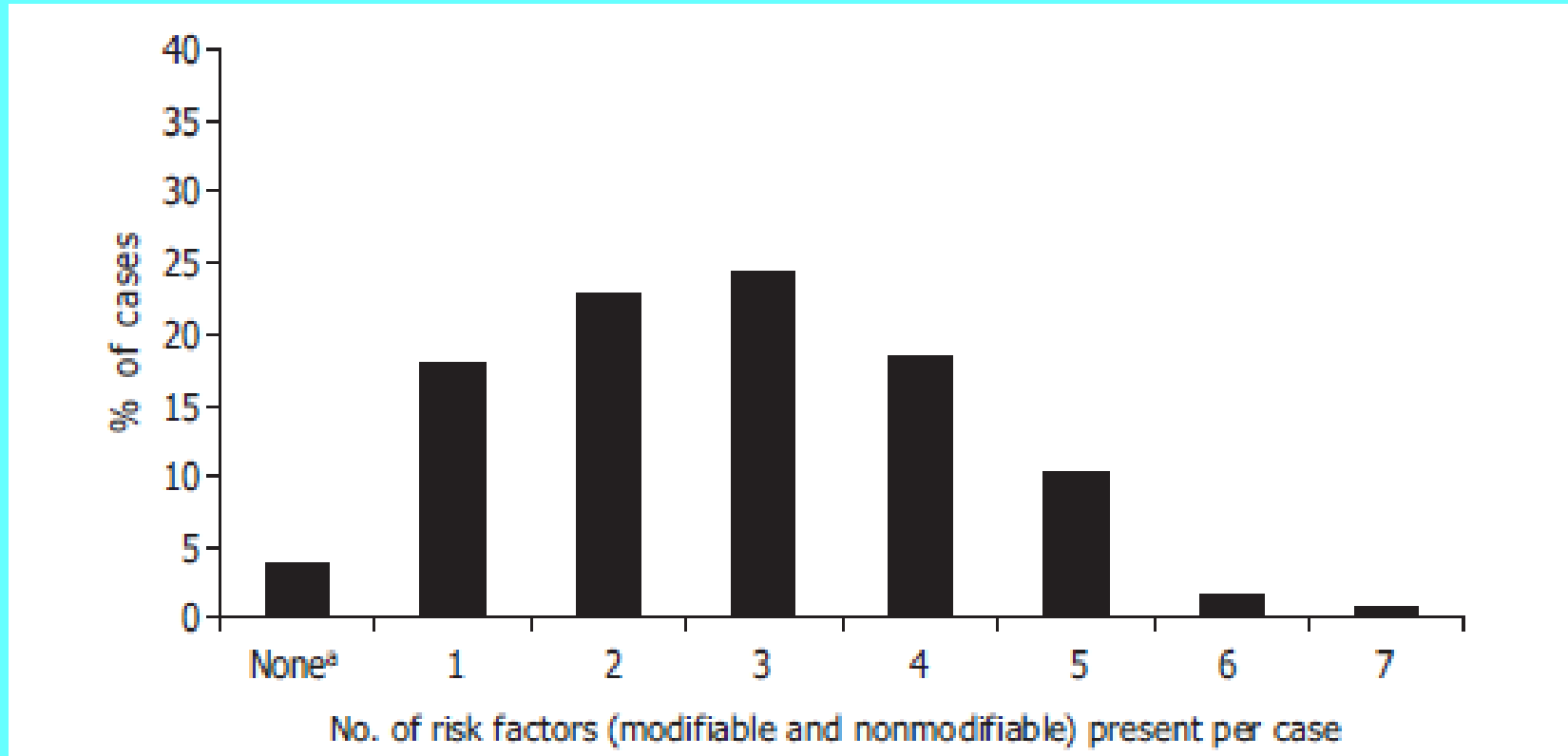


# Bed Sharing with Siblings, Soft Bedding Increase SIDS Risk – Chicago Infant Mortality Study, Pediatrics, May, 2003

- 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)

# Nursing Buy-In: Initial Discussions

- Nurse Managers (**Change Agents**)
- Discussions at staff organizational levels (**Change Aids**):
  - Multidisciplinary committees
  - Nursing counsels
  - Nurse leaders: support dissemination of program concept to general staff
- Follow-up discussions
- Timing is important!



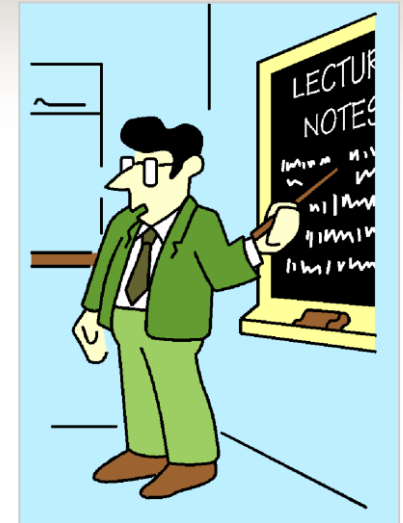
# Challenge Your Staff!

## Why are our babies dying???



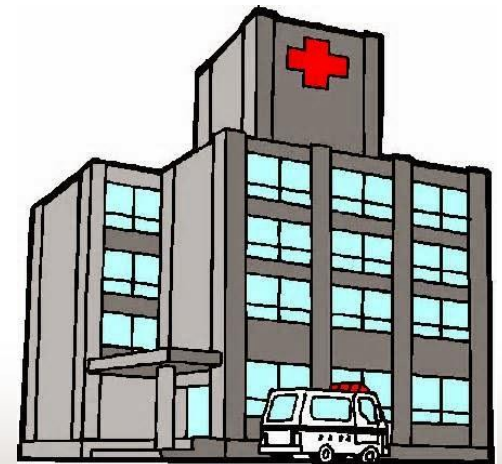
# Staff Education

- 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)



# Healthcare Provider Education

- Develop an infant sleep safety policy for the hospital:
  - Set the standard of care at the institution
  - Sample policies in the Hospital Initiative Toolkit
  - 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
- 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

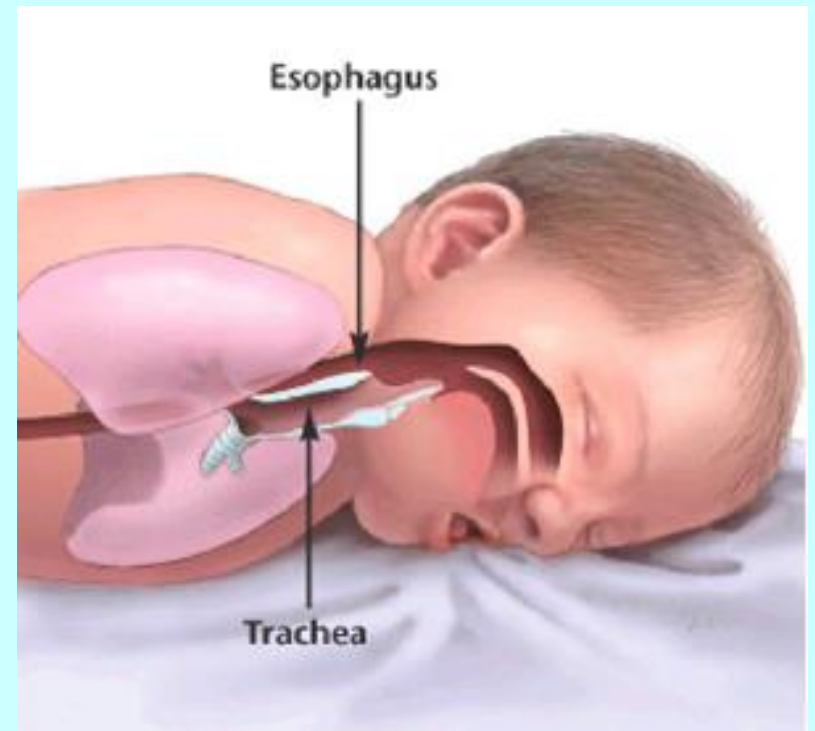
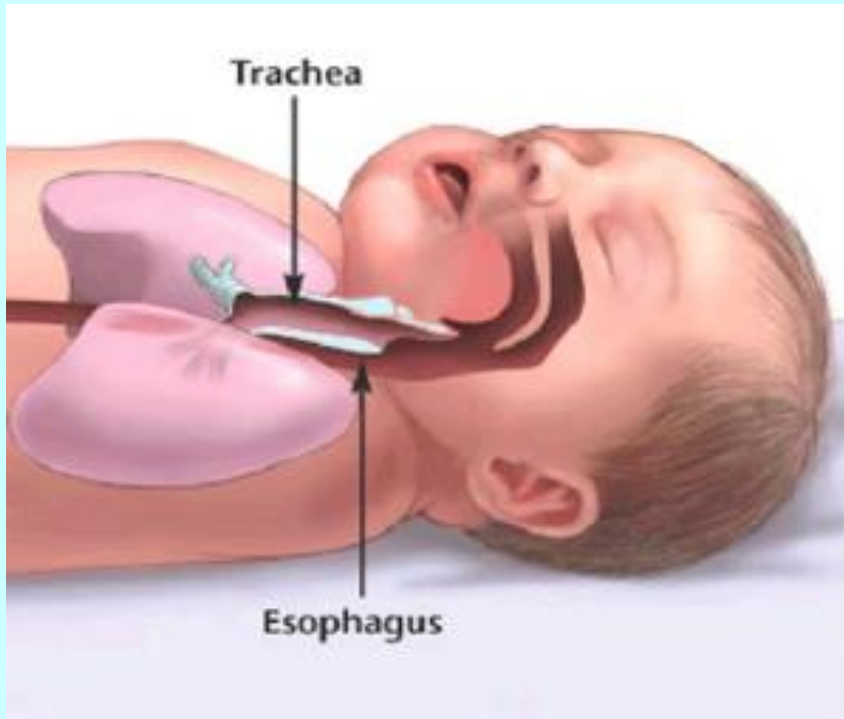
# Hospital Nursing Education

