



Georgia Safe to Sleep
Hospital Initiative
Process Evaluation

Report

March 2017

Prepared for:
Georgia Department of Public Health



Georgia Department of Public Health

Prepared by:
The University of Georgia College of Public Health



**UNIVERSITY OF
GEORGIA**
College of Public Health

EXECUTIVE SUMMARY

Sleep-related infant deaths are a major, preventable, public health issue. The Georgia Department of Public Health (DPH), as part of a multi-pronged statewide safe infant sleep campaign, implemented a Georgia Safe to Sleep Hospital Initiative with the goals of: (1) providing accurate safe infant sleep information to hospital personnel, (2) supporting hospitals in implementing and modeling safe sleep, and (3) providing guidance to hospitals on addressing parental safe sleep concerns and ultimately (4) reducing infant mortality due to sleep-related causes.

DPH partnered with the College of Public Health at the University of Georgia (UGA) to conduct a process evaluation to assess the impact of the Georgia Safe to Sleep Hospital Initiative. The purpose of the process evaluation was to evaluate how hospitals had implemented the Georgia Safe to Sleep Hospital Initiative and to evaluate the sustainability of these efforts via four objectives:

- 1) All birth hospitals have a safe infant sleep policy
- 2) All safe infant sleep policies reference the AAP 2011¹ (or 2016²) recommendations for safe infant sleep
- 3) All safe infant sleep policies specify the type and/or content of patient education on safe sleep
- 4) All hospitals require regular staff training on safe infant sleep to address changes in recommendations as research on sleep-related infant deaths continues^{1,2}

The UGA team addressed these objectives with two sources of data: (1) hospital interviews conducted by DPH program staff and (2) documents provided by hospitals (such as crib audit data, safe infant sleep policies).

DPH began recruiting hospitals for the Georgia Safe to Sleep Hospital Initiative in January 2016. By May 2016, all 78 birthing hospitals in Georgia pledged to participate in the Georgia Safe to Sleep Hospital Initiative. A 79th hospital opened and joined the initiative in September 2016. Data collection for evaluation occurred between August 2016 and February 2017. Of the 79 participating hospitals, all 79 participated in semi-structured interviews with DPH staff, 44 provided data on crib audits conducted at their facilities, and 39 provided copies of their safe infant sleep policies.

The following key process evaluation findings were observed:

- 1) Prior to implementing the DPH initiative, 44.3% of hospitals reported having a safe infant sleep policy in place; as of January 2017, 87.3% of hospitals report having a safe infant sleep policy in place or in progress.
- 2) Of the 39 safe infant sleep policies reviewed, 48.7% of policies specifically referenced the AAP 2011¹ (or 2016²) recommendations with another 20.5% referencing AAP 2005 recommendations.³
- 3) Of the 39 safe infant sleep policies reviewed, 92.3% specified the type and/or content of patient education on safe sleep.
- 4) At the time of this report, DPH program staff reported that 82.3% of hospitals completed staff training and 74.7% reported requiring ongoing staff training.

While not all objectives of the program have yet to be fully met by all participating hospitals, this is due in part to the time lag in implementation across the state. Because DPH promoted the Georgia Safe to Sleep Hospital Initiative to hospitals as a voluntary program, hospitals controlled the timing of implementation activities. This approach was valuable and appreciated by hospitals, and it is estimated that progress towards these objectives will continue with time.

Based on the results of this process evaluation, we conclude that DPH achieved its broad goals of: (1) providing accurate safe infant sleep information to hospital personnel, (2) supporting hospitals in implementing and modeling safe sleep, and (3) providing guidance on addressing safe sleep concerns. All birth hospitals in the state have received accurate safe infant sleep information via DPH implementation guide and all agreed to participate in this initiative. The majority of hospitals have updated their practices and policies to model safe sleep practices, and DPH continues to provide guidance via emails, phone calls, and visits to hospitals in order to address concerns. Feedback from hospitals was overwhelmingly positive regarding the usefulness of the materials and support provided by DPH. Moreover, the UGA team and DPH are co-authoring a manuscript for submission to a peer-reviewed research journal to outline these implementation activities. This manuscript will serve as a resource for other state and local health departments interested in launching a similar Safe to Sleep Hospital Initiative.

INTRODUCTION

In 2015, approximately 3,700 infants died of sleep-related infant deaths in the United States, including sudden infant death syndrome (SIDS), ill-defined deaths, and accidental suffocation or strangulation in bed.² The majority of sleep-related infant deaths are preventable if recommendations for a safe infant sleeping environment are followed.^{1,4} Key recommendations include placing infant back to sleep on a separate, firm, sleep surface.^{1,4} Despite widely disseminated recommendations by the American Academy of Pediatrics (AAP) and the National Institutes of Health (NIH) to reduce risk for sleep-related infant deaths since 1992,^{1-3,5,6} parental adherence to safe sleep recommendations remains low, especially in Georgia.⁷⁻⁹ See Box 1 for the AAP 2011 level A recommendations,¹ which were the most recent recommendations available at the time of this initiative.

Box 1. AAP 2011¹ Recommendations for a Safe Infant Sleep Environment

- Back to sleep for every sleep
- Use a firm sleep surface
- Room-sharing without bed-sharing is recommended
- Keep soft objects and loose bedding out of the crib
- Pregnant women should receive regular prenatal care
- Avoid smoke exposure
- Avoid alcohol and illicit drug use
- Breastfeeding is recommended
- Consider offering a pacifier at nap time and bedtime
- Avoid overheating
- Do not use home cardiorespiratory monitors as a strategy for reducing the risk of SIDS

Three major risk factors for sleep-related infant death include sleep position, sleep surface, and bed sharing. In Georgia, among 158 sleep-related infant deaths in 2014, 82 (51.9%) deaths occurred among infants who were not sleeping on their backs, 95 (60.1%) deaths occurred in an adult bed, and 99 (62.7%) occurred while the infant was sharing a sleep surface with someone else (bed-sharing).¹⁰ Moreover, according to the Georgia Pregnancy Risk Assessment Monitoring System, only 43.8% of Georgia mothers report always placing their infant supine to sleep and 48.9% report never sharing a sleep surface with their infants.⁹

Multi-pronged public health strategies to educate families to reduce the risk of sleep-related infant deaths have been suggested, such as repeated, consistent safe sleep messaging across multiple levels (e.g., at the individual, agency, and community level).¹¹⁻¹⁵ Hospitals are a significant component of such strategies as they reach almost every new parent in the state and research has demonstrated that observing hospital staff modeling safe infant sleep practices reinforces these practices for parents.¹⁶⁻²⁰ The Georgia Department of Public Health (DPH), as part of a multi-pronged statewide safe infant sleep campaign, implemented a Georgia Safe to Sleep Hospital Initiative²¹ with the goals of: (1) providing accurate safe infant sleep information to hospital personnel, (2) supporting hospitals in implementing and modeling safe sleep, and (3) providing guidance to hospitals on addressing parental safe sleep concerns. DPH partnered with the College of Public Health at the University of Georgia (UGA) to conduct a process evaluation to assess the impact of the Georgia Safe to Sleep Hospital Initiative.

Implementation

The Georgia Safe to Sleep coordinator consulted with state health department coordinators from Ohio²² and Tennessee,²³ AAP recommendations,¹ the national Safe to Sleep® campaign,¹¹ and research publications^{12-16,24,25} to inform development of the Georgia Safe to Sleep Hospital Initiative. DPH created a hospital implementation guide²⁶ which outlined steps for hospital implementation (Box 2).

DPH collaborated with the Georgia Hospital Association, the First Lady’s Georgia Children’s Cabinet, the American Academy of Pediatrics – Georgia Chapter, Georgia Bureau of Investigation, and the Georgia Obstetrical and Gynecological Society to implement this program. DPH began recruiting hospitals for the Georgia Safe to Sleep Hospital Initiative in January 2016. First, DPH and its collaborating partners sent an invitation letter to hospital leadership via the Georgia Hospital Association contact list. The invitation letter included a problem statement and an invitation to participate in an upcoming webinar about the Georgia Safe to Sleep Hospital Initiative. Second, DPH hosted a webinar that introduced the program and provided sleep-related infant death data for Georgia. Third, DPH followed up, via emails and phone calls, with women services hospital personnel identified by DPH colleagues and other partners.

Box 2. DPH Implementation Guide Outline

- Introduction/Statement of Purpose
- AAP Recommendations
- Step by Step Guide to Implementation
- Attachments
 - Crib Audit Tool
 - Pledge of Intent
 - Sample Safe Sleep Policies
 - Sample Training Materials from NICHD
 - Sample Posters
 - Sample Parent Education Materials (DPH Educational Flip Chart; NIH Caregiver Handouts)
 - Sample Parent Acknowledgement Forms
 - Sample Georgia Safe to Sleep Program Audit Form
 - Cribs for Kids National Safe Sleep Hospital Certification Program Criteria
- Reference Articles^{1,16,53}

DPH distributed the implementation guide to hospital personnel and invited them to sign a non-binding “pledge of intent.” The content of the implementation guide is outlined in the box to the right. The pledge included identifying a hospital Safe Sleep Champion as the main point of contact for DPH and an agreement to: (1) develop an infant safe sleep policy aligned with AAP 2011 recommendations,¹ (2) provide annual safe sleep training to all staff caring for infants, (3) implement safe sleep practices according to hospital policy, and (4) monitor staff compliance. In return, DPH provided the hospital with educational support tools, public recognition, and the implementation guide. DPH also provided ongoing support via site visits, group conference calls, and individual emails, phone calls, and site visits.

