

# Safe Sleep in the Hospital: Barriers, Bumps and Baby- Friendly



**DukeHealth**

By:

Kristina Nazareth-Pidgeon, MD  
Sophie Shaikh, MD

# Who are we?



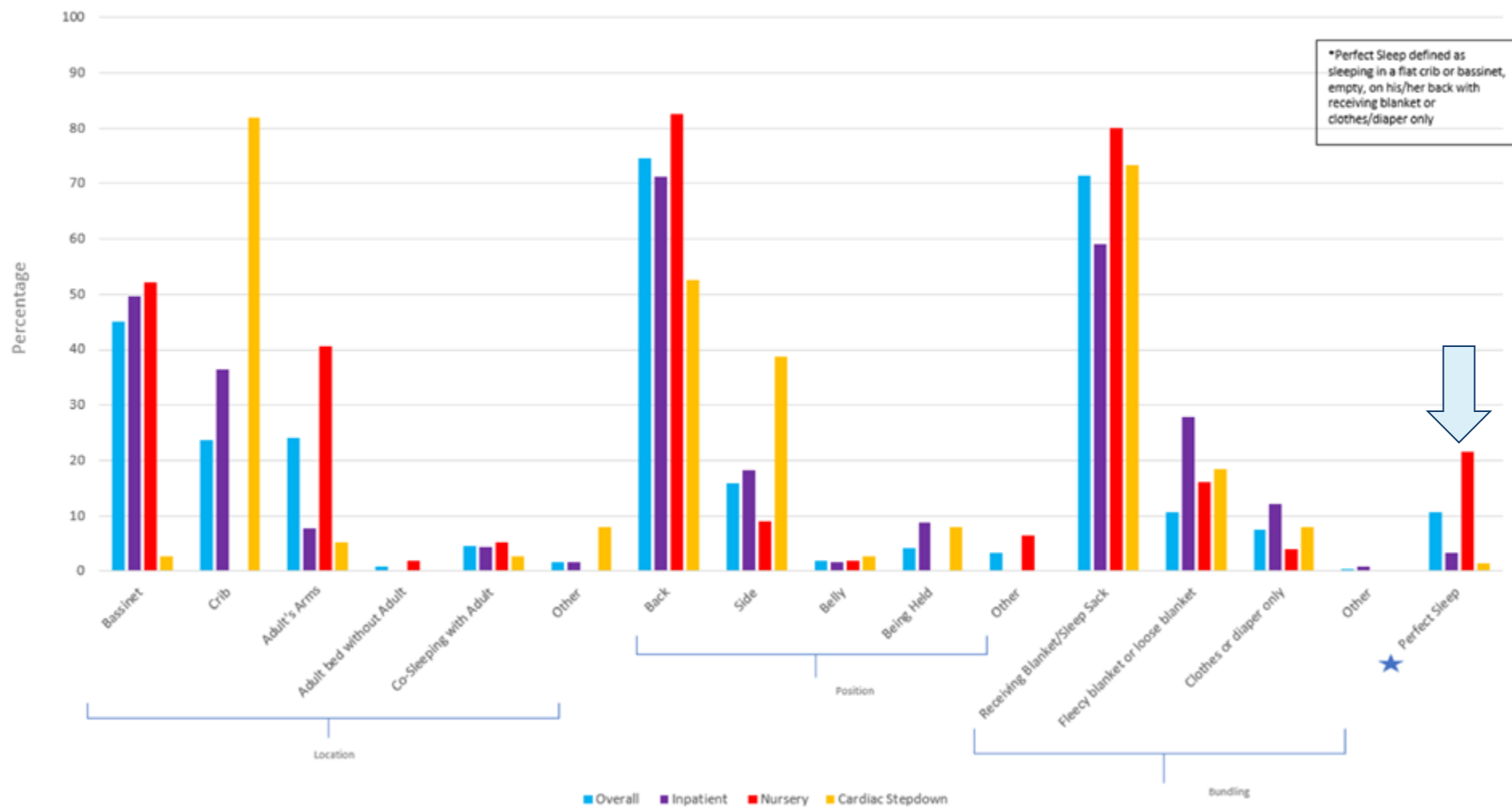
Kristina  
Nazareth-Pidgeon,  
MD

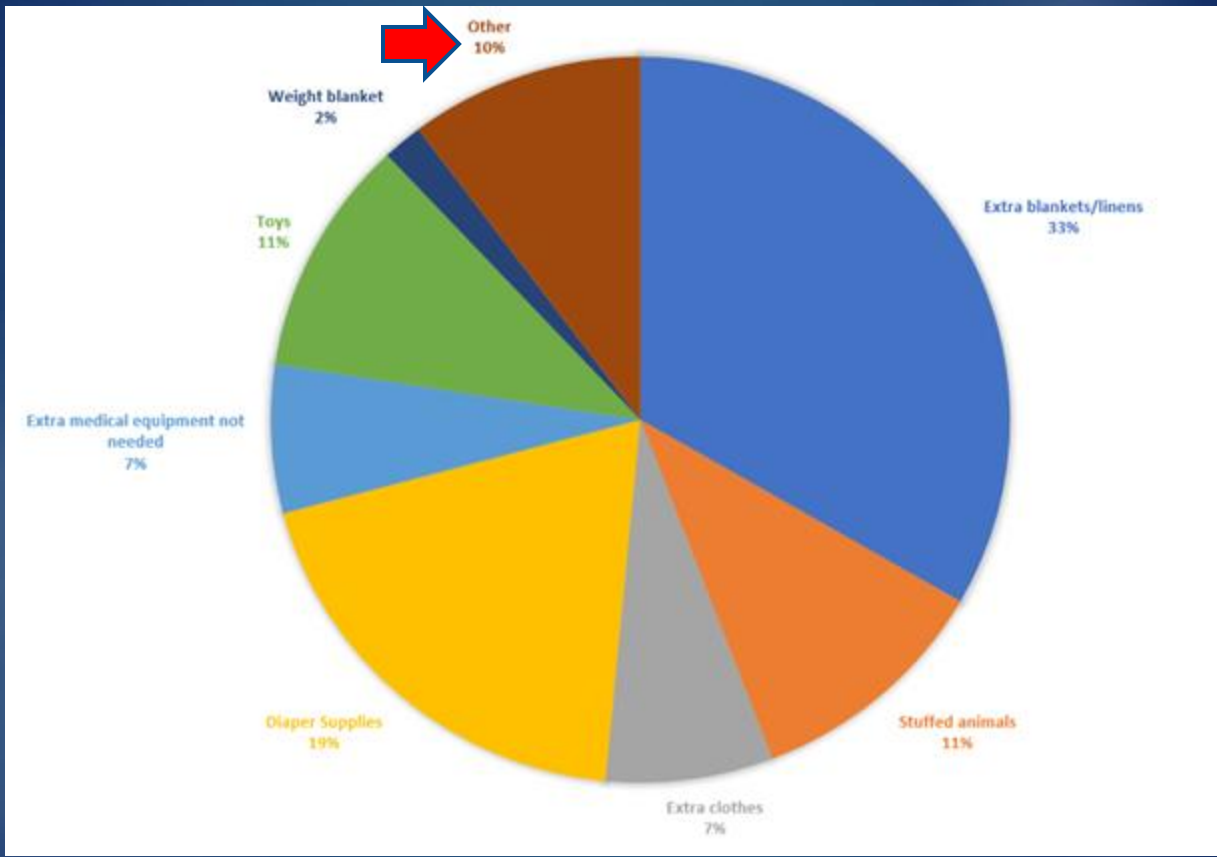


Sophie  
Shaikh, MD

# Crib Audits: Sleeping Infants Less than or Equal to 4 months

\*Perfect Sleep defined as sleeping in a flat crib or bassinet, empty, on his/her back with receiving blanket or clothes/diaper only





# Other Additional Items:

- Multiple pairs of shoes
- Parental Clothes
- Adult Blankets
- Origami
- Papers
- Socks
- Mirror
- Syringes
- Thermometer



- Sound machines
- Bean bag positioners
- Adult pillows
- Styrofoam cups
- Scissors
- Remote
- Books
- Plastic Bag
- Adult Slippers

### Upstate parents talk about importance of safe sleep for infants



remely important because unsafe sleeping is the leading cause of dea

PM EDT

7 ON YOUR SIDE

### Grieving mom asks why no one warned about Fisher-Price infant sleeper deaths

By Michael Finney and Renee Koury

Wednesday, September 28, 2022

MIAMI VALLEY NEWS

# Montgomery County issues warning after 8 infants die due to unsafe sleeping environments

by: Riley Phillips

Posted: May 10, 2023 / 06:01 PM EDT

Updated: May 10, 2023 / 06:01 PM EDT

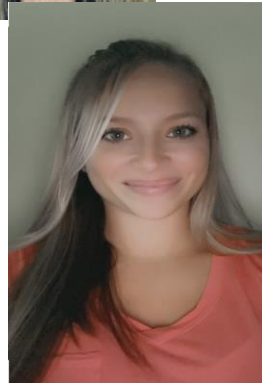
# Cincinnati mother indicted, accused of killing second child as a result of co-sleeping