- 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



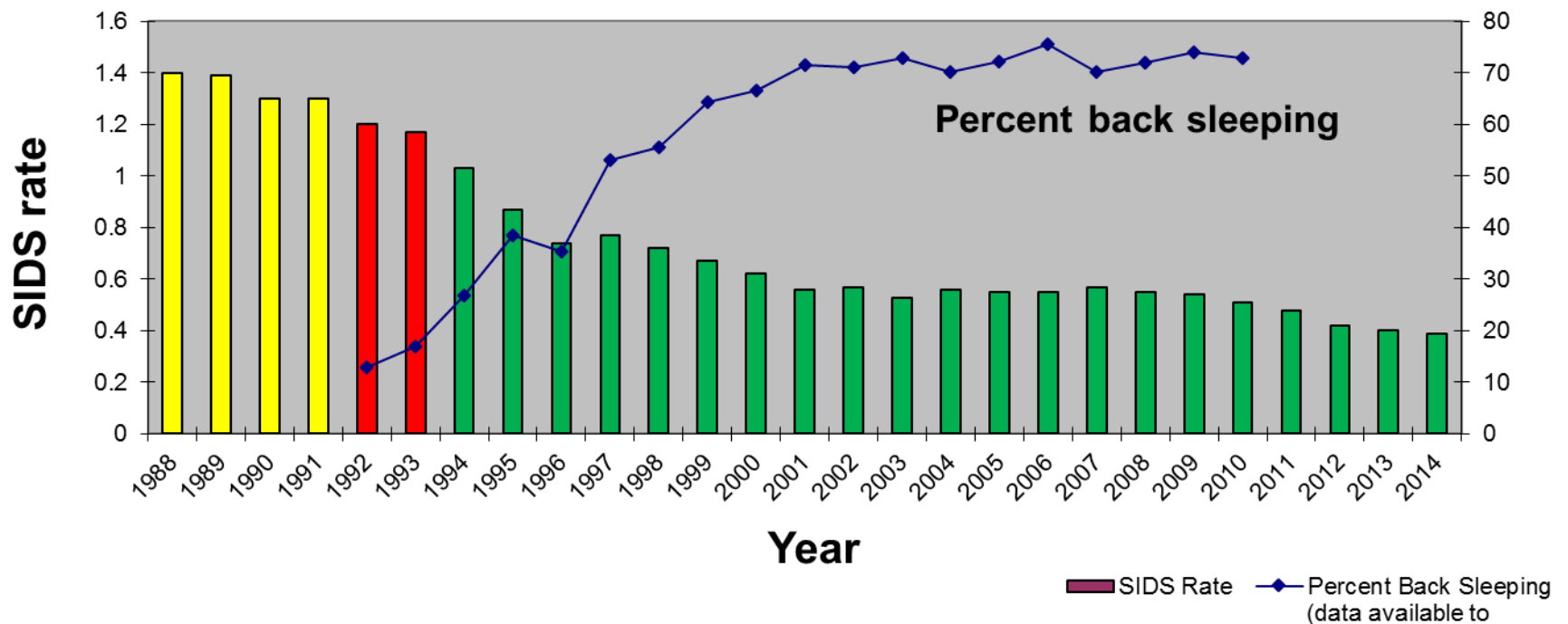
# The Truth About Supine Sleep and Aspiration: Ending the fallacy