To reinforce verbal education provided in the hospital and remind parents of recommendations at home, DPH provided the following take home parent educational support tools^{12,13} to participating hospitals: (1) the *Sleep Baby Safe and Sound* board book on safe infant sleep,²⁷ (2) an infant gown with safe sleep messaging, and (3) a travel bassinet. DPH chose travel bassinets due to their durability, portability, ease of use, lightweight design, and meeting safety guidelines.²⁸ Due to limited resources and because death certificate data indicated nearly four times higher risk of sleep-related infant deaths among Medicaid recipients,²⁹ DPH targeted bassinet distribution to Medicaid recipients. DPH received partial reimbursement from Medicaid for gowns and bassinets distributed to Medicaid recipients. In order to track distribution, DPH utilized their birth certificate data management system.

EVALUATION DESIGN

This process evaluation was reviewed and approved by the UGA Institutional Review Board (STUDY00003293) and DPH Institutional Review Board (Project#160503). The purpose of the process evaluation was to evaluate how hospitals had implemented the Georgia Safe to Sleep Hospital Initiative and to evaluate the sustainability of these efforts via four objectives:

- 1) All birth hospitals have a safe infant sleep policy
- 2) All safe infant sleep policies reference the AAP 2011¹ (or 2016¹³) recommendations for safe infant sleep
- 3) All safe infant sleep policies specify the type and/or content of patient education on safe sleep
- 4) All hospitals require regular staff training on safe infant sleep to address changes in recommendations as research on sleep-related infant deaths continues^{1,30}

The UGA team addressed these objectives with two sources of data: (1) hospital interviews conducted by DPH program staff and (2) documents (such as crib audit data, safe infant sleep policies) provided by hospitals. Data collection for evaluation occurred between August 2016 and February 2017. Regular conference calls occurred between the UGA and DPH during this time period as well.

Hospital Interviews

DPH program staff members visited individual hospitals to meet with Georgia Safe to Sleep Champions and other staff between August 2016 and January 2017. The hospital visits provided face-to-face assistance and support for the initiative and helped address any barriers to implementation. In collaboration with DPH program staff, the UGA team developed a semi-structured interview guide, or checklist, for DPH program staff to complete at each hospital visit (Appendix A). To develop the checklist, the UGA team conducted a review of the peer-reviewed research literature regarding efforts to implement safe sleep recommendations in hospital settings to identify common practices and processes, and barriers and facilitators to implementation.^{16,18,20,25,31-48}

The hospital checklist included questions gleaned from the literature review and based on DPH's objectives, including details about who was involved in the initiative, implementation activities, type and timing of parent education, barriers and facilitators to implementation, and motivation for participating. DPH program staff completed the hospital checklist during each hospital visit and entered the data into Qualtrics for synthesis by the UGA team.

Document Review

DPH program staff also invited hospitals to share documents, including crib audits, safe infant sleep policies, and other initiative-related documents. For the purposes of this evaluation, the UGA team reviewed crib audit data to ascertain aggregate results on changes from baseline to post-implementation and conducted content analysis of the safe infant sleep policies using a data extraction table to identify adherence to DPH and AAP recommendations.

FINDINGS

By May 2016, all 78 birthing hospitals in Georgia pledged to participate in the Georgia Safe to Sleep Hospital Initiative. A 79th hospital opened and joined the initiative in September 2016. Between August 2016 and January 2017, DPH program staff conducted semi-structured interviews with staff at all 79 participating hospitals, including follow-up visits with some hospitals that sought additional support. In March 2017, DPH designated 24 hospitals (30.4%) that had completed all requirements as “Georgia Safe to Sleep hospitals.” For the purposes of this report, those hospitals are referred to as “early adopters” – hospitals that accomplished all DPH requirements early in the initiative. The remaining 55 hospitals are referred to as “late adopters” – hospitals that have not yet (as of March 2017) accomplished all DPH requirements of the initiative. Forty-four hospitals (55.7%) provided data on crib audits conducted at their facilities. Thirty-nine hospitals (49.4%) provided copies of

their safe infant sleep policies; some hospitals were prevented by hospital regulations from sharing policies with individuals outside of the hospital system.

HOSPITAL VISITS

The findings from hospital visits are organized into three sections: 1) Pre-implementation, 2) Program implementation, and 3) Post-implementation reflections. The pre-implementation section focuses on what policies and practices hospitals had in place prior to the initiative and hospitals' motivation for participating in the initiative. The program implementation section focuses on the activities by hospitals as they participated in the Georgia Safe to Sleep Hospital Initiative. The post-implementation reflections section focuses on feedback from the hospitals regarding barriers and facilitators of implementation, recommendations for hospitals who are considering a Safe Infant Sleep initiative, and additional feedback to DPH.

Pre-Implementation

Prior Safe Infant Sleep Activities

Prior to the Georgia Safe to Sleep Hospital Initiative, 34.2% of hospitals reported engaging in safe sleep activities, most often reporting using sleep sacks or sharing materials from the NIH *Back to Sleep* public education campaign, which was launched in 1994.⁴⁹ NIH retitled the campaign *Safe to Sleep*® in 2012 to incorporate a focus on the infant sleep environment, as well as sleep position.¹¹

Motivating Factors to Participate

Hospitals cited a number of factors that motivated them to participate in the Georgia Safe to Sleep Hospital Initiative; the most frequently cited motivators are summarized below, with the frequency of mentions in parentheses.

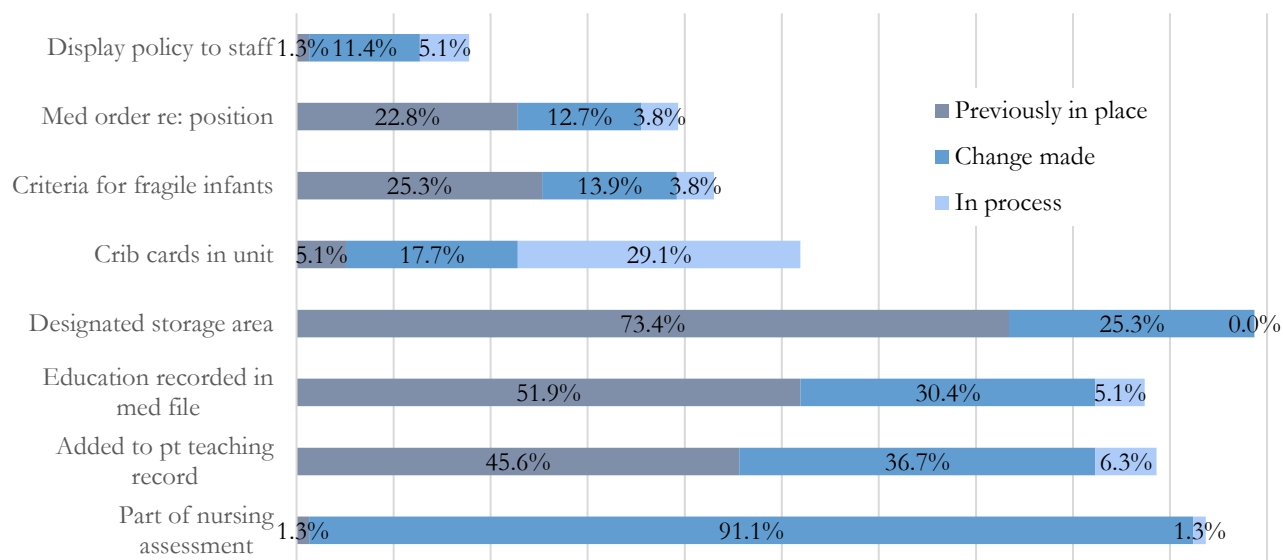
- **Infant safety/prevention** (mentioned 32 times). DPH framing the initiative in terms of “patient safety” with the potential for reducing infant mortality rates motivated hospitals to participate. Hospitals frequently mentioned “safety” and “patient safety” as important. Hospitals mentioned the potential to prevent deaths or save lives, as well as the potential to reduce the rates of infant mortality in the state or locally as important.
- **“Statistics”** (mentioned 21 times). DPH providing data on infant mortality and SIDS rates in Georgia, especially highlighting that “three Georgia infants died per week,” further helped motivate hospitals to participate. Hospitals cited state and local statistics on infant mortality and SIDS, and referenced the unique needs of the local community as motivating factors to participate.
- **DPH’s materials/educational tools** (mentioned 17 times). Hospitals noted the implementation guide made the program easy-to-implement. The free educational support tools (gowns, books, bassinets) were an added value of the program.
- **“Best practices”** (mentioned 15 times). Hospitals highlighted interest in best practices, “being up to date on the newest and best practices.”
- Though less frequently mentioned, **previous or personal experiences with sleep-related infant deaths** was mentioned 8 times as a motivating factor to participate. Examples of these experiences included the sleep-related death of an infant family member or acquaintance of the Safe Sleep Champion, as well as the hospital’s recent experience of a death of one of their patients.

Program Implementation

Changes Implemented by Hospitals

One of the main goals of the Georgia Safe to Sleep Hospital Initiative was to increase the number of hospitals that reported having a formal safe infant sleep policy as part of the hospital's standard operating procedures. Such a policy would specify the procedures that hospital staff should follow regarding safe infant sleep practices and patient education in their hospital. Safe infant sleep policies could include multiple components, such as incorporating assessment of infant sleep position and location when nurses are assessing patients, adding a prompt to provide safe sleep education in the patient teaching record, documenting safe sleep education in the patient's medical record, designating specific storage areas for infant care supplies outside of the crib, attaching crib cards with safe sleep messaging to the infant crib, providing criteria for when medically fragile infants in the neonatal intensive care unit should be moved or switched from therapeutic positioning to supine sleep position, requiring a physician order regarding infant sleep position, and displaying the safe sleep policy to hospital staff. Prior to implementing DPH initiative, 35 hospitals (44.3%) reported having a safe infant sleep policy in place; as of January 2017, 69 hospitals (87.3%) report having a safe infant sleep policy in place or in progress. At the time of the visit by DPH, hospitals reported implementing several changes as part of the initiative. The most commonly cited change (Figure 1) was incorporating safe sleep education into the nursing assessment, followed by adding safe sleep education to the patient teaching record/discharge checklist, recording patient education in the medical record, designating a storage area for infant care items, and displaying crib cards with safe sleep recommendations in the unit.