# Taskforce:

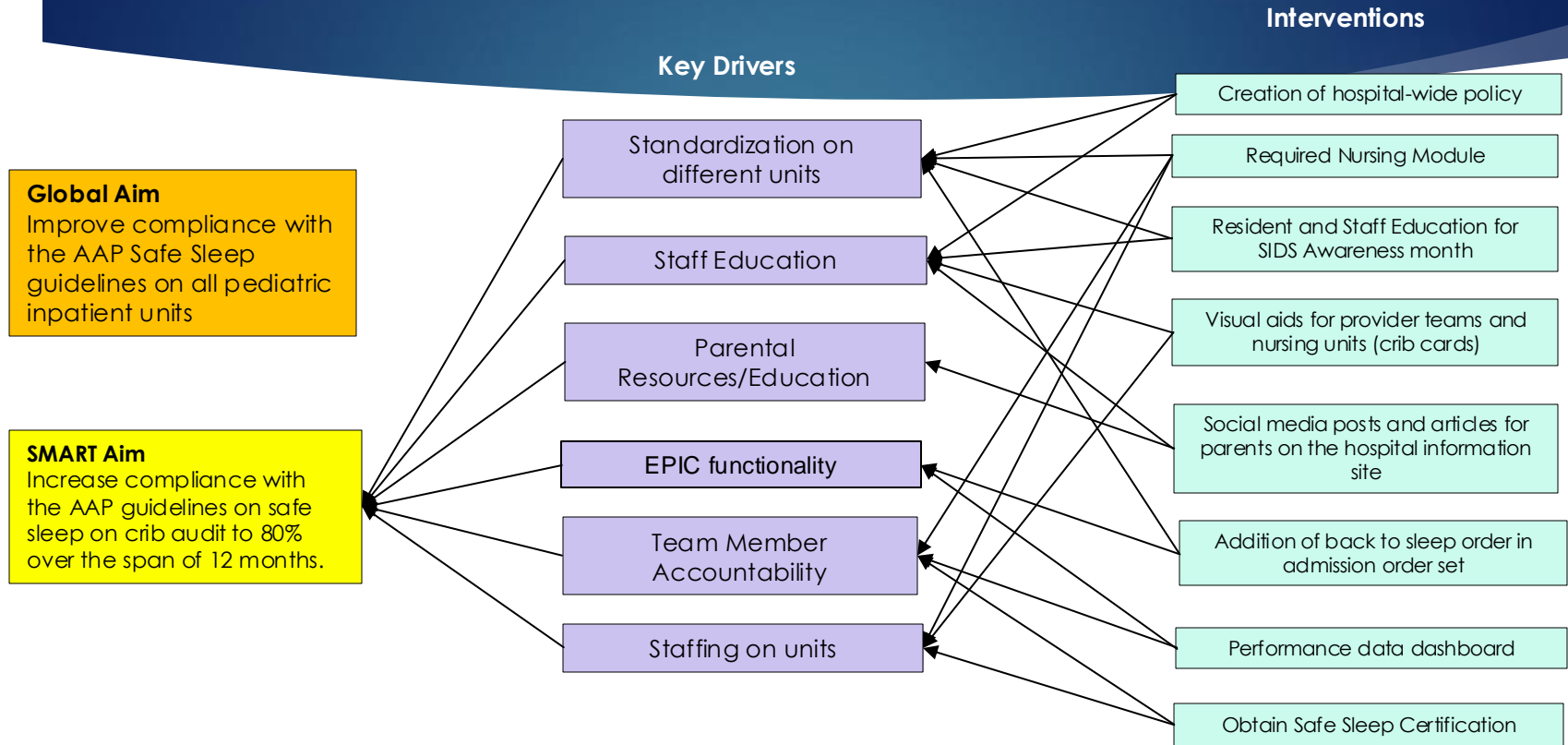
Started in 2019

Comprised of pediatric physicians, residents, nurses, physical therapists who are focused on creating a safe sleep environment within the hospital