## Orientation of the Trachea to the Esophagus

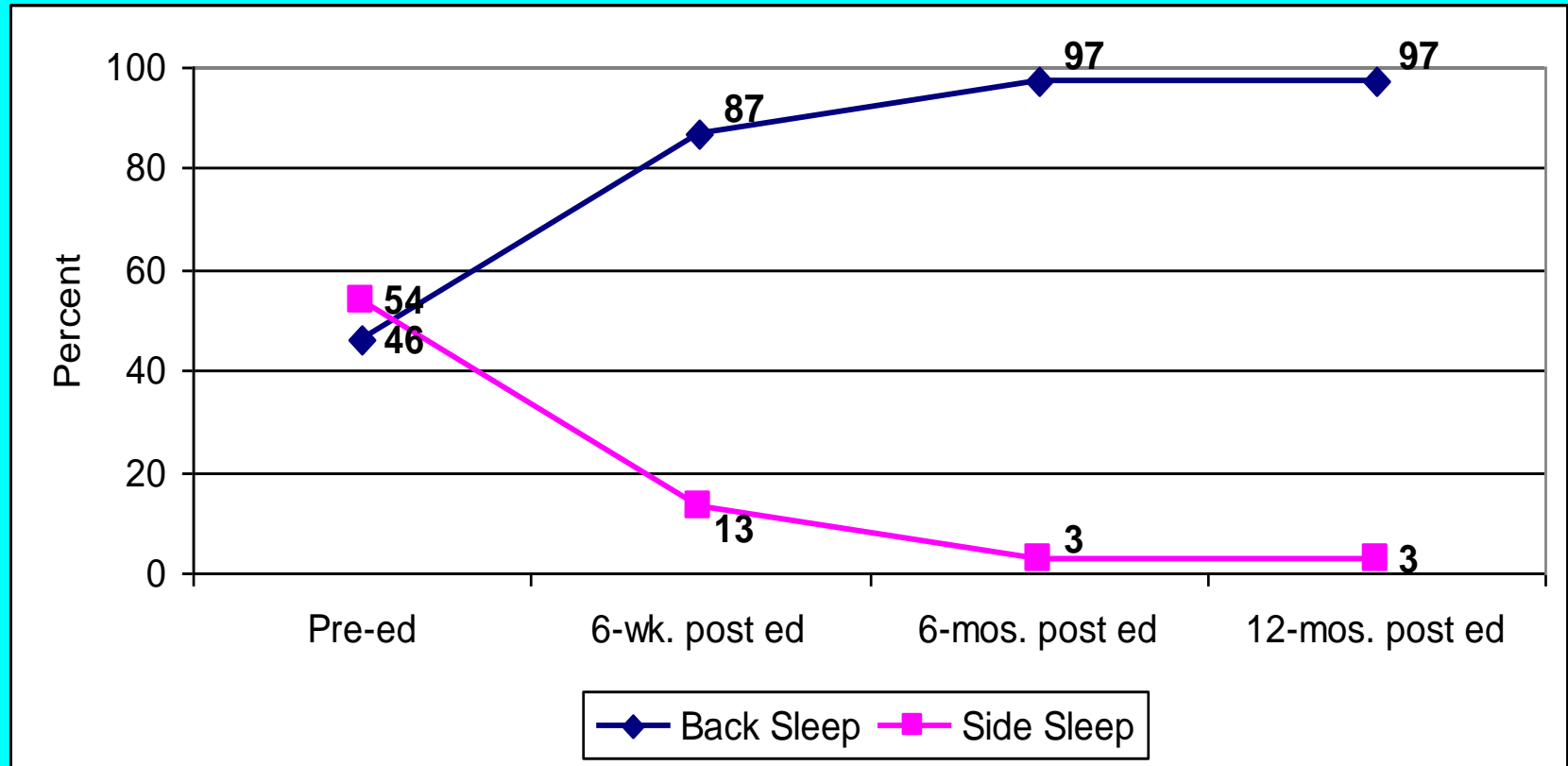


# The Back to Sleep Campaign resulted in a 53% decrease in SIDS-related deaths over 10 years

SIDS Rate\* (1998-2014) and Infant Sleep Position (1988-2010)



# 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

# 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 RESEARCH



# 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!

**model behavior** Parents tend to copy practices that they observe in hospital settings. As a nurse, you play a vital role in ensuring an infant's health and survival after they leave the hospital. This is the most important modeling job of your life.

All term infants should be placed to sleep on their backs from the start.

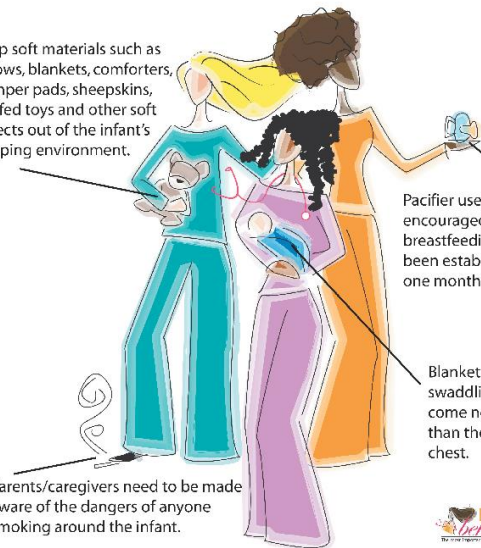
During rooming in, it must be made clear that the infant is to sleep in a crib or bassinet. Bedsharing should not take place in the mother's room.

Keep soft materials such as pillows, blankets, comforters, bumper pads, sheepskins, stuffed toys and other soft objects out of the infant's sleeping environment.

Pacifier use should be encouraged after breastfeeding has been established for one month.

Blankets used for swaddling should come no higher than the infant's chest.

Parents/caregivers need to be made aware of the dangers of anyone smoking around the infant.



For more information on the Model Behavior Program, please call 1.800.221.7437 or visit [www.firstcandle.org](http://www.firstcandle.org)



June 2006



# 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





# Maintenance of Education

- Safe sleep toolkit at nurses' stations
  - Hospital safe sleep policy
  - Review of appropriate practices
  - Discussion points to review with families
- Informational flip charts
- 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

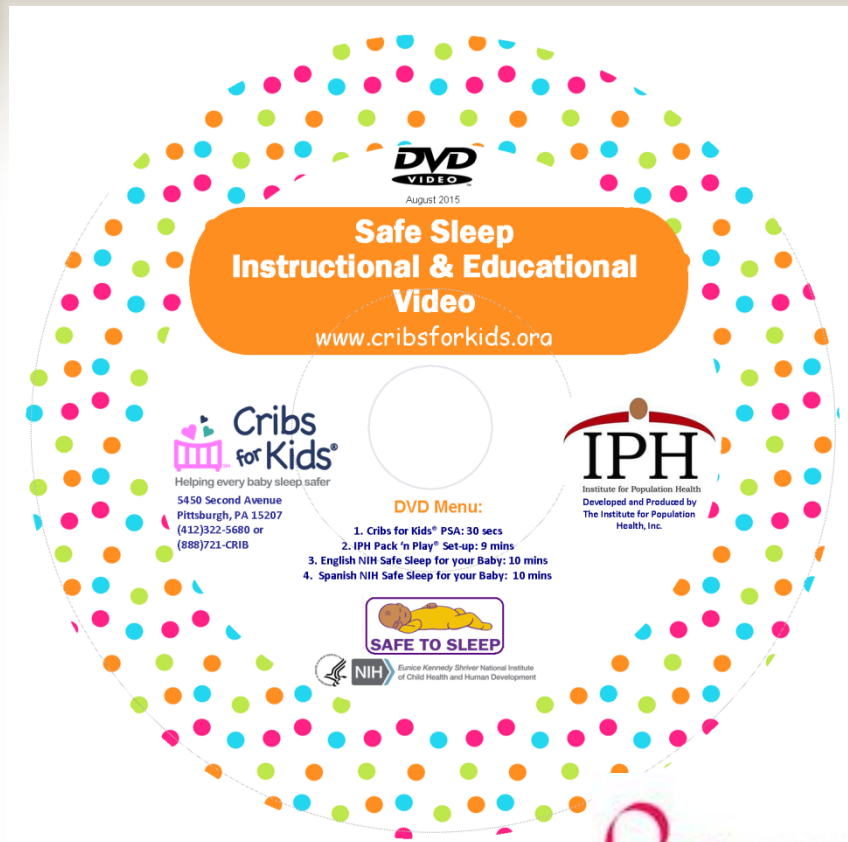


# A Model Program

- 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



 **more for  
Healthy Babies.**  
*Every baby counts on you*

# Hospital Initiative Components

[www.cribsforkids.org/HospitalInitiativeToolkit/](http://www.cribsforkids.org/HospitalInitiativeToolkit/)

- INTRODUCTORY LETTER
- HOSPITAL INITIATIVE TOOL KIT INSTRUCTIONS
- ORGANIZATIONAL CHART
- HOSPITAL POLICY
- ACKNOWLEDGMENT FORM (Engl. & Span.)
- SAFE SLEEP EDUCATIONAL IFLIP CHART
- NONCOMPLIANCE WAIVER (Engl. & Span.)
- NURSING EDUCATION MODULE
- SAFE SLEEP POSTERS
- DOOR HANGERS (Engl. & Span.)
- GRADUATION CERTIFICATE
- SAMPLE LETTER TO HOSPITALS
- SAMPLE LETTER TO PROVIDERS
- INFANT SAFE SLEEP BROCHURES (Engl. & Span.)
- PRESS KIT

# Infant Safe Sleep Program: Supplemental Components

- Place posters prominently in every labor, maternity, and pediatric room, offered to all OB, Peds, and FP offices
- Have wearable blankets 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.”



# Voluntary Acknowledgement Statement

- An acknowledgement form only
- 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



# Safe Sleep Posters

## 8.5" x 11" ~ Engl. & Span.



- 1 Always place your baby to sleep on his back. 
- 2 Never dress your baby too warmly for sleep; keep room temperature comfortable for an adult. 
- 3 Dress your baby in a wearable blanket instead of loose blankets. 
- 4 Do not bed share. Place your baby's crib near your bed. 
- 5 Remove all soft bedding, bumpers and toys from your baby's sleep area. Use only a tight-fitted sheet. 
- 6 Offer a pacifier when putting baby to sleep. If breastfeeding, offer a pacifier after 1 month. 
- 7 Visit your baby's pediatrician regularly and stay up-to-date on your baby's immunizations. 
- 8 Don't smoke around your baby. 

