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Practice Summary & Implementation Guidance

Safe Sleep Diaper Bag Project

The Safe Sleep Diaper Bag Project includes education to caregivers on safe sleep guidelines, provision of a diaper bag filled with materials that have a safe sleep message and a follow-up visit to determine any changes in the way caregivers practice safe sleep.

Cutting-Edge | Emerging | **Promising** | Best

Location	Topic Area	Setting
Tennessee	Injury Prevention/Hospitalization	Home-based

Population Focus	NPM	Date Added
Perinatal/Infant Health	NPM 5: Safe Sleep	October 2020

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Section 1: Practice Summary

PRACTICE DESCRIPTION

Tennessee's infant mortality rate continues to exceed the national rate. Tennessee's 2018 infant mortality rate was 19% higher than the 2017 US rate. Approximately, 1 in 4 infant deaths are due to unsafe sleep in Tennessee. These deaths are preventable by placing infants alone, on their back and in a crib. The goal of our safe sleep diaper bag project is to improve the number of infant caregivers adhering to the American Academy of Pediatrics safe sleep guidelines.

The project involves providing safe sleep education and resources to caregivers participating in evidence-based home visiting or care coordination. Caregivers are given a pre-test to determine current safe sleep behaviors practiced. They are then provided safe sleep education and provided a diaper bag, with a safe sleep message, filled with additional items that have a safe sleep message. The diaper bag includes: two sleep sacks, a onesie, a Sleep Baby Safe and Snug book, a Calm Baby Gently book, and a safe sleep doorhanger. At the two-month follow-up visit, caregivers are given a post-test to determine any changes in the way they practice safe sleep.

Data was continually assessed to determine if caregivers were changing their behavior after receiving the education and resources. Many families reported making a change in behavior based on receiving the items in the diaper bag. For families that reported changing behavior, data was assessed to determine what item caused them to change their behavior. When the project was expanded to care coordination participants, data was also collected to determine what caregivers changed about the way they put their baby to sleep.

CORE COMPONENTS & PRACTICE ACTIVITES

The goal of our program was to increase the number of caregivers placing their baby in a safe sleep environment based on the American Academy of Pediatrics (AAP) safe sleep guidelines. We did this by providing caregivers safe sleep education and materials and measuring the change in the way caregivers practice safe sleep. AAP guidelines for a safe sleep environment include supine positioning, the use of a firm sleep surface, room-sharing without bed-sharing, and the avoidance of soft bedding and overheating. The following questions were assessed to determine change:

- Did your home visitor give you a safe sleep diaper bag?
- Did you read the books and written materials in the diaper bag?
- Did any items in the diaper bag cause you to change the way you put your baby to sleep?
- Which items in the diaper bag caused you to change the way you put your baby to sleep?

The core components of this program include education for caregivers on safe sleep guidelines, provision of a diaper bag filled with materials with a safe sleep message and a follow-up visit to determine any changes in the way caregivers practice safe sleep.

Core Components & Practice Activities

Core Component	Activities	Operational Details
Training	Educate families on safe sleep	Home visiting and care coordination staff were trained on the AAP safe sleep guidelines. They were trained to educate parents and collect data on safe sleep behavior in Redcap. Staff were provided educational flipcharts to utilize with caregivers.
Provision of materials	Provide caregivers the diaper bag with sleep sacks, a onesie and educational materials	Home visiting and care coordination staff were trained on what materials to put into the diaper bags. All materials were sent separately to each participating site and staff had to put the correct materials into the diaper bag.
Follow-up visit	Assess behavior change	Staff were trained to ask questions about behavior change at the two-month follow-up visit. Staff were trained to record the answers in Redcap.

HEALTH EQUITY

This project works with caregivers enrolled in evidence-based home visiting and care coordination therefore targeting a high-risk population.

Home visiting and care coordination staff are trained to provide the safe sleep education, along with the diaper bag, to all participants. Referrals are made to the care coordination teams through medical providers, social services, or self-referrals. All families referred to care coordination are screened to determine their specific needs and provided with the resources to meet those needs.