Figure 1. Changes implemented by hospitals

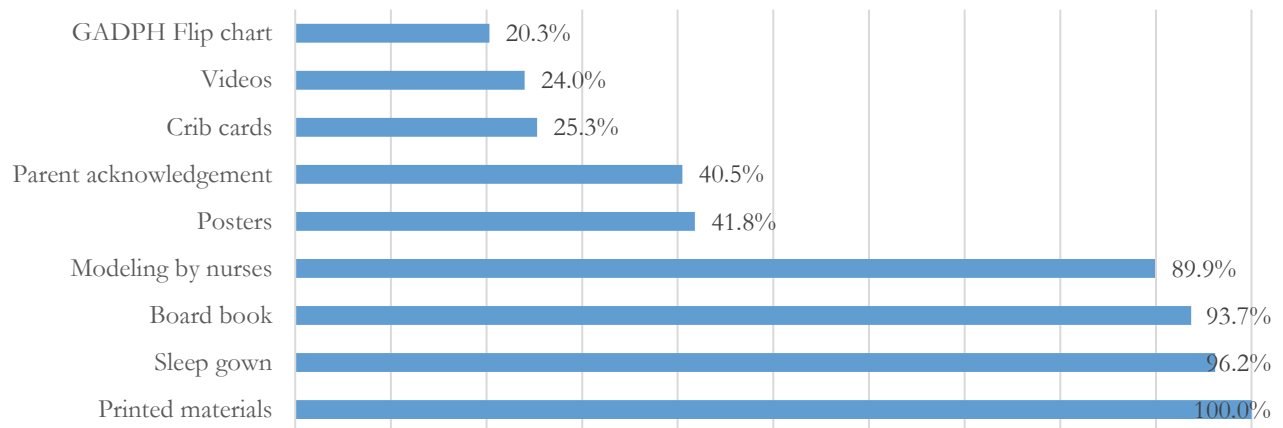


Parent Education

Hospitals reported providing parent education at multiple points in time, including when the infant is found in an unsafe situation (97.5%), at hospital admission (96.2%), at postpartum room orientation or after the infant is born (83.5%), at discharge (62%), and during prenatal/childbirth classes (24.1%). Hospitals also provided multiple types of parent education (Figure 2), primarily printed educational materials (from the NIH, DPH, or hospital-specific materials), the Georgia Safe to Sleep printed sleep gowns, the *Sleep Baby Safe and Sound* board books²⁷, nurses modeling safe infant

sleep, posters displayed in rooms and on the unit, safe sleep acknowledgement forms signed by parents, safe sleep videos, safe sleep crib cards, and DPH safe sleep flipchart (Appendix B).

Figure 2. Types of Georgia Safe to Sleep educational materials provided to parents



Staff Training

As part of the Georgia Safe to Sleep Hospital Initiative, hospitals were asked to provide safe sleep training to all staff caring for infants. Hospitals reported training a variety of staff on safe sleep, including nurses, patient care technicians, physicians, social workers, physical therapists, occupational therapists, technicians, unit coordinators, secretaries, certified nursing assistants, lactation consultants, lab technicians, birth clerks, housekeeping, and volunteers. At the time of visit, over half (n=47, 59.5%) of hospitals reported requiring ongoing staff training, most often requiring it at new hire orientation and annually afterwards.

Staff Involvement

Hospitals engaged a variety of staff to implement the Georgia Safe to Sleep Hospital Initiative. The majority of hospitals reported that nurses (89.9%) and administrators (83.5%) implemented the initiative. Hospitals also reported that clinical educators (40.5%), physicians (40.5%), social workers/case managers (21.5%), and birth clerks (15.1%) were involved in implementing the initiative. In addition, the majority of hospitals (n=56, 70.9%) reported engaging with community partners to implement safe sleep education, including local health departments, community groups and organizations, injury prevention programs, and local health care providers.

Post-Implementation Reflections

Facilitators of Program Implementation

Hospitals described a number of facilitators to program implementation; the most commonly cited facilitators are listed below, with the frequency of mentions in parentheses:

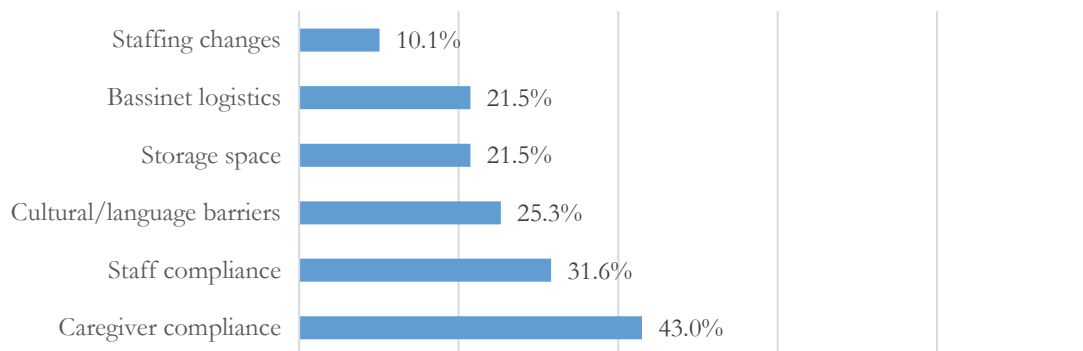
- **DPH** (mentioned 49 times). Specifically, hospitals highlighted the value of data on sleep-related infant deaths; educational support tools such as the gowns, books, and bassinets; an easy-to-implement program; the availability of pre-developed materials; and regular communication via emails and conference calls by DPH staff. Some examples are listed below:
 - “Terri visiting the hospital and staff to present Georgia Safe to Sleep, allowed staff members to hear information from a new voice and really appreciate information.”

- “Gowns and reading the books to baby are an ice breaker into discussion of safe sleep.”
- “Implementation guide made implementation ‘dummy proof.’”
- “Receiving pre-developed materials and education made implementation of program easier due to the fact that they did not have to take the time to create anything.”
- “Online material and flip charts helpful and easily accessible.”
- **Hospital buy-in** (mentioned 28 times). Hospitals reported buy-in from hospital leadership and hospital staff, including nurses, Safe Sleep Champions, program coordinators, as well as teamwork across all staff as facilitators to implementation.
- **Help from other hospitals** (mentioned 8 times). Hospitals reported that help from other hospitals, including consulting with specific hospitals on how they implemented the program or joining the conference calls with DPH and other hospitals to hear how others had addressed issues, was helpful.

Challenges to Program Implementation

58 of the hospitals (73.4%) experienced challenges while implementing the program (Figure 3). These included caregiver compliance regarding bed-sharing; staff compliance regarding program implementation; cultural and language barriers (such as cultural practices of using heavy blankets and need for Spanish materials); storage space for program materials; logistics of bassinet distribution and reporting; and staffing changes.

Figure 3. Challenges to program implementation



To address these challenges, hospitals reported providing continuous reinforcement of safe sleep education to parents and staff; utilizing translators; identifying creative storage solutions; and establishing logistics for distributing/reporting of bassinets. The barriers reported are similar to barriers described in the literature by hospitals attempting to implement similar programs.⁴¹

An additional challenge identified by DPH and UGA included issues with the bassinets and board books. Five hospitals expressed concern regarding fairness of bassinet distribution practices, specifically, that it was not fair that only Medicaid recipients received the bassinets. This concern resulted in one hospital choosing not to distribute bassinets. A second issue arose regarding the board books and some hospitals that had or were pursuing designation as a Baby-Friendlyⁱ hospital

ⁱ The Baby-Friendly Hospital Initiative is a global program launched by the World Health Organization and the United Nations Children’s Fund to encourage and recognize hospitals that offer an optimal level of care for infant feeding and

by Baby-Friendly USA as adapted from the World Health Organization. Site auditors from the Baby-Friendly Hospital Initiative expressed concern that the board book recommends use of pacifiers and has pictures of pacifier use in the book; the Baby-Friendly initiative advises against pacifier usage in the hospital. Some site auditors and staff were concerned that the depiction of pacifiers in the book would cause confusion. Three hospitals identified this issue as a barrier to implementation. DPH attempted to address this issue with the Baby-Friendly Hospital Initiative by offering to affix stickers clarifying the one-month time frame; however, no formal resolution has been achieved at the time of this report. Thus, to avoid the risk of losing their Baby-Friendly designation, three hospitals chose not to distribute the board books. Two of those hospitals worked with hospital-affiliated pediatricians to distribute the board books.

DPH and its collaborating partners worked with Baby-Friendly USA to address this issue. Per a letter to DPH from Baby-Friendly USA dated April 14, 2017, Baby-Friendly USA acknowledged the importance of safe sleep education to reduce risk of sleep-related infant deaths. The letter notes that while the board book is out of compliance with their criteria; they do not recommend or endorse any specific products. The letter also specified that Baby-Friendly USA will not disagree with distribution of the board book if verbal and written education to mothers is provided that meets the following three stipulations:

- 1) Pacifier use in the breastfed infant should be delayed until breastfeeding is well established, usually around 3-4 weeks of life.
- 2) How mothers can know that breastfeeding is well established.
- 3) Breastfeeding is associated with a reduced risk of SIDS, and the protective effect increases with breastfeeding exclusivity.

Sustainability

At time of the visit, half (56.4%) of hospitals had set goals to sustain safe sleep efforts. Most often, these goals included ongoing staff training, compliance with safe sleep policy (for example, through crib audits), educating all parents and increasing parents' adherence to safe sleep practices, expanding the Georgia Safe to Sleep Hospital Initiative to other units in the hospital, and revising safe infant sleep policies (for those hospitals who had not yet done so). A few hospitals identified the goal of participating in national programs such as Cribs for Kids^{®50} or HALO Sleep Sacks^{®51}.