Awarded Bronze Certification as a Safe Sleep Hospital

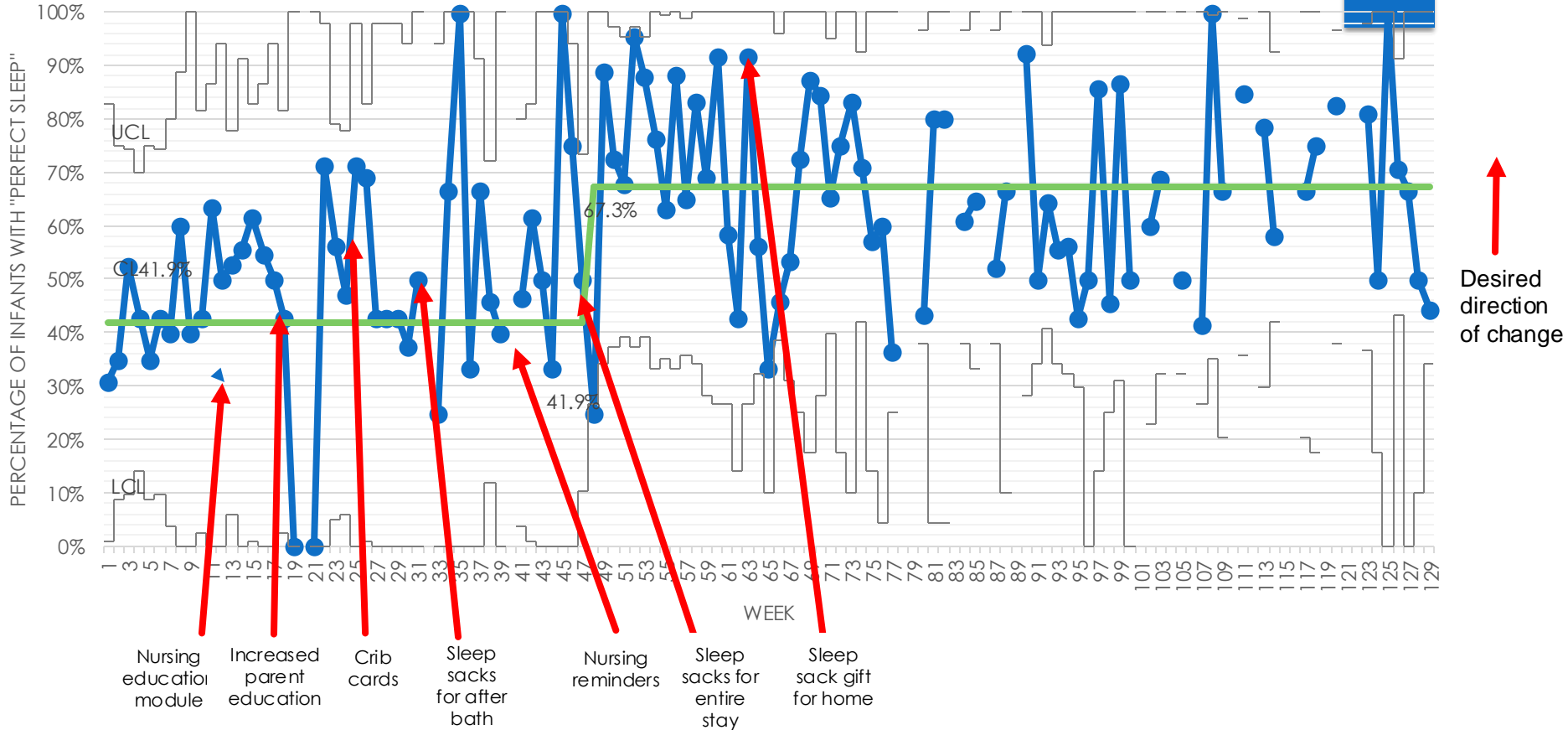


# Improving Safe Sleep in the Hospital





# "Perfect Sleep"



# POLICY STATEMENT

Organizational Principles to Guide and Define the Child Health  
Care System and/or Improve the Health of all Children

American Academy  
of Pediatrics



DEDICATED TO THE HEALTH OF ALL CHILDREN™

# Sleep-Related Infant Deaths: Updated 2022 Recommendations for Reducing Infant Deaths in the Sleep Environment

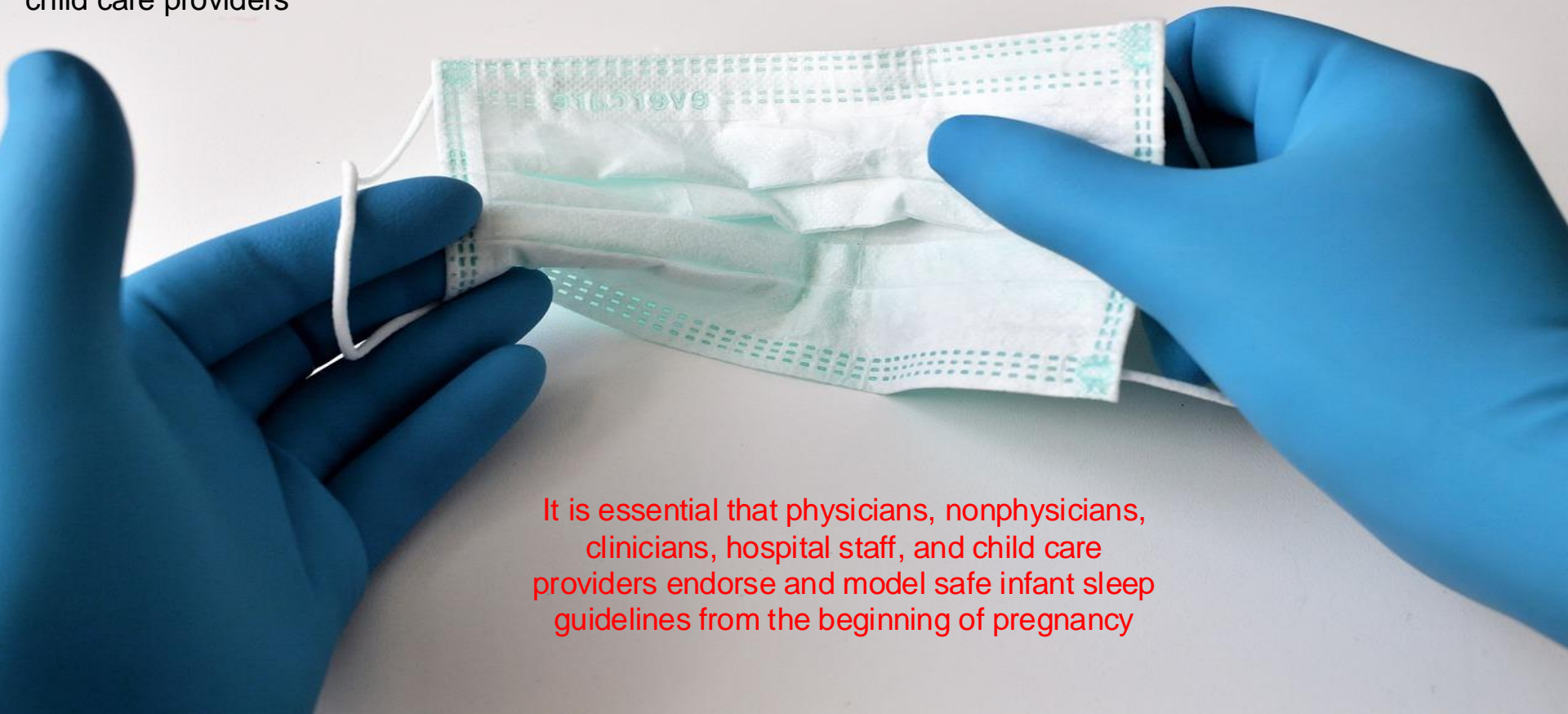
Rachel Y. Moon, MD, FAAP,<sup>a</sup> Rebecca F. Carlin, MD, FAAP,<sup>b</sup> Ivan Hand, MD, FAAP,<sup>c</sup>