This project provides not only the education to the caregiver, but the tools needed to reduce the barriers to practicing safe sleep. Some of the barriers to caregivers practicing safe sleep include the inability to afford sleep sacks and cribs. This project provides the caregiver with sleep sacks and

onesies to reduce the use of blankets. The project also connects families to resources for a crib if one is needed.

This project addresses the social determinants of health through the environment and social context by providing caregivers a portable crib, if needed, to make their environment a safe place for infants to sleep. In addition to addressing the environment of families, the project also provides social support through the home visit and follow-up home visits. Providing the resources families need to make their environment safe is a critical step to ensure families can practice safe sleep. Providing social and community support through regular home visits also assists the family to practice the recommended safe sleep protocols.

EVIDENCE OF EFFECTIVENESS

Data from the pre and post-tests were analyzed from July 2018 – September 2020. Data from the time a caregiver was provided the education and diaper bag was compared to data at a follow-up visit to measure the impact of the medium-term outcomes. Overall, 41% of participating families reported a change in behavior at the two-month follow-up visit based on the information they received. For Evidence-Based home visiting, 34% of participants reported changing their sleep behavior based on receiving the information. Families were asked what contributed to their behavior change and 52% said the sleep sack, 37% said the door hanger and 32% said the Sleep Baby Safe and Snug book. For care coordination, 57% of participants reported making a change in their safe sleep practices, 53% said the sleep sack contributed to their behavior change, 50% said the Sleep Baby Safe and Snug book and 39% said the doorhanger.

One unexpected outcome was that families participating in the care coordination program were more likely to change their safe sleep behavior than families in evidence-based home visiting. It is unknown exactly why there is a difference in the percentage of caregivers that changed behavior, however, one theory is that the timeframe for follow-up is different with care coordination. Care coordinators follow-up with the families as early as one month after the initial visit whereas evidence-based home visiting follows-up two months after the initial visit. With less time in between the initial and follow-up visit, care coordination participants may be more likely to still be practicing the correct behavior at the time of the follow-up visit.

Targeting a high-risk population may result in a higher percentage of participants reporting a change in behavior than if the general population was targeted because there may have been more room for improvement in a population already considered high-risk.

Section 2: Implementation Guidance

STAKEHOLDER EMPOWERMENT & COLLABORATION

The key stakeholders for this project include the evidence-based home visiting agencies and the TDH care coordination (CHANT) program. We partnered with these agencies because they work directly with families and are familiar with the needs of the families. Utilizing this model also creates a system in which the program staff identify families that need assistance to practice safe sleep because they are in the home with them. These agencies also can follow-up with those families and already had systems in place to collect baseline and follow-up data. Having this infrastructure in place to work directly with families and provide follow-up allows us to better monitor the process and impact of this project.

The state level staff for evidence-based home visiting and care coordination were involved with the development of the questions for evaluation and the process for distribution of the bags. The local level staff working with families were responsible for collecting data about the project from the participating families. The data collected by staff have allowed us to make improvements to the project. The project initially included a nightlight with a safe sleep message in the diaper bag. Data collected showed that the nightlight had little impact on behavior change but the sleep sack was reported as causing the caregiver to change their behavior. Because of this data collected, the project was modified to eliminate the nightlight and include an extra sleep sack instead therefore each family gets two sleep sacks.

REPLICATION

This practice has not yet been replicated.

INTERNAL CAPACITY

A program coordinator is needed to support this practice to determine how many materials are needed at each site, order materials and provide instructions for each site. Instructions are needed at each site on assembling the diaper bag materials, questions to ask the family and documentation of answers.

The maternal, infant, early childhood home visiting (MIECHV) and care coordination leadership helped develop personnel capacity to support this practice. The MIECHV and care coordination

participants were the direct recipients of the education and materials therefore we needed their support to educate their staff and distribute the materials. The MIECHV and care coordination leadership included the safes sleep education and diaper bag distribution protocol in their guidelines.