Recommendations to Hospitals

During the structured interviews, hospitals provided advice for other hospitals interested in implementing a Georgia Safe to Sleep program. The most frequently cited recommendations are summarized below, with the frequency of mentions in parentheses:

- Ensure staff buy-in and education prior to implementing the program (mentioned 29 times). Comments included:
 - “Conduct staff education before implementation.”
 - “Discuss the initiative with the staff and validate importance.”
 - “Share initiative at staff meetings, hospital-wide committee meetings, physician meetings, and through written communication (i.e. Hospital-wide/unit-based newsletters and hospital website).”
- Engage a Safe Sleep Champion, use a team-based approach to implement the program, and educate all staff (mentioned 18 times). Comments included:

mother/baby bonding (www.babyfriendlyusa.org/). Currently, 6 Georgia birth hospitals have been designated as Baby-Friendly.

- “Have a Georgia Safe to Sleep Champion who is in the unit every day to help with the implementation and is not in administration.”
- “Compile a Women's Health Team to focus on the education and implementation.”
- “Plan and educate ALL staff in the hospital from housekeeping to dietary. Anyone that comes in contact with family or baby should know how about safe sleeping recommendations.”
- Utilize DPH resources (mentioned 18 times), including reading the implementation guide and reviewing all written resources provided, regularly communicating with DPH staff, and joining the conference calls. Comments included:
 - “Use all of the resources provided to you, ask the [DPH] program coordinator to visit and present on the topic.”
 - “Read the full hospital implementation binder and information from DPH.”
- Complete “pre-work” before implementing the program (mentioned 15 times). In addition to educating staff prior to implementing the program, the hospitals suggested additional work that should be completed before implementation, including assessing the learning needs of staff, collecting baseline data, and developing a system for implementation.
 - “Identify the knowledge gap with survey of staff in order to understand any cultural beliefs involved and target the education from there.”
 - “Do baseline crib audits so that hospital knows where they stand before implementing the program.”
 - “Figure out the best process for implementation before rolling out program.”
- Create a plan for patient education, including timing and methods for sharing information (mentioned 9 times). Comments included:
 - “Start education upon admission.”
 - “Include information/practices into daily teaching routine.”
 - “Provide script for the staff when educating parents.”
 - “Use visual aids to educate.”

Additional Feedback

When asked about any additional feedback to DPH about the program, the majority of comments were very positive, expressing gratitude for the program and the useful resources and educational tools. Hospitals reported the program was well-organized and easy to implement, and the conference calls with DPH were helpful. Comments included:

- “Program is straightforward and easy to want to implement.”
- “This has been a very positive experience and timely initiative.”
- “Through creative strategies, hospitals can help educate families, impact patient safety, and reduce infant morbidity/mortality.”
- “Phone conferences with Terri and other hospitals have been very helpful to bounce ideas around.”
- “Implementation binder was very helpful, followed it throughout implementation.”

A few suggestions for improvement were made, including:

- “Bolster the Georgia Safe to Sleep Hospital Initiative via broader outreach to the community via ads on the radio, engaging daycares, prenatal care providers, and pediatricians.”
- “Provide access to Spanish language handouts, books, and gowns.”

- “Create a flyer for the rooms that clearly and simply state ABCs of Georgia Safe to Sleep in English and Spanish.”
- “Always remind parents that the ‘travel bassinet’ does not mean that it can travel in the car with baby in it, fearful that some will misinterpret the word ‘travel’ and have an accident.”
- “Would like to know when will the data be measured and shared to determine if program has helped with SIDS rates; want to know the rates for the specific region.”
- “Looking for hospital specific SIDS numbers for quality improvement.”

Early Adopters versus Late Adopters

When comparing early and late adopters, a larger proportion of late adopting hospitals reported issues with the logistics of bassinet distribution and reporting (49.1% of late adopters versus 20.8% of early adopters). Additionally, a larger proportion of early adopting hospitals (41.7%) reported that infant safety/prevention was a motivating factor compared to late adopting hospitals (29.1%). There were no major differences between early versus late adopters when examining whether or not hospitals had previously implemented safe sleep policies, or when examining the changes that hospitals implemented. No other major differences between early versus late adopters were noted regarding motivating factors to participate or facilitators to implementing the initiative.

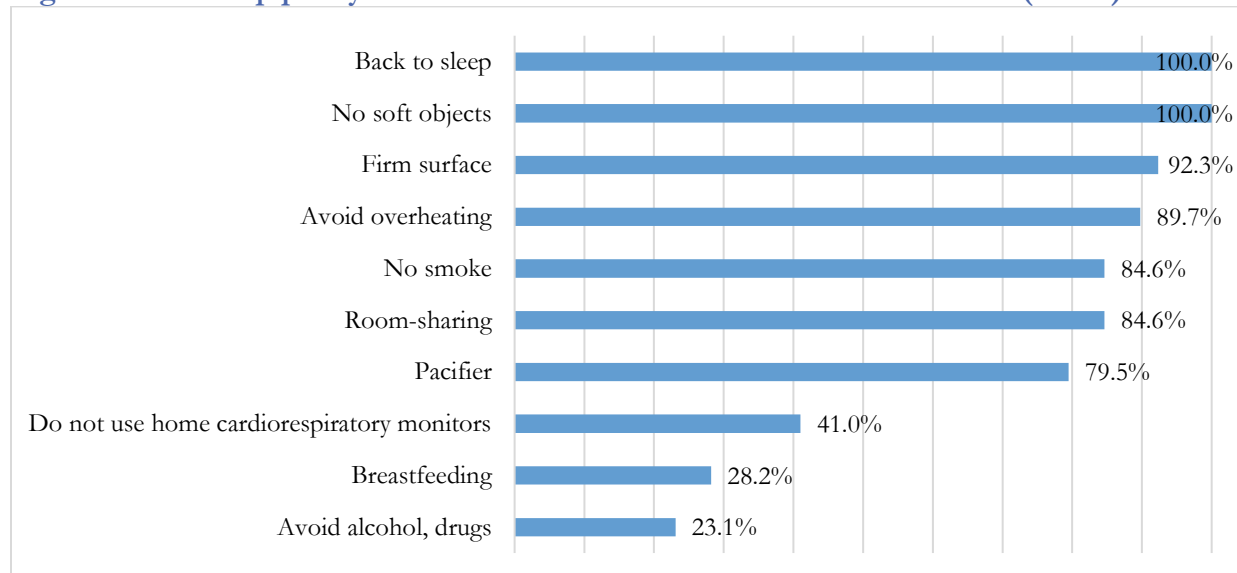
DOCUMENT REVIEW

The findings from the document review are organized into two sections: a review of the safe infant sleep policies and a review of the crib audit data.

Safe Infant Sleep Policies

Thirty-nine hospitals (49.3%) submitted copies of their safe infant sleep policies to DPH. The majority of the reviewed policies explicitly listed most of the key aspects of the AAP Level A recommendations (Figure 4). When reviewing the policies for adherence to DPH’s goals, 49.3% of hospitals specifically referenced the AAP 2011¹ (or 2016²) recommendations. Almost all policies (92.3%) explicitly stated the type and/or content of parent education, as well as timing of education, regarding safe infant sleep.

Figure 4. Safe sleep policy inclusion of AAP 2011 level A recommendations (N=39)



A small percentage (20.3%) of hospitals referenced AAP 2005 recommendations;³ several of the policies appeared to have copied verbatim the text from a sample policy provided in DPH implementation manual, which included a reference to the 2005 recommendations. This suggests that for future initiative efforts, a template policy be provided that incorporates all key elements recommended by the public health agency (e.g. ongoing staff training requirements, specific types and content of parent education to provide, and reference to the most recent AAP published recommendations). The UGA team developed a suggested safe infant sleep policy template (Appendix C), which was provided to DPH.

Only 28.2% of safe infant sleep policies included the recommendation for breastfeeding as a strategy to reduce the risk of sleep-related infant deaths. This is a concern, especially considering state (Georgia 5-STARⁱⁱ) and national (Baby-Friendly Hospital Initiativeⁱⁱⁱ) efforts to promote breastfeeding. The AAP 2011 and 2016 recommendations note that breastfeeding is associated with a reduced risk of SIDS.^{1,2} The omission of breastfeeding in the policies may be reflective of the AAP 2005 recommendations,³ which noted “although breastfeeding is beneficial and should be promoted for many reasons, the task force believes that the evidence is insufficient to recommend breastfeeding as a strategy to reduce SIDS” (p. 1250). These discrepancies reinforce the importance of ensuring that hospital safe infant sleep policies include the most recent evidence and suggest that hospital teams should search for the most up-to-date recommendations when reviewing safe infant sleep policies. To encourage these efforts, a statement that “the AAP reviews the evidence and the policy statement on recommendations for a safe infant sleeping environment every 5 years, with the most recent policy revision published in 2016” was included in the safe infant sleep policy template (Appendix C).