For more Safe Sleep visit [www.cribsforkids.org](http://www.cribsforkids.org)



- 1 Siempre coloque al bebé boca arriba para dormir. 
- 2 Nunca vista al bebé con ropa demasiado abrigada para dormir; mantenga la temperatura de la habitación a un nivel cómodo para un adulto. 
- 3 Use una cobija tipo saco para dormir en lugar de usar cobijas sueltas. 
- 4 No duerma en la misma cama que el bebé. Ponga la cuna del bebé cerca de su cama. 
- 5 Retire toda la ropa de cama suave, los protectores y los juguetes del área donde duerme tu bebé. Use únicamente una sábana de algodón que ajuste bien. 
- 6 Al acostar al bebé, ofrézcale un chupón, si está lactando, ofrézcale un chupón al bebé después de un mes. 
- 7 Visite al pediatra de su bebé periódicamente, y manténgase al corriente con las vacunas del bebé. 
- 8 No fume cerca de su bebé. 

Para un sueño más seguro, visite [www.cribsforkids.org](http://www.cribsforkids.org)

For more Safe Sleep visit [www.cribsforkids.org](http://www.cribsforkids.org)

# Safe Sleep Door Hangers

**Safe Sleep for your Baby**  
(Keep hanging this within baby's reach)

**8 Steps for Safe Sleep**



**1** Always place your baby to sleep on his back.

**2** Never dress your baby too warmly for sleep; keep room temperature comfortable for an adult.

**3** Dress your baby in a wearable blanket instead of loose blankets.

**4** Do not bed share. Place your baby's crib near your bed.

**5** Remove all soft bedding, bumpers and toys from your baby's sleep area. Use only a tight fitted sheet.

**6** Breastfeed if possible. Offer a pacifier when putting baby to sleep. If breastfeeding, offer a pacifier after 1 month.

**7** Visit your baby's pediatrician regularly and stay up-to-date on your baby's immunizations.

**8** Don't smoke around your baby.

For more Safe Sleep visit [www.cribstorkids.org](http://www.cribstorkids.org)

**Sueño seguro para el bebé**  
(Mantener fuera del alcance del niño)

**8 Pasos Para un Sueño Seguro**



**1** Siempre coloque al bebé boca arriba para dormir.

**2** Nunca vista al bebé con ropa demasiado abrigadora para dormir; mantenga la temperatura de la habitación a un nivel cómodo para un adulto.

**3** Use una cobija tipo saco para dormir en lugar de usar cobijas sueltas.

**4** No duerma en la misma cama que el bebé. Ponga la cuna del bebé cerca de su cama.

**5** Retire toda la ropa de cama suave, los protectores y los juguetes del área donde duerme su bebé. Use únicamente una sábana de cajón que ajuste bien.

**6** Al acostar al bebé, ofrézcale un chupón. Si está lactando, ofrézcale un chupón al bebé después de un mes.

**7** Visite al pediatra de su bebé periódicamente y manténgase al corriente con las vacunas del bebé.

**8** No fume cerca de su bebé.

Para un sueño más seguro, visite [www.cribstorkids.org](http://www.cribstorkids.org)

**Sueño seguro para el bebé**  
(Mantener fuera del alcance del niño)

**8 Pasos Para un Sueño Seguro**



**1** Siempre coloque al bebé boca arriba para dormir.

**2** Nunca vista al bebé con ropa demasiado abrigadora para dormir; mantenga la temperatura de la habitación a un nivel cómodo para un adulto.

**3** Use una cobija tipo saco para dormir en lugar de usar cobijas sueltas.

**4** No duerma en la misma cama que el bebé. Ponga la cuna del bebé cerca de su cama.

**5** Retire toda la ropa de cama suave, los protectores y los juguetes del área donde duerme su bebé. Use únicamente una sábana de cajón que ajuste bien.

**6** Al acostar al bebé, ofrézcale un chupón. Si está lactando, ofrézcale un chupón al bebé después de un mes.

**7** Visite al pediatra de su bebé periódicamente y manténgase al corriente con las vacunas del bebé.

**8** No fume cerca de su bebé.

Para un sueño más seguro, visite [www.cribstorkids.org](http://www.cribstorkids.org)

**Safe Sleep for your Baby**  
(Keep hanging this within baby's reach)

**8 Steps for Safe Sleep**



**1** Always place your baby to sleep on his back.

**2** Never dress your baby too warmly for sleep; keep room temperature comfortable for an adult.

**3** Dress your baby in a wearable blanket instead of loose blankets.

**4** Do not bed share. Place your baby's crib near your bed.

**5** Remove all soft bedding, bumpers and toys from your baby's sleep area. Use only a tight fitted sheet.

**6** Breastfeed if possible. Offer a pacifier when putting baby to sleep. If breastfeeding, offer a pacifier after 1 month.

**7** Visit your baby's pediatrician regularly and stay up-to-date on your baby's immunizations.

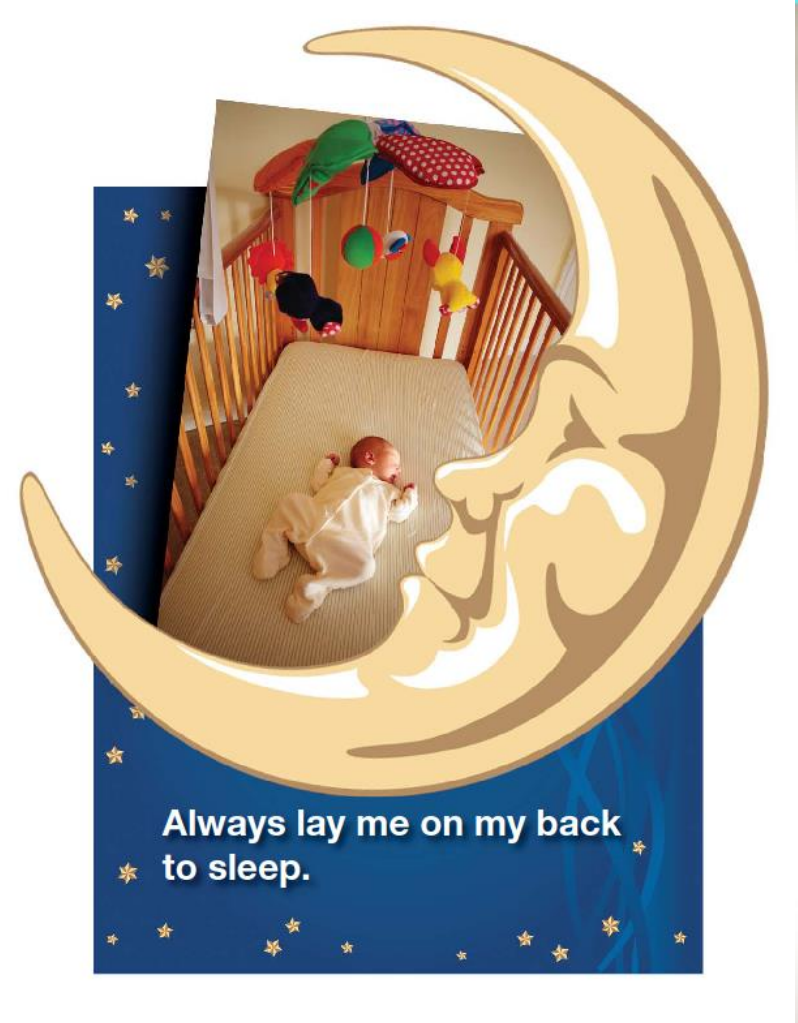
**8** Don't smoke around your baby.

For more Safe Sleep visit [www.cribstorkids.org](http://www.cribstorkids.org)

# Model Nursery/Infant Sleep Safety Center



# Model Nursery



# Qualitative Study Results

(n = 17)

- Overall 94% of sites were pleased with their progress on safe sleep:
  - 11/17 very well
  - 5/17 relatively successful, helped significantly, making progress, fairly well
  - 1 hospital failed to maintain the program

# Achieving Cultural Change

- “Nurses hold each other accountable”
- “Rarely find things in the crib”
- “Nurses come to report incidents of unsafe sleep”
- “We have convinced both nursing staff and the patients that this is an important topic.”
- “The sustainability of this initiative is remarkable.”