PRACTICE TIMELINE

Phase: Planning/Pre-Implementation		
Activity Description	**Time Needed**	**Responsible Party**
Determine and order materials to include in the diaper bag	July 2017-August 2017 5 hours	TDH Child Fatality Review (CFR) Staff
Develop instructions/protocols for staff to provide the education and the materials	September 2017-November 2017 5 hours	EBHV and Care Coordination Staff
Develop evaluation questions	September 2017-November 2017 3 hours	CFR Staff
Incorporate questions into Redcap	November 2017 2 hours	CFR Staff and epidemiologists

Phase: Implementation		
Activity Description	**Time Needed**	**Responsible Party**
Train staff to assemble the diaper bag with the correct materials	January 2018 2 hours	CFR Staff

Train staff to educate families	October 2019 2 hours	CFR Staff
Train staff to collect data from families in Redcap.	January 2018 1 hour	CFR Staff and Program Epidemiologists
Provide additional materials to sites as needed	October 2019 10 hours annually	CFR Staff

Phase: Sustainability		
Activity Description	**Time Needed**	**Responsible Party**
Include implementation guidelines in program protocols	July 2018-Ongoing 1 hours annually	EBHV and Care Coordination Staff
Identify additional funding sources and incorporate into relevant budgets	July 2018-Ongoing 5 hours annually	CFR Staff
Analyze data collected	July 2018-Ongoing 1-2 hours monthly	Program Epidemiologists
Make changes based on results of data	July 2018-Ongoing 3-5 hours annually	CFR Staff and Program Epidemiologists

PRACTICE COST

Budget			
Activity/Item	**Brief Description**	**Quantity**	**Total**
Diaper bags	A black diaper bag with a yellow print on front left pocket "Babies should sleep Alone on their Back and in a Crib"	2000 ($12 per bag)	$24,000
Sleep sacks	Infant sleep sacks in natural color. Available in sizes newborn and small. Fleece and cotton material.	4000 ($8 per sleep sack)	$24,000
Onesies	White newborn sized onesies with purple and yellow print with "I should sleep Alone on my Back, and in a Crib" on the front and "If I'm asleep turn me over" on the back.	2000 ($4.75 per onesie)	$9,500
Sleep Baby Safe and Snug book	Hard board book that has a short story that parents can read to their baby with a safe sleep message.	2000 ($1.25 per book)	$2,500
Calm Baby Gently book	Hard board book that parents can read to their babies about staying calm and helping baby calm down.	2000 ($3.00 per book)	$6,000
Staff time to coordinate materials	Minimum 40 hours to coordinate all materials and training.	40 ($25 per hour)	$1,000
Printed Door Hangers with Safe Sleep message	Door hangers with safe sleep check list on one side and resource list with phone numbers on the other side.	2,000 ($0.15 per door hanger)	$300

Safe Sleep Flip Charts	Educational component that has a script for EBHV and care coordination staff to teach standardized infant safe sleep education. Distributed to all participating agencies and available in English, Spanish and Arabic.	200 ($15.00)	$3,000
		Total Amount:	**$70,300**

LESSONS LEARNED

Staff from the infant mortality program utilized PDSA (Plan, Do, Study, Act) cycles to implement continuous quality improvement (CQI) for this project. All the key stakeholders including infant mortality staff, evidence-based home visiting staff and care coordination staff were involved with the CQI process. Staff looked at data for this project monthly to determine any changes needed. One question that we tracked was whether any items in the diaper bag caused the caregiver to change the way they were putting their baby to sleep. If so, the family was asked which item caused them to change their behavior. Because a high percentage of families reported making a change due to the sleep sack and a low percentage due to the nightlight, we discontinued the nightlight and provided two sleep sacks to families instead.

Another change was made in the data that was collected. With the evidence-based home visiting sites, there weren't any questions asked about the changes caregivers made to the way they put their baby to sleep. When the project was expanded to care coordination, questions were added to determine what specific behavior the caregiver changed.

NEXT STEPS

Evidence-based home visiting is expanding from 51 counties to all 95 counties in Tennessee. We plan to provide the diaper bags to families in all 95 participating counties. Future improvements include the documentation of whether a crib was provided to the family and if they were using the crib at the follow-up visit.

RESOURCES PROVIDED

- Safe Sleep Campaign Materials

APPENDIX

- *N/A.*