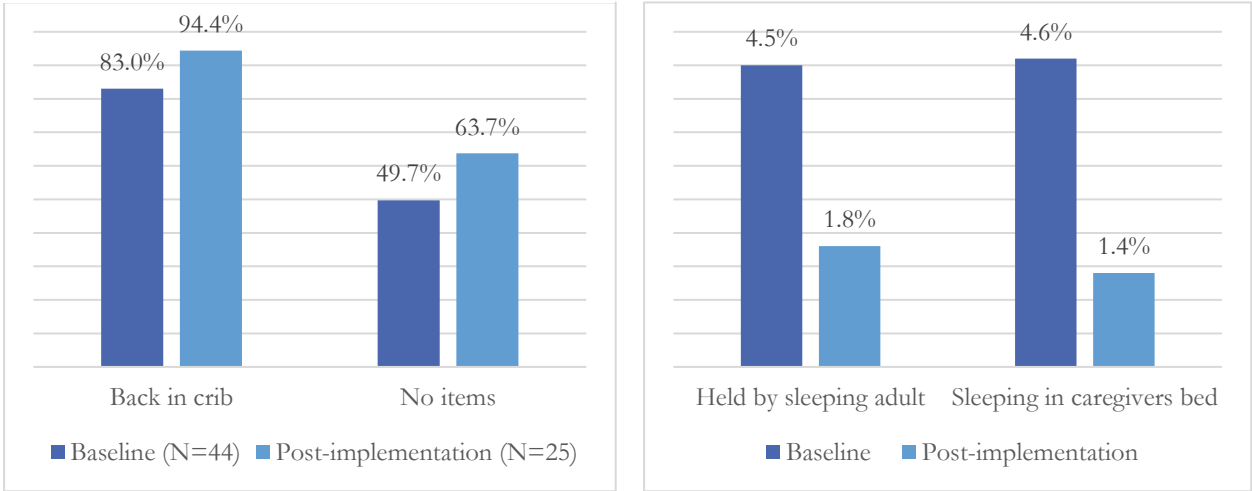
Crib Audit Reviews

Crib audits are a tool used by hospitals to ascertain compliance with safe sleep practices; they involve a staff person directly observing a set number of infants’ sleep environment and noting compliance with recommendations (such as position, sleep location, items in the crib). An example crib audit tool was provided in the DPH Implementation Guide. Forty-four hospitals (55.7%) provided baseline crib audit data and 25 hospitals (31.6%) provided post-implementation crib audit data. The figures below compare the aggregate baseline and post-implementation results, which demonstrate improvements in safe infant sleep practices at hospitals. Figure 5 illustrates that the average percent of infants observed on their backs increased, as did the percent of cribs observed with no items in the crib (except pacifiers or bulb syringes). Figure 6 illustrates that the average percent of infants observed being held by a sleeping adult or sleeping in a caregiver’s bed decreased.

ⁱⁱ Georgia 5-STAR is an initiative led by DPH to recognize hospitals that have taken steps to promote, protect, and support breastfeeding in their hospital (dph.georgia.gov/georgia-5-star). Currently, 20 Georgia birth hospitals have received recognition for their efforts.

ⁱⁱⁱ The Baby-Friendly Hospital Initiative is a global program launched by the World Health Organization and the United Nations Children’s Fund to encourage and recognize hospitals that offer an optimal level of care for infant feeding and mother/baby bonding (www.babyfriendlyusa.org/). Currently, six Georgia birth hospitals have been designated as Baby-Friendly.

Figure 5. Average % of back sleep position & Figure 6. Average % of unsafe sleep locations no items in crib



LIMITATIONS OF THE PROCESS EVALUATION

Because DPH promoted the Georgia Safe to Sleep Hospital Initiative to hospitals as a voluntary program, hospitals controlled the timing of implementation activities. While this approach was valuable and appreciated by hospitals, it created a lag time in implementation activities. At the time of this report (March 2017), 24 hospitals (30.4%) have completed all requirements of the Georgia Safe to Sleep Hospital Initiative, with the majority of hospitals still implementing various aspects of the initiative. This lag time is reflected in progress towards the objectives summarized below. DPH efforts are continuing through a second year, and it is estimated that progress towards these objectives will continue with time. A second limitation of this process evaluation is the limited number of documents available for review; of 79 participating hospitals, 39 (49.4%) provided copies of safe infant sleep policies, 44 (55.7%) provided baseline crib audit data, and 25 (31.6%) provided post-implementation crib audit data, thus results may not be generalizable to all hospitals participating in the initiative. A third limitation of this process evaluation is that implementation activities varied by hospital. DPH asked all hospitals to incorporate AAP 2011 Level A recommendations,¹ however, hospitals could choose how to implement patient education activities; thus safe sleep education materials, etc., were not standardized across all hospitals. Further, not all hospitals distributed all educational support tools. For example, one hospital decided not to distribute bassinets and three hospitals decided not to distribute board books.

SUMMARY OF FINDINGS

In relation to the sustainability objectives identified by DPH, the following key process evaluation findings were observed:

Objective 1: All birth hospitals have a safe infant sleep policy. Prior to implementing DPH initiative, 44.3% of hospitals reported having a safe infant sleep policy in place; as of January 2017, 87.3% of hospitals report having a safe infant sleep policy in place or in progress.

Objective 2: All policies reference the AAP 2011 recommendations for safe infant sleep.¹ Of the 39 safe infant sleep policies reviewed, 48.7% of policies specifically referenced the AAP 2011 (or 2016) recommendations,^{1,2} with another 20.5% referencing AAP 2005 recommendations.³

Objective 3: All policies specify the type and/or content of patient education on safe sleep. Of the 39 safe infant sleep policies reviewed, 92.3% specified the type and/or content of patient education on safe sleep.

Objective 4: All hospitals require regular staff training on safe infant sleep to address changes in recommendations as research on sleep-related infant deaths continues.^{1,2} At the time of the visit, 59.5% of hospitals required ongoing staff training. Note, however, that these visits often occurred mid-implementation for hospitals. At the time of this report, DPH program staff reported that 82.3% of hospitals completed staff training and 74.7% reported requiring ongoing staff training.

While not all objectives of the program have yet to be fully met by all participating hospitals, this is due in part to the voluntary nature of the program and the time lag in implementation across the state. It is estimated that progress towards these objectives will continue with time.

Based on the results of this process evaluation, DPH has achieved its broad goals of: (1) providing accurate safe infant sleep information to hospital personnel, (2) supporting hospitals in implementing and modeling safe sleep, and (3) providing guidance on addressing safe sleep concerns. All birth hospitals in the state have received accurate safe infant sleep information via DPH implementation guide and all agreed to participate in this initiative. The majority of hospitals have updated their practices and policies to model safe sleep practices, and DPH continues to provide guidance via emails, phone calls, and visits to hospitals in order to address concerns. Feedback from hospitals was overwhelmingly positive regarding the usefulness of the materials and support provided by DPH. Moreover, the UGA team and DPH are co-authoring a manuscript for submission to a peer-reviewed research journal to outline these implementation activities. This manuscript will serve as a resource for other state and local health departments interested in launching a similar Safe to Sleep Hospital Initiative.

REFERENCES

1. Moon RY, American Academy of Pediatrics Taskforce on Sudden Infant Death Syndrome. SIDS and other sleep-related infant deaths: Expansion of recommendations for a safe infant sleeping environment. *Pediatrics*. 2011;128(5):1030-1039.
2. Moon RY, American Academy of Pediatrics Taskforce on Sudden Infant Death Syndrome. SIDS and other sleep-related infant deaths: Updated 2016 recommendations for a safe infant sleeping environment. *Pediatrics*. 2016;138(5):e20162938.
3. American Academy of Pediatrics. The changing concept of sudden infant death syndrome (SIDS): Diagnostic coding shifts, controversies regarding the sleeping environment, and new variables to consider in reducing risk. *Pediatrics*. 2005;116(5):1245-1255.
4. Carlin RF, Moon RY. Risk factors, protective factors, and current recommendations to reduce sudden infant death syndrome: A review. *JAMA Pediatr*. 2017;171(2):175-180.
5. American Academy of Pediatrics. Positioning and SIDS. *Pediatrics*. 1992;39:1120-1126.
6. American Academy of Pediatrics. Changing concepts of sudden infant death syndrome: Implications for infant sleeping environment and sleep position. *Pediatrics*. 2000;105:650-656.
7. Gaydos LM, Blake SC, Gazmararian JA, Woodruff W, Thompson WW, Dalmida SG. Revisiting safe sleep recommendations for African-American infants: Why current counseling is insufficient. *Matern Child Health J*. 2015;19(3):496-503.
8. Salm Ward TC, Robb SW, Kanu F. Prevalence and characteristics of bed-sharing among black and white infants in Georgia, 2004-2011. *Matern Child Health J*. 2016;20(2):347-362.
9. Georgia Department of Public Health. Safe sleep fact sheet, 2004-2013. . 2016.
10. Georgia Child Fatality Review Panel. Georgia child fatality review panel 2014 annual report. . 2016.
11. National Institute of Child Health and Human Development. Safe to sleep® public education campaign. <http://www.nichd.nih.gov/sts/>. Updated 2015. Accessed 11, 2015.
12. Salm Ward TC, Balfour G. Infant safe sleep interventions, 1990-2015: A review. *J Community Health*. 2016;41(1):180-196.
13. Moon RY, Hauck FR, Colson ER. Safe infant sleep interventions: What is the evidence for successful behavior change? *Curr Pediatr Rev*. 2016;12:67-75.
14. Salm Ward TC, Doering JJ. Application of a socio-ecological model to mother-infant bed-sharing. *Health Educ Behav*. 2014;41(6):577-589.
15. Georgetown University. National action partnership to promote safe sleep. <https://www.nappss.org/>. Updated 2016.
16. Gelfer P, Cameron R, Masters K, Kennedy KA. Integrating "back to sleep" recommendations into neonatal ICU practice. *Pediatrics*. 2013;131(4):e1264-70.
17. Vernacchio L, Corwin MJ, Lesko SM, et al. Sleep position of low birth weight infants. *Pediatrics*. 2003;111(3):633-640.
18. Colson ER, Joslin SC. Changing nursery practice gets inner-city infants in the supine position for sleep. *Arch Pediatr Adolesc Med*. 2002;156(7):717-720.
19. Stastny PF, Ichinose TY, Thayer SD, Olson RJ, Keens TG. Infant sleep positioning by nursery staff and mothers in newborn hospital nurseries. *Nurs Res*. 2004;53:122-129.
20. Mason B, Ahlers-Schmidt CR, Schunn C. Improving safe sleep environments for well newborns in the hospital setting. *Clin Pediatr*. 2013;52(10):969-975.
21. Georgia Department of Public Health. Safe to sleep. <https://dph.georgia.gov/safetosleep>. Updated 2015.
22. Ohio Hospital Association. Starting a hospital-based infant safe sleep program: A step by step guide. <http://ohiohospitals.org/OHA/media/Images/Patient> Safety and