# Five Themes to Successful Culture Change: Infant Sleep Safety

- LEADERSHIP
- EDUCATION
- PERSISTENCE
- PERSONALIZE
- INSTITUTIONALIZE

# Reasons for Success

- Leadership: people to promote and sustain the program; multidisciplinary
  - “the nurses know that physicians will back them in discussions around safe sleep”
- Education
  - “a lot of the educational support we received from the program promoted buy-in”
  - “what has made this program work is education, continued education of staff... and education of patients and community”

# Reasons for Success

- Persistence
  - “It took patience and consistency to make the change happen”
    - Takes more than one time education
    - Maintenance of competency
    - Changing personnel
- Personalize
  - “making SIDS a personal issue for us and convincing us of the need to get serious about patient education has been the key”

# Reasons for Success

- Institutionalize
  - Ownership/internalization
  - Standard of care
  - Expectations
  - Repercussions
- Moral Imperative
  - “the numbers speak for themselves”
  - “sharing with staff the number of babies that die per year... was alarming to people and they pay attention”

# Roadblocks

- Nurses
  - Fear of choking
    - Overcome with education and time
- Parents
  - Bed sharing and attachment parenting
  - Need for patient satisfaction
- Cultural barriers
- Time and commitment

# 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% ( $p < 0.01$ )



# ISS Study: Phase 1 Results

- After education with the ISS program:
  - Intention to always sleep the baby supine **increased** from 82% to 97% ( $p < 0.01$ )
  - Intention to always place the baby in the crib or bassinet **increased** from 81% to 92% ( $p < 0.01$ )



# Mason: Clinical Peds, 7/13

- Bundled intervention:
  - Nursing education, policy, model behavior, safe sleep video, posters in rooms, declaration of safe sleep practice
- Safe sleep environment: ↑ from 25 to 58%
- Intention in home: 95% supine, none “co-sleeping”





# Comparison: ISS Program vs. NISP

QUESTION	GROUP		p-value
	ISS Study	NISP	
<b>Behavior Questions</b>	n = 490	n = 1046	
Baby routinely place to sleep on back	92.5%	73%	< 0.001
Baby routinely sleeps in bassinet/crib	99.5%	71%	< 0.0001
Baby sleeps under a thin sheet	99.2%	86%	< 0.001
Baby given a pacifier for sleep	74.1%	84%	< 0.001

# Conclusions from Other Health Systems

- Hospital based safe sleep is a practical, cost-effective and reproducible model
- The program has positive impact on providers and families
- Successful implementation requires:
  - Leadership (identify champions)
  - Education and reinforcement
  - Sweat equity (time and effort)
- Experience of each hospital may vary, but common process can be used
- Long term cultural change is achievable

# Coordinated Education Efforts Work!

- TN- 25% reduction in infant sleep-related deaths in 2 year
- SD- Over 7,915 Pack 'n Plays distributed since 2021. Infant mortality rate decreased from 8.6 (2012) to 4.8 (2016).

# Coordinated Education Efforts Work!

- Baltimore B'more for Healthy Babies:
  - 2012 lowest infant mortality rate ever recorded
  - decreased 28% to 9.7 per 1000.
  - Racial disparity decreased almost 40%.
  - **Biggest contributor was decrease in number of sleep-related deaths.**

# Measuring Improvement

- Pre- and Post- Tests
- Competencies
- Follow-up Surveys
- Unannounced Audits

# Audit Tools

- Numerous tools available
- Cribs for Kids (thanks to UAMS)
- Can be used as part of a PDSA cycle



Safe Sleep Audit Tool

Date: \_\_\_\_\_

Auditor: \_\_\_\_\_



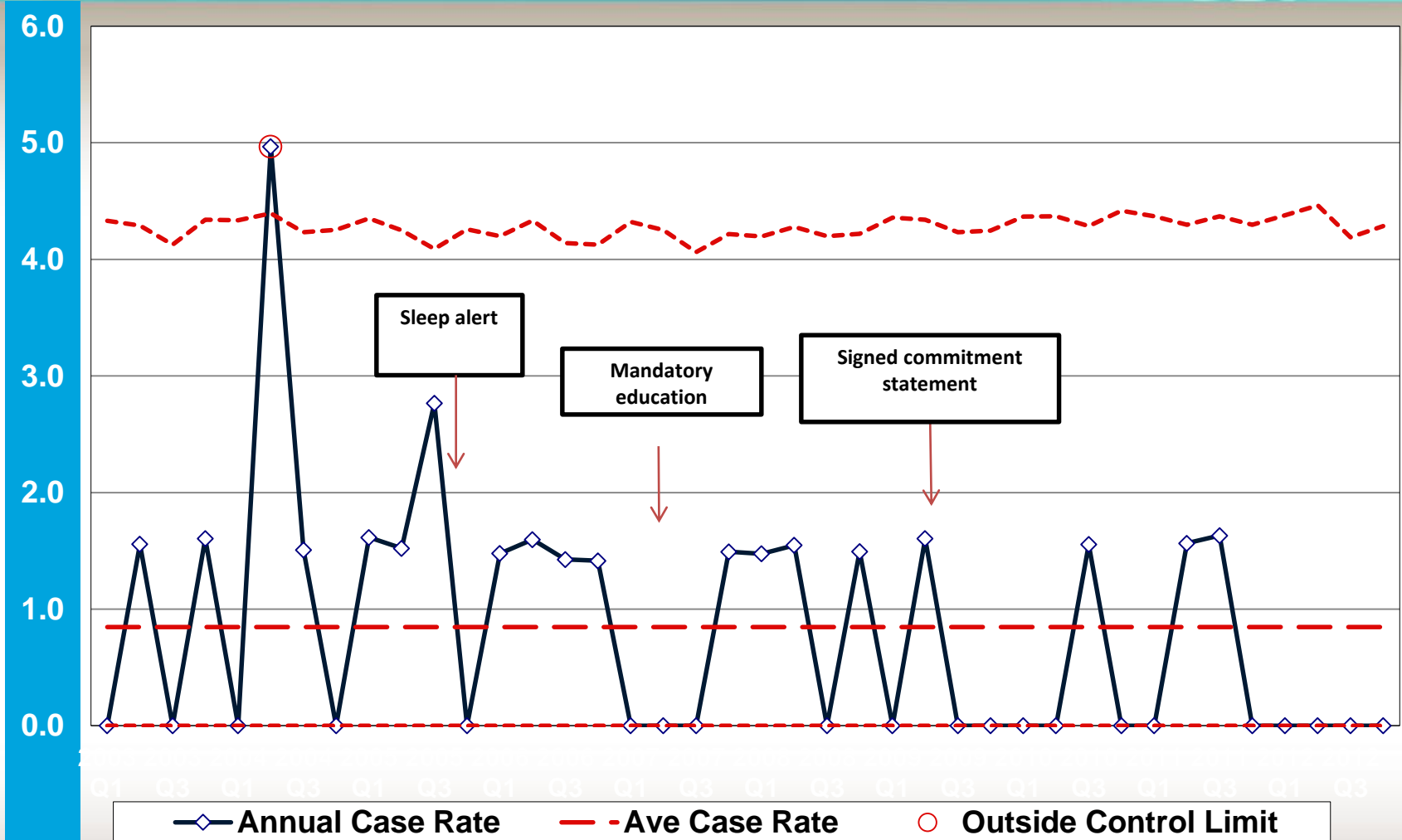
<i>Patient #</i>	<i>Head of bed Flat? Y or Degree of elevation</i>	<i>Patient Asleep Supine? Y or N</i>	<i>Multiple Blankets to Crib? Y or N</i>	<i>Stuffed Animals in Crib? Y or N</i>	<i>Large or Fluffy Blankets Around Pt.? Y or N</i>	<i>Patient in Nest Y or N</i>	<i>Patient Bundled? Y or N</i>	<i>Patient Able to Move Legs? Y or N</i>	<i>Positioning Device used? Y or N</i>
1									
2									
3									
4									
5									
6									