THE TASK FORCE ON SUDDEN INFANT DEATH SYNDROME AND THE COMMITTEE ON FETUS AND NEWBORN

# Revised 2022 Safe Sleep Guidelines

11) Health professionals and child care providers

Health care professionals, staff in newborn nurseries and child care providers should endorse and model the SIDS risk reduction recommendations from birth



It is essential that physicians, nonphysicians, clinicians, hospital staff, and child care providers endorse and model safe infant sleep guidelines from the beginning of pregnancy



Surely everyone wants to support infant safe sleep??

Many more stakeholders and opinions than we ever anticipated!

Lots of competing interests



unicef  | for every child

## Baby-Friendly Hospital Initiative

*Ten steps to successful breastfeeding, from UNICEF and the World Health Organization*

# The TEN STEPS to Successful Breastfeeding

### HOSPITAL POLICIES

Develop support materials to implement...

- Develop support materials to implement...
- Develop support materials to implement...
- Develop support materials to implement...

### STAFF COMPETENCY

Develop support materials to implement...

- Develop support materials to implement...
- Develop support materials to implement...
- Develop support materials to implement...

### ANTENATAL CARE

Develop support materials to implement...

- Develop support materials to implement...
- Develop support materials to implement...
- Develop support materials to implement...

### CARE RIGHT AFTER BIRTH

Develop support materials to implement...

- Develop support materials to implement...
- Develop support materials to implement...
- Develop support materials to implement...

### ROOMING-IN WITH BREASTFEEDING

Develop support materials to implement...

- Develop support materials to implement...
- Develop support materials to implement...
- Develop support materials to implement...

### SUPPLEMENTING

Develop support materials to implement...

- Develop support materials to implement...
- Develop support materials to implement...
- Develop support materials to implement...

### ROOMING-IN

Develop support materials to implement...

- Develop support materials to implement...
- Develop support materials to implement...
- Develop support materials to implement...

### RESPONSIVE FEEDING

Develop support materials to implement...

- Develop support materials to implement...
- Develop support materials to implement...
- Develop support materials to implement...

### BOTTLES, TEATS, AND DROPPERS

Develop support materials to implement...

- Develop support materials to implement...
- Develop support materials to implement...
- Develop support materials to implement...

### DISCHARGE

Develop support materials to implement...

- Develop support materials to implement...
- Develop support materials to implement...
- Develop support materials to implement...



# Opportunities from Baby Friendly

- ▶ Opportunity to re-examine existing processes and protocols
- ▶ Nurses receptive to new education
- ▶ Increased opportunity for safe sleep modeling and education of families





# Safe Sleep and Skin-to-Skin Care in the Neonatal Period for Healthy Term Newborns

Lori Feldman-Winter, MD, MPH, FAAP, Jay P. Goldsmith, MD, FAAP, COMMITTEE ON FETUS AND NEWBORN,  
TASK FORCE ON SUDDEN INFANT DEATH SYNDROME

How do we develop Baby Friendly  
policies while also ensuring safe infant  
sleep environments?



## Strategies for safe skin-to-skin

- Educate of post-partum staff
- Optimize environment:
  - Appropriate lighting to visualize infant well
  - Unobstructed view of newborn for easy assessment
- Risk stratify and increase vigilance for high-risk situations:
  - Moms- fatigue, sleep deprivation, sedation from general anesthesia or magnesium sulfate, post-partum hemorrhage
  - Babies- resuscitation, low Apgars, late term/early term, difficult delivery, maternal meds causing neonatal sedation

### Components of Safe Positioning for the Newborn While Skin-to-Skin

- ▶ Infant's face can be seen
- ▶ Infant's head is in "sniffing" position
- ▶ Infant's nose and mouth are not covered
- ▶ Infant's head is turned to 1 side
- ▶ Infant's neck is straight, not bent
- ▶ Infant's shoulders and chest face mother
- ▶ Infant's legs are flexed
- ▶ Infant's back is covered with blankets
- ▶ Mother-infant dyad is monitored continuously by staff in the delivery environment and regularly on the postpartum unit
- ▶ When mother wants to sleep, infant is placed in bassinet or with another support person who is awake and alert

# Strategies for Safe Rooming-In

- Educate mothers and support persons to avoid bedsharing/sleeping while holding infant
- Nurse or support person to immediately place infant in bassinet if mother falls asleep while holding
- Encourage use of bedrails when feeding, and call bell to help transition baby back to bassinet if needed
- Increase nurse monitoring for high-risk dyads and during high-risk times of day (typically night/early morning)



# Unified Hospital Policy



Have to get  
everyone at the  
table

Different Units have  
different populations  
and priorities

# Universal Hospital Policy

- ❑ Wound policy
- ❑ NPO Status
- ❑ Oxygen/Respiratory Concerns



# Wound Policy

Patients need to be turned every two hours to prevent hospital-related injuries

What positions are appropriate for infants to be in?