- Quality/Documents/SafeSleep/1-instructions-for-starting-a-hospital-based-safe-sleep-program.pdf. Updated 2016.
23. Tennessee Department of Health. Safe sleep for infants: The role of hospitals. https://www.tn.gov/assets/entities/health/attachments/Hospital_TrainingSlides.pdf. Updated 2013.
 24. Barnes-Josiah DL, Eurek P, Huffman S, Heusinkvelt J, Severe-Oforah J, Schwalberg R. Effect of “This side up” T-shirts on infant sleep position. *Matern Child Health J*. 2007;11(1):45-48.
 25. Goodstein MH, Bell T, Krugman SD. Improving infant sleep safety through a comprehensive hospital-based program. *Clin Pediatr*. 2015;54(3):212-21.
 26. Georgia Department of Public Health, ed. *Implementing a hospital-based safe to sleep program: A policy and education development guide*. Atlanta, GA: Georgia Department of Public Health; 2016.
 27. Hutton J. *Sleep baby safe and snug*. Cincinnati, OH: Blue Manatee Press; 2013.
 28. ASTM International. ASTM F2194-16e1, Standard consumer safety specification for bassinets and cradles. <https://www.astm.org/Standards/F2194.htm>. 2016.
 29. Georgia Department of Public Health. Association between insurance payer and infant sleep-related deaths. 2016.
 30. Moon RY, American Academy of Pediatrics Task Force on Sudden Infant Death Syndrome. SIDS and other sleep-related infant deaths: Evidence base for 2016 updated recommendations for a safe infant sleeping environment. *Pediatrics*. 2016;138(5):e20162940.
 31. Aris C, Stevens TP, Lemura C, et al. NICU nurses’ knowledge and discharge teaching related to infant sleep position and risk of SIDS. *Adv Neonatal Care*. 2006;6(5):281-294.
 32. Barsman SG, Dowling DA, Damato EG, Czeck P. Neonatal nurses' beliefs, knowledge, and practices in relation to sudden infant death syndrome risk-reduction recommendations. *Adv Neonatal Care*. 2015;15(3):209-219.
 33. Bartlow KL, Cartwright SB, Shefferly EK. Nurses' knowledge and adherence to sudden infant death syndrome prevention guidelines. *Pediatr Nursing*. 2016;42(1):7-13.
 34. Rowe AD, Sisterhen LL, Mallard E, et al. Integrating safe sleep practices into a pediatric hospital: Outcomes of a quality improvement project. *J Pediatr Nursing*. 2016;31(2):e141-e147.
 35. Thompson DG. Safe sleep practices for hospitalized infants. *Pediatr Nurs*. 2005;31(5):400-403, 409.
 36. McMullen SL, Fioravanti ID, Brown K, Carey MG. Safe sleep for hospitalized infants. *Am J Matern Child Nurs*. 2016;41(1):43-50.
 37. Shaefer SJ, Herman SE, Frank SJ, Adkins M, Terhaar M. Translating infant safe sleep evidence into nursing practice. *J Obstet Gynecol Neonatal Nurs*. 2010;39(6):618-626.
 38. McMullen SL, Lipke B, LeMura C. Sudden infant death syndrome prevention: A model program for NICUs. *Neonatal Network*. 2009;28(1):7-12.
 39. Srivasta B, Eden AN, Mir MA. Infant sleep position and SIDS: A hospital-based interventional study. *J Urban Health*. 1999;76(3):314-321.
 40. Voos KC, Terreros A, Larimore P, Leick-Rude MK, Park N. Implementing safe sleep practices in a neonatal intensive care unit. *J Matern Fetal Neonatal Med*. 2015;28(14):1637-1640.
 41. Kuhlmann S, Ahlers-Schmidt CR, Lukasiewicz T, Truong TM. Interventions to improve safe sleep among hospitalized infants at eight children's hospitals. *Hosp Pediatr*. 2016;6(2):88-94.
 42. Hwang SS, O'Sullivan A, Fitzgerald E, Melvin P, Gorman T, Fiascone JM. Implementation of safe sleep practices in the neonatal intensive care unit. *Journal of Perinatology*. 2015;35(10):862-866.
 43. Price SK, Gardner P, Hillman L, Schenk K, Warren C. Changing hospital newborn nursery practice: Results from a statewide “Back to sleep” nurses training program. *Matern Child Health J*. 2008;12(3):363-371.

44. Young J, O'Rourke P. Improving attitudes and practices relating to sudden infant death syndrome and the reduce the risk messages: The effectiveness of an educational intervention in a group of nurses and midwives. *Neonatal, Paediatric & Child Health Nursing*. 2003;6(2):4-14.
45. Young J, Higgins N, Raven L, Watson M. Supporting nurses and midwives to promote a safe infant sleeping eLearning program. *Aust Nurs J*. 2013;21(2):41.
46. Canter J, Rao V, Patrick PA, Alpan G, Altman RL. The impact of a hospital-based educational video on maternal perceptions and planned practices of infant safe sleep. *J Spec Pediatr Nurs*. 2015;20(3):187-192.
47. Issler RM, Marostica PJ, Giugliani ER. Infant sleep position: A randomized clinical trial of an educational intervention in the maternity ward in Porto Alegre, Brazil. *Birth*. 2009;36(2):115-21.
48. Goetter MC, Flanders Stepan MB. First-time mothers' selection of infant supine sleep positioning. *J Perinat Educ*. 2005;14(4):16-23.
49. National Institute of Child Health and Human Development. *Back to Sleep education campaign*. <http://www.nichd.nih.gov/sids/>. Updated 1994. Accessed 04/02, 2013.
50. Cribs for Kids. Cribs for kids® hospital certification. <http://www.cribsforkids.org/hospitalinitiative/>. Updated 2017.
51. HALO. HALO® in-hospital sleep sack® program. <http://www.halosleep.com/in-hospital-sleepsack-program>. Updated 2017.
52. National Institute of Child Health and Human Development. Sudden infant death syndrome (SIDS) and other sleep-related causes of infant death: Questions and answers for healthcare providers. 2014;14-7207.
53. Moon RY, American Academy of Pediatrics. SIDS and other sleep-related infant deaths: Expansion of recommendations for a safe infant sleeping environment - technical report. *Pediatrics*. 2011;128:e1341-e1367.

APPENDIX A: HOSPITAL CHECKLIST

Georgia Safe to Sleep Hospital Initiative Hospital Checklist

Name of Hospital: _____

Date of Visit: _____ Conducted by: _____

Date hospital signed the Pledge of Intent: _____

Date hospital began implementing initiative: _____

Pre-Intervention/Baseline

Did the hospital complete a short baseline survey?^{26,31-33}

___No ___Yes

If yes, are they willing to share the results?

___No ___Yes

Results received?

___No ___Yes

Did the hospital complete baseline crib audits?^{26,33}

___No ___Yes

If yes, are they willing to share the results?

___No ___Yes

Results received?

___No ___Yes

Prior to this initiative, did the hospital have a safe sleep policy for each of their units?

Unit	No	Yes	N/A
Mother-baby/postpartum unit			
NICU			
Pediatrics			
Other, Specify: _____			

If yes, can we get a copy of the old policy(ies)?

___No ___Yes

Prior to this Georgia Safe to Sleep Hospital Initiative with the Georgia Department of Public Health, did the hospital engage in any other activities to implement safe sleep practices/policies? (i.e., Cribs for Kids, National Safe to Sleep Campaign, etc.)

___No ___Yes

If yes, what activities/changes did they make? _____

Intervention/Implementation

Did the hospital report baseline survey results to Perinatal Leadership, Hospital Administration, Well Baby Nursery Medical Director, Lactation Support, or other participants?²⁶

___No ___Yes

If yes, describe below:

Who: _____

When: _____

How: _____

Can we get a copy of what they presented? ___No ___Yes

Who from the hospital was involved in this intervention/implementation? (list title/roles)^{26,34,35}

	Check if involved	Title/role
Administration ³⁴		

Clinical Educator		
Child life ^{34,35}		
Interpreter services ³⁴		
Nurses ^{34,35}		
Physicians ^{34,35}		
Social work/Case Management ^{34,35}		
Other ³⁴		

Which areas/units were targeted? (check all that apply)

Postpartum/mother-baby unit	
NICU	
Pediatrics	
Other, specify: _____	

Did the hospital set goals and/or objectives for the future?²⁶

No Yes

If yes, what were they? (also note if they described any formal change process/method such as Plan Do Study Act cycle,^{20,36} Quality Improvement process^{16,34,37})

Did the hospital engage with any other community/local partners, such as local Boards of Health, Safe Kids Coalitions, Cribs for Kids programs, Child Death Review teams, etc.?²⁶

No Yes

If yes, who? _____

What activities/interventions did the hospital engage in? (described below)

Safe sleep policy revision^{16,20,34-41}

No Yes

If yes, can we get a copy of each unit's policies?

No Yes

Changes in the unit(s) (check all that apply, note any activities that were previously in place in the hospitals)

Previously in place	Yes	In process	
			Develop criteria for when medically-fragile infants can transition to safe sleep practices ^{16,38,40,42}
			Display hospital policy posters/baseline data displayed for hospital staff? ^{20,36,42}
			Use of crib cards in the unit ^{16,36,38,42}
			Sleep sacks used in the unit ^{34,36,41}
			Documentation of education recorded in medical record ^{34,36}
			Incorporating assessment of sleep environment as part of the nursing care assessment ^{20,37,42}
			Added to patient teaching record/discharge checklist ^{38,40}
			Medical order re: safe sleep position versus NICU therapeutic positioning ^{35,36,40,42}
			Designated/labelled infant care supply storage in room (so as not to be placed in crib) ⁴¹ i.e. syringe bulb

		Other, specify:
--	--	-----------------

Was staff training conducted?