# Measuring Improvement: Sample Survey

1. It is safest for a baby to sleep:
  - On his stomach
  - On his back
  - Does not matter
  - On his side
  - On his side or back
2. It is safest for a baby to sleep:
  - In a crib or bassinet in the parents' room
  - In a side car or "co-sleeper"
  - In bed with the parents
  - Does not matter
  - In a crib or bassinet in a separate room
3. Which of the following are safe to have in the baby's sleep area: (you may fill in more than one answer)
  - pillows
  - positioners
  - stuffed animals and/or plush toys
  - bumpers
  - comforters
  - none of the above
4. Which of the following statements is correct: (choose 1)
  - It is best to bundle the baby with lots of blankets to keep him warm.
  - Sleeping with the baby is the best way to keep him warm.
  - Keeping the room temperature comfortable for a lightly dressed adult is safest for the baby.
  - It is safest to bundle the baby up to the chin with a thick blanket to stay warm.
5. The only way for breastfeeding to be successful is by having the mother and baby sleep together.
  - True
  - False
6. Pacifiers are useful for reducing the risk of SIDS.
  - True
  - False

# Quarterly Control Chart

Sleep-Related Deaths/1000 Births





# Today'sBaby QI: Safe Sleep Teaching

- Safe Sleep Toolkit
  - NIH Safe Infant Sleep Curriculum for Nurses
  - AAP Task Force recommendations
  - Research on barriers to safe sleep
  - Qualitative data from other QI projects
  - Focus groups
    - Advertising agency
      - Branding
      - Social marketing

# Today's Baby QI: Safe Sleep Teaching

- PowerPoint on PDSA cycles
- Posters
- Pocket cards
- Sample policy
- Website: FAQs, track QI



**CREATE A CAMPAIGN to  
achieve culture change!**

# Today'sBaby QI: Safe Sleep Teaching

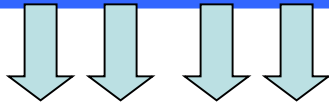
- QI intervention median = 160 days
- Mothers reported receiving information 72% to 95% (increase of 24-57%)
- 94% babies observed supine (plus 24%)
- 88% infants in safe sleep environment
  - Increase of 33%
- Gains maintained up to 12 months

# Social Media and Risk-Reduction Training Study (SMART)

- Cluster randomization: 4 groups
- Safe sleep or breast feeding education
- Nursing QI and Social Media (mobile health)
- N = 1600; 1263 responses (79%)
- Safe sleep NQI and MHealth:
  - Supine sleep 92.5%
  - Room sharing 85.9%
  - No soft bedding: 81.9%
  - Pacifier use: 76.2%

# Achieving a Cultural Shift on ISS

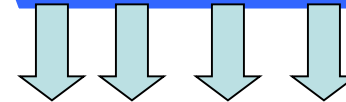
Inconsistency of message.  
Lack of HCP education.  
Wrong advice from family and friends.  
Unsafe sleep images.  
Inappropriate sleep products.



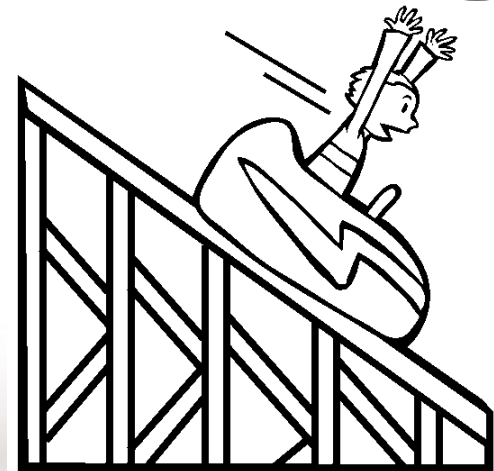
**Safe Sleep**



National campaign with consistency of message.  
Improved HCP education.  
Partnership: Religious Leaders.  
Safe sleep images.  
Social marketing.  
Legislation?



**Safe Sleep**



# Website Information

- [www.cribsforkids.org](http://www.cribsforkids.org)
- [www.cribsforkids.org/safesleephospitalcertification/](http://www.cribsforkids.org/safesleephospitalcertification/)
- For help with developing your program
  - Contact Tiffany Price:  
[tprice@cribsforkids.org](mailto:tprice@cribsforkids.org) or 412-322-5680 x112

# Contact Information

- [mgoodstein@wellspan.org](mailto:mgoodstein@wellspan.org)



# THANK YOU!



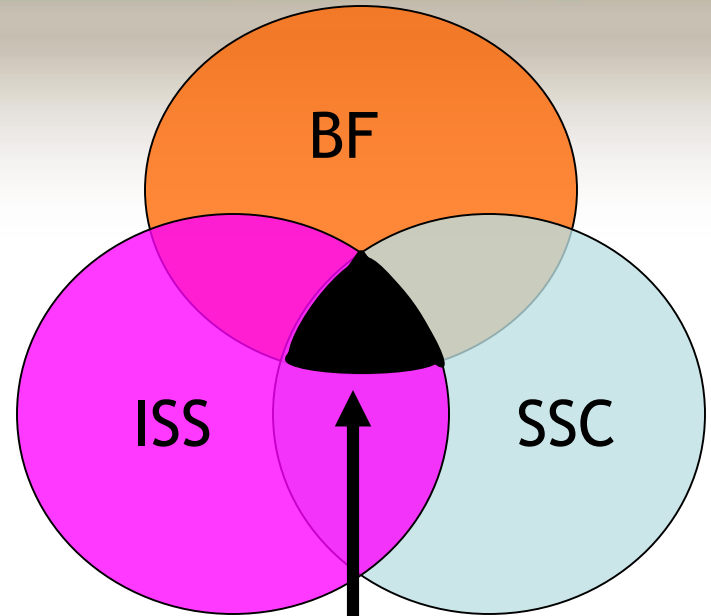
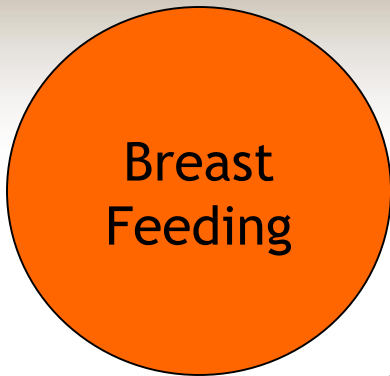
## National Safe Sleep Hospital Certification Program



<http://www.cribsforkids.org/safesleephospitalcertification/>



# Achieving Equanimity



Best Health Outcome



# Pacifiers

- AAP recommendation: Consider offering a pacifier at nap time and bedtime.
- Studies consistently demonstrate a protective effect of pacifiers on SIDS
- Mechanism unknown:
  - Dislodge within 15 to 60 minutes
  - Decreased arousal threshold



# Pacifiers and Breastfeeding

- Well-designed trials:
  - 2 found no association among term infants
  - 1 found no association among preterm infants
  - 1 found slightly decreased breastfeeding duration at one month if pacifier introduced in first week of life, **but NO difference if pacifier introduced after one month!**



# Baby Friendly USA: Pacifiers

- Breastfeeding babies should not be given pacifiers by the staff of the facility, **with the exception of:**
  - Limited use to **decrease pain** during procedures when the baby cannot safely be held or breastfed (pacifiers used should be discarded after these procedures)
  - Babies who are being tube-fed in NICU
  - Other rare, specific medical reasons

# Q. What if a mother requests that her infant be given a pacifier?

- After counseling and education, the mother's choice should be **respected**.
- The nurse should be knowledgeable regarding the AAP's policy and support the policy statement that pacifiers should not be used with breastfeeding infants until breastfeeding is well-established, after about 3-4 weeks.