# NPO Status



## Physiological Effect of Prone Position in Children with Severe Bronchiolitis: A Randomized Cross-Over Study (BRONCHIO-DV)

Florent Baudin, MD, MSc   • Guillaume Emeriaud, MD, PhD • Sandrine Essouri, MD, PhD • ...  
Aurelie Portefaix, MD • Etienne Javouhey, MD, PhD • Claude Guerin, MD, PhD • [Show all authors](#)

Published: November 14, 2018 • DOI: <https://doi.org/10.1016/j.jpeds.2018.09.066> •  Check for updates



Cochrane Database of Systematic Reviews

### Positioning for acute respiratory distress in hospitalised infants and children (Review)

Gillies D, Wells D, Bhandari AP

Published: 01 September 1997

European Society for Pediatric Research Abstracts

## Prone Vs. Supine Sleep Position in Bronchiolitis: Effects on Apnoea and Oxygenation

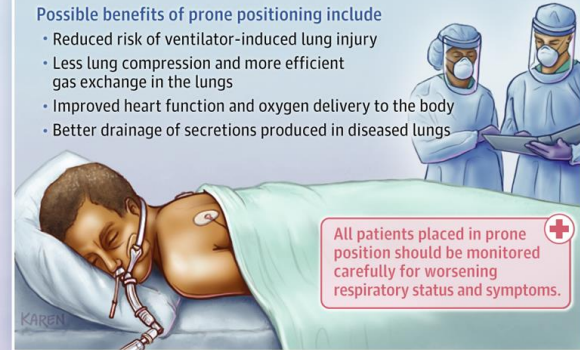
[Christian F Poets](#), [Tina Marinaki](#), [Valerie A Stebbens](#), [Louise M O'Brien](#) & [David P Southall](#)

*Pediatric Research* 42, 412 (1997) | [Cite this article](#)

**Prone positioning** is the technique of placing patients with breathing difficulties on their stomach to help them breathe better. Prone positioning is generally reserved for sedated patients who require a breathing machine, known as a ventilator, but it may be beneficial for awake patients with COVID-19.

Possible benefits of prone positioning include

- Reduced risk of ventilator-induced lung injury
- Less lung compression and more efficient gas exchange in the lungs
- Improved heart function and oxygen delivery to the body
- Better drainage of secretions produced in diseased lungs



Hadaya J, Benharash P. Prone Positioning for Acute Respiratory Distress Syndrome (ARDS). *JAMA*. 2020;324(13):1361. doi:10.1001/jama.2020.14901

# What patients are exceptions?



- ▶ Preterm infants less than 32 weeks corrected gestational age
- ▶ Infants at risk for pressure injuries
  - ▶ If an infant is not attempting any feeds orally, continue with Pressure Injury Repositioning guidelines
- ▶ Patients on a ventilator
  - ▶ Should have head of bed elevated to prevent ventilator-associated pneumonia
- ▶ Infants who are **not medically stable** for any component of the Safe Sleep recommendations and who have a physician-documented reason why they should be an exception.
- ▶ Consider Safe Sleep Practice Trial





# Staffing Issues



# Staffing Issues

Nursing Ratios

Complexity of patients on the floors

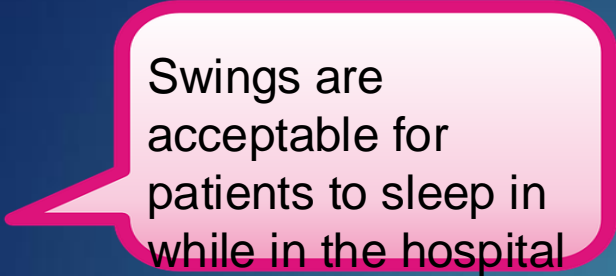
"Fussy" Babies

Frequent turnover of staff (including nurses and residents)

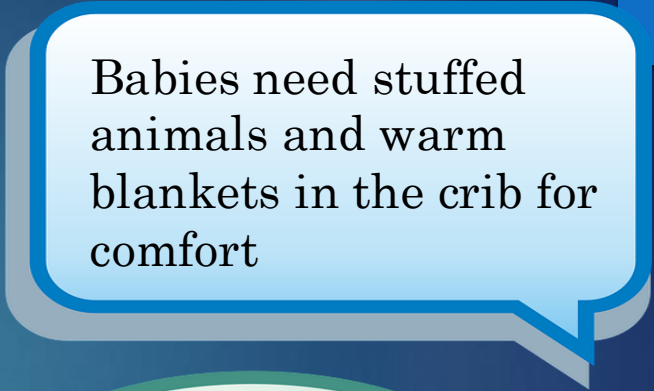


# Culture of sleep in the hospital

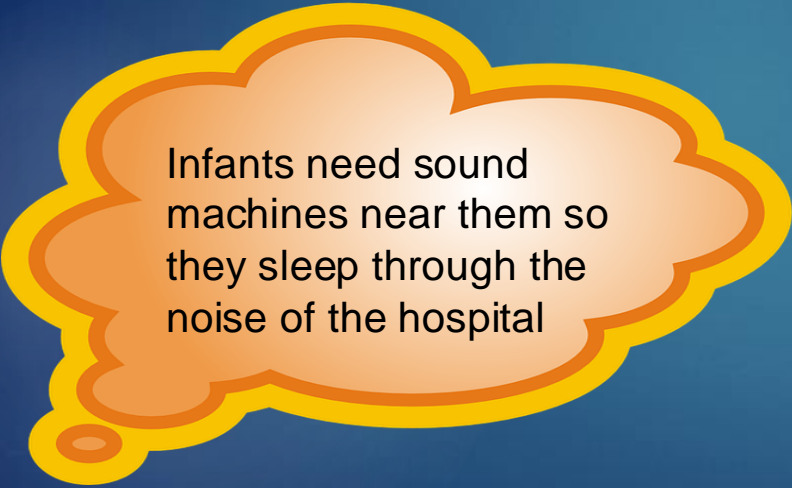


A pink speech bubble with a white outline and a tail pointing to the left.