___ No ___ Yes

If yes, approximately how many staff have been trained so far? _____

Who was trained? (check all that apply)	
Nurses – NICU ^{34,36}	
Nurses – obstetric ^{34,36}	
Nurses – other	
Physicians ³⁴	
Resident physicians in training, interns ^{35,36}	
Patient care technicians ^{34,36}	
Child life therapists ^{36,41}	
Social workers ³⁶	
Volunteer services ³⁴	
Other, specify: ^{35,36,41} _____	
Other, specify: _____	

How was staff training conducted? (check all that apply)

At new staff orientation ³⁸	
Training session or in-service education ^{16,34,35,37-40,42,43}	
Staff meetings ³⁵	
Policy posters ^{20,35}	
Email education/notification/monthly newsletter ^{20,35}	
Online/computerized teaching tool ^{34,36,38,43,45} (if yes, which one)	
NICHD continuing education program ^{16,26,36,42}	
Other, specify: _____	
Train-the-trainer model ⁴³	
Reminder emails ³⁶	
As part of daily rounds ³⁶	
Safe infant sleep champions in each unit/floor ³⁶	
Written provider education materials (check all that apply)	
NICHD “Infant sleep position & SIDS: Questions & Answers for Health Care Providers” ⁵²	
Reference articles ³⁶	
Safe sleep declaration by staff ^{20,36,41}	
Pamphlet of summary of scientific literature ⁴⁴	
Other training method, specify: _____	

Are there requirements for ongoing staff training?²⁶

___ No ___ Yes

If yes, check all that apply:

Monitoring staff compliance with crib audits ^{26,37,40}	
Yearly nursing competencies ^{16,25,38,40}	
Other, specify: _____	
Other, specify: _____	

How often are these conducted? _____

When does parent education occur? (check all that apply)

At discharge ^{26,38,40}	
----------------------------------	--

At postpartum room orientation ²⁰	
When found in unsafe situation ^{20,38}	
At another time (specify):	

What kind of parent education is provided? (check all that apply)

Videos or DVDs ^{16,20,25,34,36,39-41,46}	
NICHHD “Safe Sleep for Your Baby” ³⁶	
Other, specify: _____	
Printed educational materials (check all that apply)	
From NICHHD ^{36,41}	
From DPH ²⁶	
From Other source (please specify): _____	
Pamphlets/brochures ³⁹	
Crib cards ^{16,36,38}	
Written discharge instructions ^{16,38}	
Safe sleep poem ³⁹	
Safe sleep acknowledgement/attestation form signed by parents ^{25,35,36}	
Translated documents ³⁵	
Visual displays (check all that apply)	
In-room posters ^{20,35,39}	
Posters in the unit ³⁶	
Demonstration ⁴⁷	
Modeling of safe sleep practices by nurses ^{16,18,20,25,37-39,43,44,48}	
DPH safe sleep flipchart ²⁶	
Take-home items (check all that apply)	
“This side up” sleep gown (from DPH) ²⁶	
Board book on safe sleep (from DPH) ²⁶	
Wearable blankets/sleep sacks ^{36,38}	
Other, specify: _____	
Follow-up post-discharge phone call to parents ¹⁶	
Other parent education, please specify: _____	

Did the hospital apply for Cribs for Kids® National Safe Sleep Hospital Certification?²⁶

___No ___Yes

If yes, did they receive it? ___No ___Yes

What level? ___Bronze ___Silver ___Gold

Did the hospital conduct any community and/or media outreach?²⁶

___No ___Yes

If yes, please provide details and/or copies of press releases, etc.: _____

Has the hospital encountered any barriers/challenges to implementation?

___No ___Yes

If yes, what were they (check all that apply)?

Cultural and language barriers ⁴¹	
Staff buy-in/compliance ⁴¹	
Lack of time to conduct teaching ⁴¹	
Storage space ⁴¹	
Caregiver compliance/bed-sharing/co-bedding ⁴¹	
Staff lack of knowledge on swaddling when sleep sacks not available ⁴¹	

Technology limitations re: showing videos ⁴¹	
Physician resistance – if yes, specify: _____	
Other, specify ^{36,41} : _____	

If yes, how have they addressed these barriers?

Are there any other resources/information that the hospital needs?

No Yes

If yes, what? _____

Is there a particular area that was the most challenging in which you could have used more resources to assist with? (i.e. patient education, staff education, policy work)

No Yes

If yes, what? _____

What facilitators has the hospital encountered? What has helped them with this initiative?

What was the motivating factor that made your hospital want to participate in the initiative?

Post-Intervention

Has the hospital completed a post-intervention program audit?

No Yes

If yes, are they willing to share the results?

No Yes

Results received?

No Yes

Has the hospital completed post-intervention crib audits or other staff compliance checks?^{26,37,40}

No Yes

If yes, are they willing to share the results?

No Yes

Results received?

No Yes

Has the hospital measured change in any other way?

No Yes

If yes, how, and what were the results? _____

What advice would the hospital give to other hospitals or states that are interested in implementing a safe to sleep initiative? _____

Any other comments?

Any feedback for DPH about this initiative?

References

See references of main document

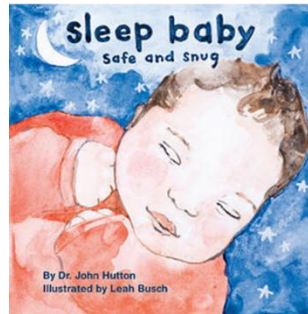
APPENDIX B: EXAMPLES OF PARENT EDUCATION

Educational Support Tools Provided by DPH

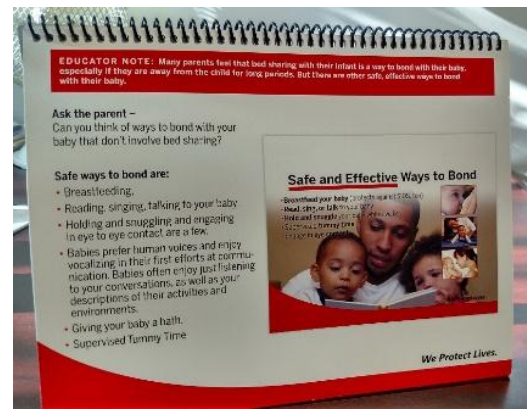
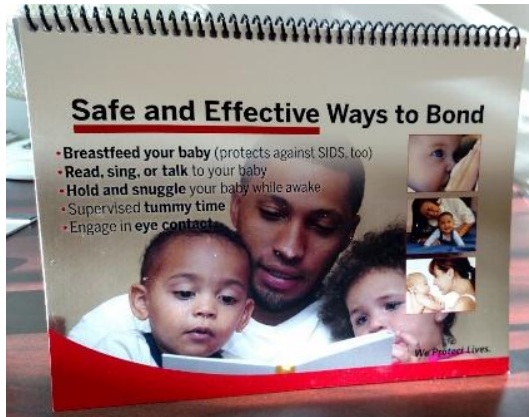
Travel Bassinet; “This Side Up” Sleep Gown



Board Book



Sample Pages from DPH Flip Chart



Printed Materials

NICHD Safe to Sleep® Campaign Materials



Parent Acknowledgement Forms

Infant Safe Sleep Non-Compliance Release Form

This is to certify that I _____, the mother/father/guardian of minor child _____ has been educated on infant safe sleep practices including specific SIDS (Sudden Infant Death Syndrome) risk reduction strategies, as set by the AAP (American Academy of Pediatrics). I fully understand that it is never safe for an adult or child to sleep with an infant (less than 1 year of age) because this increases the risk of sudden infant death. I acknowledge that I have been informed of the risks of unsafe sleep practices including possible death and hereby release the attending physician and the health system from all responsibility from any ill effects that may occur as a result of my decision not to comply with the safe sleep recommendations.

Signature of authorized individual Date

Witness Signature Date

INFANT SAFE SLEEP COMPLIANCE FORM

This is to certify that I _____, the mother/father/guardian of minor child, _____ has been educated on infant safe sleep practices, including specific SIDS(Sudden Infant Death Syndrome) risk reduction strategies, as set by the American Academy of Pediatrics. I fully understand that it is never safe for an adult or child to sleep with an infant(less than 1 year of age), for an infant to sleep on their abdomen, or to have pillows, loose bedding or stuffed animals in crib/bassinet with infant.

Signature of authorized individual

Relationship of authorized individual

Witness

Images courtesy of Cartersville Medical Center and Dodge County Hospital

Crib Cards


I Sleep Safest . . .
Safe Sleep greatly reduces the risk of SIDS and other sleep accidents.
For more information, visit www.nichd.nih.com

A ALONE: Do not sleep with your baby!



B On my **BACK:** Tummy and side positions are not safe!

C In a safe **CRIB:** With no fluffy or loose items.

KEEP YOUR BABY SAFE



When you put me down to rest
Know that on my Back is best
ALONE in my crib is where I should be,
No extra blankets, toys, pillows with me.
If these tips in mind you keep
Then I will have the safest sleep!

Images courtesy of Dorminy Medical Center and Piedmont Newnan

Room Poster

Practice Safe Sleep!
Keep Babies Safe!
Reduce SIDS and Falls:
Put Babies to Sleep on Back - No Bed-sharing



Where you place off baby rolls off!
Avoid re-assembly of baby or car!