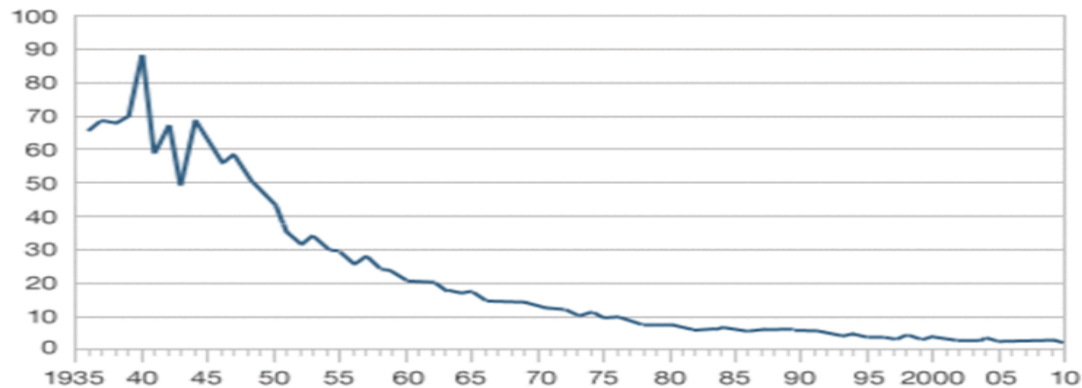
# Equanimity

- Balance SSC, Breast Feeding , and Safe Sleep **is achievable!**
- Focus: best health outcome for our babies!
- Requires: commitment, education, respect, and sensitivity



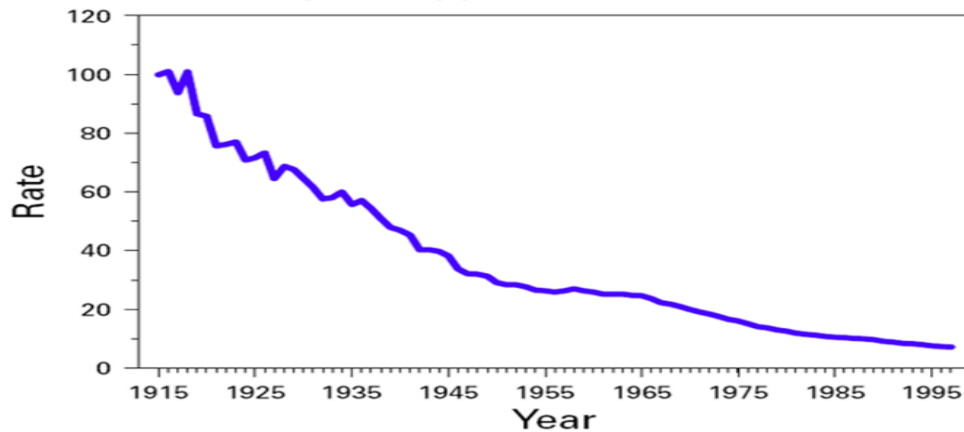
# IMR over time: Finland vs. US

Infant mortality in Finland, 1936 to 2010 per 1,000 births



Source: Statistics Finland

FIGURE 1. Infant mortality rate,\* by year — United States, 1915–1997



\*Per 1000 live births.

# Sleep Enablers: The Wahakura



encore1



- Woven flax bassinet for infants up to 5-6 months of age





# Sleep Enablers: The Pepi-pod

- Made from the bottom section of a plastic clothes container
- Christchurch, NZ following the February 2011 earthquake



# Safer Bed/Bassinet Design



# To Swaddle or Not to Swaddle? That is the Question

- Pros:

- Calms the infant; promotes sleep; decreases number of awakenings
- Encourages use of the supine position



- Cons:

- Increased respiratory rate and reduced functional residual lung capacity
- Exacerbates hip dysplasia if the hips are kept in extension and adduction
- “Loose” swaddling becomes loose bedding
- Overheating, esp if the head is covered or the infant has infection
- Effects on arousability to an external stimulus remain unclear (conflicting data). There may be minimal effects of routine swaddling on arousal.

# Swaddling

- There is insufficient evidence to recommend routine swaddling as a strategy to reduce the incidence of SIDS.
- Swaddling must be correctly applied to avoid the possible hazards
- Swaddling does not reduce the necessity to follow recommended safe sleep practices.



# Swaddling- Is it Safe?

- McDonnell 2014, J Peds
  - Wearable blankets, swaddles: 10 deaths
    - 80% positional asphyxia, prone sleeping
    - 70% additional risk factors
  - Regular blankets, 12 deaths
    - 58% positional asphyxia, prone sleeping
    - 92% additional risk factors



# Swaddling- More Questions...

- Pease 2016, Pediatrics
- Pooled OR = 1.38
  - Prone = 12.99
  - Side = 3.16
  - Supine = 1.93
- Increased risk with age
- Limitations:
  - Heterogeneity, definitions, other risk factors



- Swaddling (wrapping a light blanket snugly around a baby) may help calm a crying baby. If you swaddle your baby, be sure to place him on his back to sleep. Stop swaddling your baby when he starts to roll.

# 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

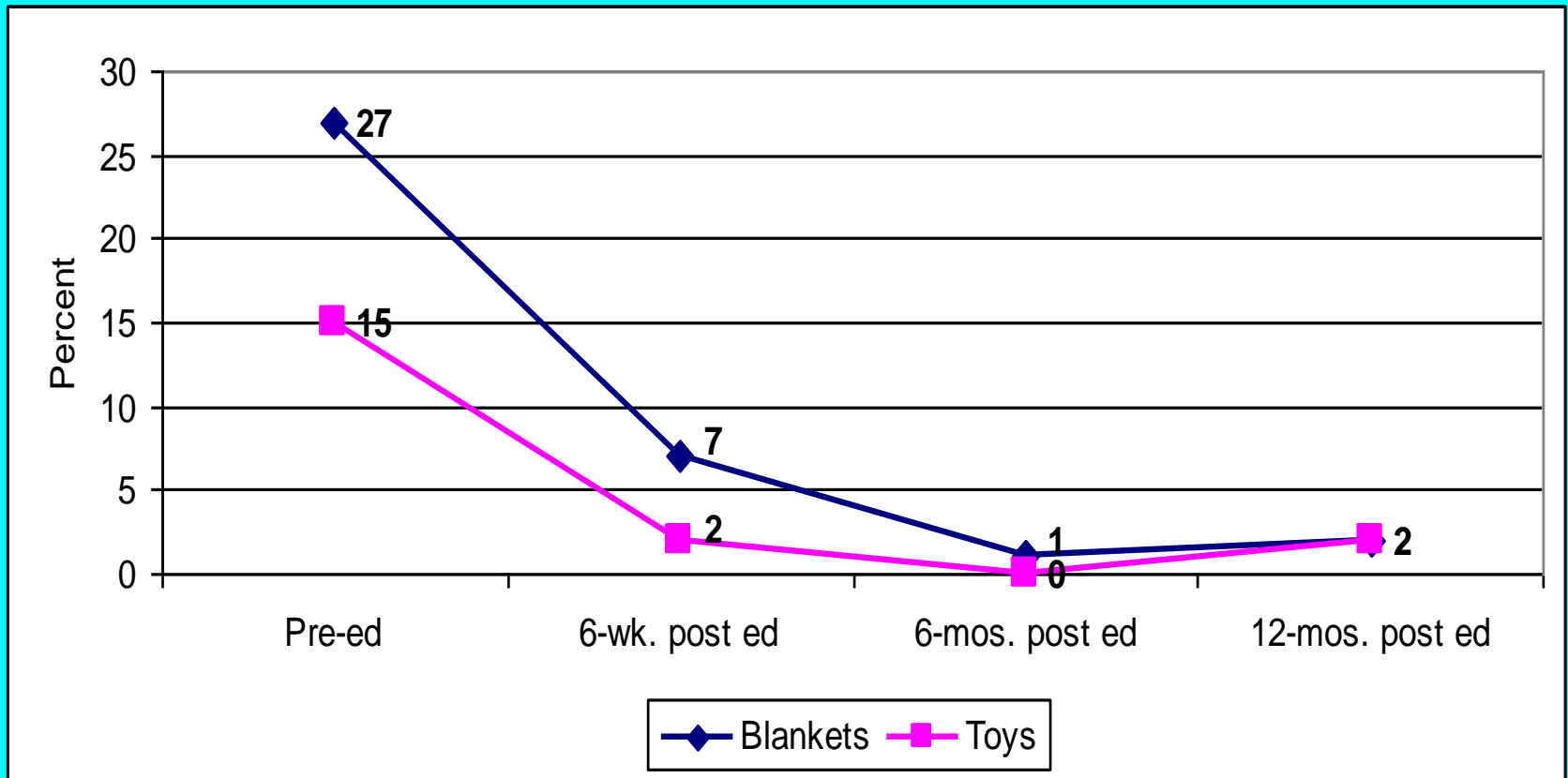


# Why Develop a Hospital-Based Program?

- 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



# 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

# SC BOI Safe Sleep Initiative

The mission is to eliminate sleep-related infant deaths by providing prevention education and consistent messaging and support to healthcare providers, parents, caregivers and the community.