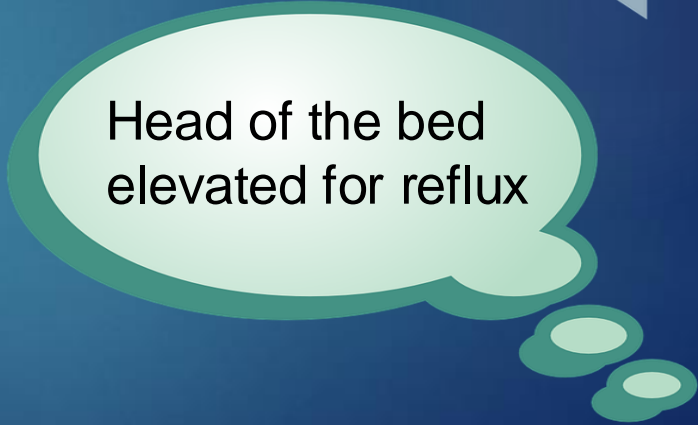
Swings are acceptable for patients to sleep in while in the hospital

A blue speech bubble with a white outline and a tail pointing to the right.

Babies need stuffed animals and warm blankets in the crib for comfort

An orange thought bubble with a white outline and a tail pointing to the bottom left.

Infants need sound machines near them so they sleep through the noise of the hospital

A green thought bubble with a white outline and a tail pointing to the bottom right.

Head of the bed elevated for reflux

# Who makes the bed?

Occupational  
Therapy

Physical  
Therapy

Providers



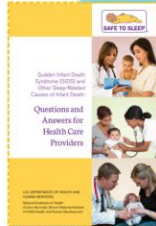
Childlife

Nursing

Nursing  
Assistants

## CAN WE PREVENT INFANT SLEEP- RELATED DEATHS?

What you need to  
know if you work in a  
hospital



*Text and images used with permission,  
Courtesy of the Safe to Sleep® campaign  
<https://safetosleep.nichd.nih.gov>*

### Will babies aspirate if they regurgitate while sleeping on their backs?

There is no evidence that aspiration is more common among healthy infants who sleep in the prone position than among healthy infants who sleep in the prone position.<sup>1,2</sup> Furthermore, in countries (including the United States) that have seen a major change in infant sleep position—from nearly all infants sleeping to mostly back sleeping—the incidence of serious or fatal choking has not increased.<sup>3</sup>

In fact, babies may actually clear secretions better when placed on their backs. When babies are in the back sleep position, the trachea lies on top of the esophagus (see Figure 1). Anything regurgitated or refluxed from the esophagus must work against gravity to be aspirated into the trachea.



Conversely, when an infant is in the stomach sleep position, anything regurgitated or refluxed will pool at the opening of the trachea, making it easier for the infant to aspirate (see Figure 2). Also, chondromatous tissue that irritates the trachea is more prominent on the posterior versus anterior pharyngeal wall, thus suggesting an even greater protection against aspiration when the baby is lying on his or her back.

Of the very few reported cases of death due to choking, most of the infants were in the stomach sleep position.

### Safe Sleep: Modeling in the hospital

- The most effective way to communicate risk reduction messages is to **PRACTICE** them so that parents and families can see the message in action!
- People trust nurses and healthcare providers
- Whatever the nurse, medical provider or therapist 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!



# Educational Campaign

# “Safe to Sleep” Practices at Home and the Hospital



## Patient Education

### “Safe to Sleep” Practices at Home for Babies (less than 1 year)

For the safety of your child, the American Academy of Pediatrics recommends the following:

- § “Back to sleep” – babies should sleep on their backs not their tummies
- § Use of a firm mattress in a crib or bassinet
- § No sleeping in car seats, swings, or other devices
- § No loose sheets, blankets, or soft objects in crib
- § Do not let your baby get too hot. At most, your baby only needs one more layer of clothing than an adult to be comfortable.
- § Babies should not sleep in a bed, sofa, or other area with an adult or child

Please watch the [Safe Sleep Video for Babies](#) by scanning the QR code:



### Special Hospital Sleep Practices (less than 1 year)

While in the hospital, your child may be placed in positions besides those recommended for “Safe to Sleep” practices at home. These may include:

- § Raising the head of bed (baby’s head higher than feet)
- § Placing extra blanket rolls or special positioning aids (Freddie the frog, bendy bumpers, etc.)
- § Lying on their side or belly
- § Using medical equipment in the crib

**These positions are not recommended or safe for your baby at home. We will tell you when it is time to switch to the “Safe to Sleep” positions that you will use at home.**



## BACK SLEEPING: What about choking?



Here the trachea (airway) is above the esophagus (food pipe). Anything that is spit up will be pushed back down by gravity to the lowest point. The airway is protected.