WELLSTAR

Image courtesy of Wellstar Kennestone

Hospital Safe Sleep Displays



Image courtesy of Piedmont Atlanta



Image courtesy of Northside NICU

Community Outreach



Image courtesy of Coffee Regional

APPENDIX C: TEMPLATE SAFE SLEEP POLICY DEVELOPED BY UGA TEAM

	Women's Health	Page: 29 of 4
	TITLE:	Effective Date:
	SAFE SLEEP FOR NEWBORNS	Previous Versions Dated:

I. SCOPE:

Safe Sleep for Newborns

II. PURPOSE:

- 1) To provide a uniform hospital policy for healthcare providers in the newborn and NICU nurseries and pediatric settings that complies with the American Academy of Pediatrics' most recent recommendations for a safe infant sleeping environment.
- 2) To ensure safe sleep practices are modeled by hospital personnel involved in the care of newborns and infants.
- 3) Establish appropriate and consistent parental education on recommendations for a safe infant sleeping environment.
- 4) Establish initial competency training/testing on employment and annually.

III. POLICY:

Approximately 3,500 infants die annually in the United States from sleep-related infant deaths, including sudden infant death syndrome (SIDS), accidental suffocation and strangulation in bed, and ill-defined deaths. After an initial decrease in the 1990s, the overall death rate attributable to sleep-related infant deaths has not declined in more recent years. Many of the modifiable and nonmodifiable risk factors for SIDS and other sleep-related infant deaths are strikingly similar. The AAP has expanded its recommendations to include a safe sleep environment that can reduce the risk of all sleep-related infant deaths, including SIDS. Sleep-related infant deaths are the leading cause of death between one month and one year of age. Research has shown that sleep-related deaths are not caused by vomiting, choking, or immunizations. The AAP reviews the evidence and the policy statement on recommendations for a safe infant sleeping environment every 5 years, with the most recent policy revision published in 2016.

All healthcare providers interacting with infants will receive training on safe sleep recommendations at orientation and annually.

IV. PROCEDURE:

Safe Sleep Key Points for Parents:

- 1) *Always place your baby on his or her back to sleep, for naps and at night.*

Teaching Points:

- *The flat supine sleeping position does not increase the risk of choking and aspiration in the newborn, even those with gastroesophageal reflux, because infants have airway anatomy and mechanisms that protect against aspiration.*
- *Use visual aids to show parents that the supine position does not increase the risk of choking and aspiration.*

- Have parents communicate this “back to sleep” message to everyone who cares for their baby.

2) Place your baby on a firm sleep surface, such as on a safety-approved crib mattress, covered by a fitted sheet. Never place your baby to sleep on pillows, quilts, sheepskins, or other soft surfaces.

Teaching Points:

- Mattresses should be firm (maintain their shape and not indent or conform to the shape of the infant’s head when infant is placed on the surface). There should be no gaps between the mattress and the side of the crib, bassinet, portable crib, or play yard.
- If an additional waterproof pad is used, it should be thin and tightly fitted.
- Sitting devices, such as car safety seats, strollers, swings, baby carriers, and baby slings are not recommended for routine sleep in the hospital or at home.

3) Breastfeeding is recommended.

Teaching Notes:

- Breastfeeding is associated with a reduce risk of SIDS.
- If possible, mothers should breastfeed exclusively or feed with expressed milk (i.e., not offer any formula or other nonhuman milk-based supplements) for 6 months, in alignment with AAP recommendations.
- The protective effect of breastfeeding increases with exclusivity, however, any breastfeeding has been shown to be more protective against SIDS than no breastfeeding.

4) Keep your baby’s sleep area close to, but separate from, where you and others sleep.

Teaching Points:

- Bed-sharing with anyone, including parents, other children, and multiples is not safe. Pets also pose a threat to sleeping babies.
- Babies may be brought into bed for feeding and comforting but should be returned to their own bed when the parent is ready to return to sleep.
- The baby’s crib, portable crib, play yard, or basinet should be placed in the parent’s room, close to their bed, making it more convenient for feeding and contact.
- Babies should not be fed/held on a couch, armchair, or bed when there is a high risk that the parent might fall asleep.
- Sleeping on couches, recliners, or armchairs with babies puts them at extraordinarily high risk of infant death, including SIDS, suffocation through entrapment or wedging between seat cushions, or overlay.

5) Keep soft objects, toys, and loose bedding out of your baby’s sleep area.

Teaching Points:

- No bumper pads, stuffed toys, or any other objects in the crib. “NOTHING BUT BABY.”
- Appropriately sized sleep sacks/blanket sleepers are optimal; avoid blankets and other loose bedding.

6) Think about offering a pacifier at naptime and bedtime.

Teaching Points:

- Although the mechanism is yet unclear, studies have reported a protective effect of pacifiers on the incidence of SIDS, even if the pacifier falls out of the infant’s mouth.
- For breastfed babies, avoid pacifier use until breastfeeding is firmly established (approximately 1 month).
- It is not necessary to reinsert a pacifier once the baby falls asleep.

- *Do not force a baby to take a pacifier.*
- *Pacifiers should not be coated in any sweet solution, hung around the baby's neck or attached to clothing while sleeping.*

7) *Avoid smoke exposure and use of drugs or alcohol.*

Teaching Points:

- *Families should set strict rules for smoke-free homes and cars to eliminate secondhand smoke.*
- *Clothing exposed to secondhand smoke should be changed prior to handling babies.*
- *Wash hands after smoking and before touching baby.*
- *Anyone who is sleep-deprived, exhausted, or using alcohol or medications or drugs that cause diminished responsiveness in combination with bed-sharing also places baby at high risk.*
- *Share smoking cessation resources in your institution or community.*

8) *Do not let your baby overheat during sleep.*

Teaching Points:

- *Babies should be dressed appropriately for the environment, with no more than one additional layer than an adult would wear to be comfortable.*
- *Appropriately sized sleep sacks/ blanket sleepers are optimal; avoid blankets and other loose bedding.*
- *Suggest layering clothing as a secondary choice.*
- *Acknowledge cultural beliefs and how it affects safe sleeping.*
- *If swaddling is needed for comfort or thermoregulation, swaddle below the axilla.*
- *Kangaroo Care or skin-to-skin is another method of thermoregulation but should be used only when mother is awake.*
- *Teach parents to evaluate babies for signs of overheating, such as sweating or the chest feeling hot to touch.*
- *Do not cover the baby's face or head.*

9) *Infants should be immunized according to the AAP and Centers for Disease Control recommendations.*

Teaching Points:

- *There is no evidence that there is a causal relationship between immunization and SIDS.*
- *Recent evidence suggests that immunization might have a protective effect against SIDS.*

10) *Do not use home cardiorespiratory monitors as a strategy to reduce the risk of SIDS.*

Teaching Points:

- *No monitoring device can identify, predict, or prevent SIDS.*
- *Monitors are only machines and are not substitutes for direct observation.*

11) *Avoid products that claim to reduce the risk of SIDS or that are inconsistent with safe sleep recommendations.*

Teaching Points:

- *Avoid commercial devices marketed to reduce the risk of SIDS, plagiocephaly, and acid reflux (products include wedges, positioning aids, rolled blankets).*
- *There is no evidence that these devices reduce the risk of SIDS or suffocation, or that they are safe.*

12) Supervised, awake tummy time is recommended to help develop your baby's upper body muscles and to reduce the chance that flat spots will develop on your baby's head.

Teaching Points:

- *Place babies on tummy when they are awake and alert and when someone is supervising. Tummy time helps strengthen the baby's head, neck, and shoulder muscles, and helps to prevent flat spots on the head.*
- *Avoid plagiocephaly by:*
 - *Limiting time in car seats, carriers, bouncers, and other devices.*
 - *Encouraging "cuddle time" (bonding) by holding baby.*
 - *Changing the baby's orientation in the bed.*

NICU

- All parents will receive written and verbal education regarding safe sleep in the hospital.
- Babies should be placed in the back sleep position for sleep as soon as medically stable and well in advance of anticipated discharge (by approximately 35 weeks or greater postmenstrual age) unless otherwise ordered by the physician. At this time, a card will be placed on the crib regarding safe sleep practices.
- Co-bedding: The safety and benefits of co-bedding for multiples has not been established. It is prudent to provide separate sleep surfaces and avoid cobedding for multiples in the hospital and at home.
- On discharge, parents will receive additional education regarding a safe sleep environment at home.

Mother/Baby Unit

- On newborn's admission to the Mother/Baby floor, the nurse will provide written and verbal education regarding safe sleep in the hospital. A card will be placed on the crib regarding safe sleep practices.
- Encourage frequent skin-to-skin when mom is awake. Other family members can be encouraged to place newborn skin-to-skin (while they are awake) if mother is sleeping or unable to hold the baby.
- If mom is sleeping and another family member is not holding the baby, the baby should be placed on his or her back in the bassinet.
- The bassinet should have only one blanket covering the mattress. There should be no toys or loose bedding in the bassinet.
- Parents should be instructed to not let the baby sleep on a pillow or in the hospital bed if mother is sleepy, sleeping, or unable to observe the baby.
- On discharge, the nurse will provide written and verbal education regarding safe sleep at home.

V. PARENT EDUCATION RESOURCES:

- Georgia Department of Public Health Safe to Sleep Campaign: <https://dph.georgia.gov/safetosleep>
- National Institute of Child Health and Human Development Safe to Sleep Campaign: <https://www.nichd.nih.gov/sts/>

VI. REFERENCES:

- 1) American Academy of Pediatrics. (2016). SIDS and other sleep-related infant deaths: Updated 2016 recommendations for a safe infant sleeping environment. *Pediatrics*, 138(5), e20162938. Available at: <http://pediatrics.aappublications.org/content/early/2016/10/20/peds.2016-2938>
- 2) National Institute of Child Health and Human Development. Continuing Education Program on Risk Reduction for SIDS and Other Sleep-Related Causes of Infant Death: *Curriculum for Nurses*. Available at: <https://www.nichd.nih.gov/cbt/sids/nursececourse/>
- 3) National Institute of Child Health and Human Development. (2014). Sudden Infant Death Syndrome (SIDS) and other sleep-related causes of infant death: Questions and answers for health care providers. Available at: <https://www.nichd.nih.gov/sts/materials/>