# Hospital Safe Sleep Pledge

As the Chief Executive Officer of one of our state's 44 birthing hospitals, we are asking for your commitment in creating a Safe Sleep environment and promoting Safe Sleep education. In order to achieve our mission and reach all audiences, we need to ensure education and outreach support is coming from many different levels of the family medical care team from prenatal care and birth through a child's first 12 months of life.

# Hospital Safe Sleep Pledge

SCBOI is in the process of developing a comprehensive toolkit of resources based on the 2016 Safe Sleep Recommendations from the American Academy of Pediatrics (AAP) to assist your hospital in promoting best practices for safe sleep. In addition, we will be using quality improvement designs and metrics to measure advancements in safe sleep practices. SCBOI will share this information and additional details on the launch of this new initiative as they become available.

# Hospital Safe Sleep Pledge

Today we are simply asking that you once again stand with us to help save babies in South Carolina by signing this pledge of your commitment to the Safe Sleep Initiative. Please also identify a clinical champion who will be responsible for leading this effort in your hospital.

**Signed by all 44 SC Birthing Hospitals!!!!**

# SC BOI Safe Sleep Initiative

- Meet every 2<sup>nd</sup> Wednesday (prior to the BOI meeting)
- 9:30 a.m.
- SC Hospital Association

Join us!

# Safe Sleep Initiative Brochure

- Developed by the SC BOI Safe Sleep Initiative members in accordance with the American Academy of Pediatrics 2016 Safe Sleep Recommendations
- One consistent message and SC specific data
- In the process of planning the stages for distribution



## Why is Safe Sleep important?

Because even one death is too many.

### Safe Sleep

Safe Sleep focuses on actions you and others can take to help your baby sleep safely and to reduce your baby's risk of dying while sleeping, which is called Sudden Unexpected Infant Death Syndrome (SUIDS).

The term "SUIDS" may sound scary, and the death of a baby is always heartbreaking. But there are a number of ways you can lower his or her risk while giving your baby the best care possible.

Learning about SUIDS and safe sleep for babies is important for all caregivers, not just for parents. Grandparents, aunts, uncles, babysitters, childcare providers and anyone else who might care for a baby also need to know about safe sleep.

The mission of the South Carolina Birth Outcomes Initiatives (SCBOI) Safe Sleep Initiative is to eliminate sleep-related infant deaths by providing prevention education and consistent messaging and support to healthcare providers, parents, caregivers and the community.

Simple, consistent actions can make a big difference in keeping your baby safe.

## Can this really happen to me or someone I know?

### The truth is in the numbers.

- South Carolina's State Child Fatality Committee found 80 cases of infant deaths reviewed in 2017 were due to unsafe sleep.
- In these deaths, 65% of the babies who died were sleeping in an adult bed, couch or chair.
- For a South Carolina infant, a sleep-related death is 18 times more likely to occur than a motor vehicle-related death.
- According to the South Carolina Department of Health and Environmental Control (DHEC), SUIDs is the third leading cause of infant death in South Carolina.
- Putting a baby to sleep in the parents' room, but on a separate surface, reduces the risk of sudden infant death syndrome by up to 50%.

### Contact Information

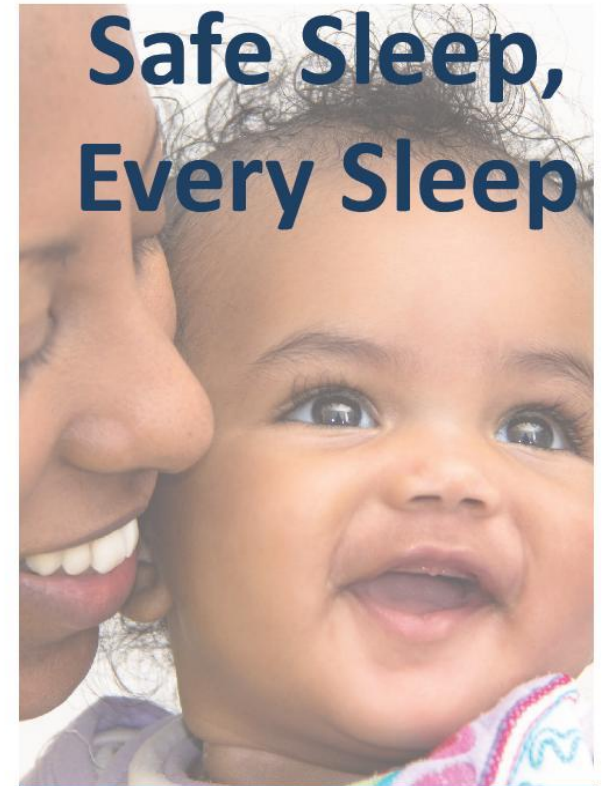
For more information on the South Carolina Birth Outcomes Initiative, email [schoi@scdhhs.gov](mailto:schoi@scdhhs.gov) or visit [scdhhs.gov/boi](http://scdhhs.gov/boi).

### South Carolina Birth Outcomes Initiative

[www.scdhhs.gov/boi](http://www.scdhhs.gov/boi)

P.O. Box 8206, Columbia, SC 29202

## Safe Sleep, Every Sleep



Six infants die each month  
in South Carolina from  
unsafe sleep.

Safe Sleep Initiative

South Carolina Birth Outcomes Initiative

# Know and Share the ABCs of Safe Sleep

Babies are at risk of sleep-related deaths until they are a year old, and most deaths occur when babies are between 1 month and 4 months of age. However if you follow these safety tips based on the American Academy of Pediatrics (AAP) recommendations, you can help prevent infant deaths due to unsafe sleep practices. Even one is just too many.



## Alone

Babies should sleep alone in their own safe sleep space such as a crib, bassinet or playard with a firm, flat mattress. Sleeping alone means no other people, pets or objects are in the same sleep area.

This means all toys, soft objects, bumper pads, blankets and pillows need to be removed from a baby's crib. These items are choking and suffocation hazards. Also, never lay a baby down on adult beds, chairs, sofas, waterbeds, air mattresses, pillows or cushions.

## Back

Always put your baby to sleep on his back, both for naps and at night. Placing babies on their backs to sleep is one of the most important ways to prevent sudden unexpected infant death (SUID). Often a baby is put to sleep safely at first, but then is moved to an unsafe sleep position after awakening in the night.

## Crib

A crib, bassinet or playard is safer than having a baby sleep next to you in bed. But what's just as important is making sure the crib or bassinet is safety approved by the Consumer Products Safety Commission and that the crib is bare.

## Additional Safety Tips

Here are some safety tips to remember.

- **Do not use cribs made before 2011.** Older cribs may not meet current safety standards.
- **Do not use altered cribs.** Cribs that are broken or modified, or that have gaps larger than two fingers between the sides of the crib and the mattress can be dangerous.
- **Use a firm mattress.** Make sure the sleep surface, such as a mattress, of the crib or bassinet is firm.
- **Share a room, not a bed.** A crib or bassinet near your bed can make it easy to reach your baby so you can easily breastfeed and bond with the baby. This is safer than risking falling asleep with a baby in bed with you.
- **Keep sleeping space away from cords.** Do not place a crib or bassinet near a window with blinds, curtain cords or baby monitor cords, as babies can strangle on these items.
- **Set a timer.** When feeding your baby, set an alarm or timer on your phone to ensure you stay awake.
- **No objects in sleeping space.** Remove all bumper pads, blankets, toys, pillows and other objects from the baby's crib or bassinet.



# SC BOI Safe Sleep Initiative

- For questions or how to become involved please contact -
  - [scboi@scdhhs.gov](mailto:scboi@scdhhs.gov)

Thank you