On the stomach, the trachea (airway) is below the esophagus (food pipe). Anything that is spit up will be pushed back down by gravity to the lowest point. On the stomach it is easier to aspirate into the lungs.



# Crib of Horrors.....



Can you name 10 things wrong with this crib?

## Answers:

1. Elevated crib
2. Side-lying
3. Sound machine
4. Weight on chest
5. Unused medical equipment



6. Loose blanket
7. Toys
8. Diaper supplies in crib
9. Extra clothes
10. Styrofoam Cup

# Sleep Items in the Hospital



## Infant Positioners

- ↳ Used in the hospital to prevent pressure injuries
- ↳ Directed by wound care or PT
- ↳ Seen more often in ICU settings
- ↳ Often used incorrectly and/or unnecessarily



# Infant Positioners

- Nursing education
- Orders in the chart for positioner use
- PT on our taskforce
- Signs at bedside
- Written into safe sleep hospital policy

Please help me practice

## Safe Sleep



Keep my crib flat.



Keep my crib empty.



Put me to sleep on my  
back and in my crib.



## Zflo Pillows for Pressure Injury Prevention

### DO:

- Use the correct Zflo pillow based on the patient's weight!!!
- Mold the pillow to the patient's head/extremity q2h with each assessment/repositioning
- Allow independent head movement
- Place the Zflo directly beneath the head/extremity you want to offload
- Keep a Zflo beneath the patient's head for any bedside procedure (chest closure, exploration, etc.), except for an ECMO cannulation
- Replace Zflo pillow with a new one if unable to remold or if the middle of pillow loses shape
- Be careful that pillow does not place pressure points onto ears



### DON'T:

- Leave flat Zflo pillows beneath head/extremities
- Place the Zflo under layers
- Use a standard pillow in place of a Zflo pillow beneath the head, unless the patient can turn independently
- Prevent independent head movement

## Which z-flo pillow does my patient need?

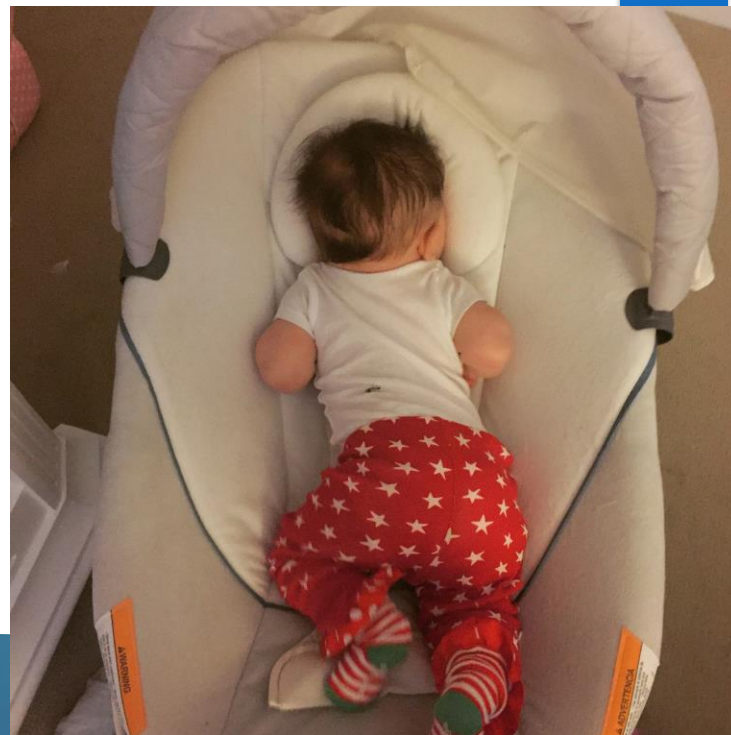
< 4.1kg = 9x15 size

> 4.1kg = 12x20 size



7x10 size should  
**NOT** be used under  
patient head

\*\*7x10 zflo pillows are to be used to offload extremities or as repositioning aids only\*\*



# Infant Swings

## Pros

- Soothing and comforting
- Helpful for staff when parents are not present
- Change of position for infant



## Cons

- Inclined surface
- Soft bedding
- Parents may imitate at home
- Not approved for sleep





# Infant Swings and Bouncers:

## Not Intended for Sleep

Patient will be placed on pulse oximetry while in these devices. If patient falls asleep, they will be moved to a safe sleep location.

**ALONE**

Not with other people, pillows, loose blankets, or toys

**BACK**

Not on their stomach or side, in a flat crib

**CRIB (or BASSINETT)**

Not on an adult bed, sofa, cushion, swing, infant seat or other soft surface

Together  
we can help  
prevent  
SIDS!

# What We Have Done

- ↳ Education to nursing staff
- ↳ Escalation of concerns to hospital leadership
- ↳ New policy in place requiring monitoring (pulse oximeter) for any infant placed in infant swing
- ↳ Policy also states infants should be moved back to crib if found sleeping in swing



Multidisciplinary teams are important to ensure that all staff are on the same page

Modeling and education in the hospital gives families the keys to continue safe sleep at home.



# Please contact us with any questions!



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