

The Health Care Improvement Foundation
2017 Delaware Valley Patient Safety and Quality Award
Entry Form

1. Hospital Name

Temple University Health System

2. Title Of Initiative

SAFE-T (Sleep Awareness Family Education) Program

3. Abstract (Please limit this description to 250 words.)

Objective: This study sought to determine if infant sleep education plus a cardboard bassinet reduced bed-sharing, a risk factor for sudden infant death syndrome (SIDS) and sleep-related deaths in the first week of life.

Methods: Women delivered between 1/1/2015-11/15/2016 were interviewed by phone within 72 hours of discharge. Control 1 delivered through 10/31/2015 (previously reported); Control 2: 11/1/2015-2/7/2016; Intervention 1 received inpatient safe sleep education and delivered between 2/8/2016-5/4/2016; Intervention 2 also received a cardboard bassinet and delivered after 5/4/2016. Subjects self-reported bed-sharing, newborn sleep position, feeding method, and sleep environment; demographic data was obtained from medical records. Bayesian methodology compared bed-sharing rates between aggregated control and intervention groups; results were expressed as posterior rates, rate ratios, and 95% credible intervals; the posterior probability that the rate ratio was > 1 (Bayesian probability) was determined by calculation and simulation.

Results: 5187 eligible subjects, 2763 (53%) completed the survey (Control 1: n=1264; Control 2: n=423; Intervention 1: n=391; Intervention 2: n=685). Bed-sharing rates: Control: 6.3% (5.2,7.4); Intervention: 4.7% (3.5,5.9). Rate ratio (Control/Intervention) was 1.36 (0.95,1.83) and the Bayesian probability that the rate ratio >1 was .96 and .97 by calculation and simulation, respectively. Bed-sharing rates for exclusively breastfed infants: Control: 11% (7.4, 14.6); Intervention: 5.9% (2.7, 9.2); Rate ratio was 2.00 (1.01, 3.15) and the Bayesian probability that the rate ratio >1 was .993.

Conclusions: Infant sleep education plus a cardboard bassinet reduced the rate of bed-sharing in the first week of life, particularly among exclusively breastfeeding dyads. Cardboard bassinets facilitated breastfeeding.

4. What were the goals of your initiative?

- 1-Educate postpartum women and their families on safe newborn sleep environment
- 2-Change common behaviors associated with an increased risk of sudden infant death syndrome (SIDS) and other sleep-related deaths in an urban population
- 3-Provide a safe sleeping space for newborns
- 4-Reduce the rates of SIDS and other sleep-related deaths in an urban population

5. What were your initiative's baseline data and the results of your initiative?

Bed-sharing:

6.3% of the 1687 subjects in the control group reported bed-sharing; compared to 4.7% of the 1076 subjects in the intervention group.

For bed-sharing with exclusively breastfed infants, 11.3% of the 417 subjects in the control group reported bed-sharing; compared to 5.9% in the intervention group.

Use of the bassinet:

The bassinet was used as a sleeping space by 51% (349/685) of the recipients; 12% (82/685) used the cardboard bassinet as the primary sleeping space for their infant. Of respondents who answered the question regarding satisfaction with the receipt of a cardboard bassinet, 99% (659/668) of respondents were “happy” that they received the cardboard bassinet.

Bassinet and breastfeeding:

Of the 104 breastfeeding recipients who used the bassinet as a sleeping space, 61 (59%) responded the bassinet makes breastfeeding easier.

See Tables 1 and 2 for details.

6. Describe the interventions that were instrumental in achieving the results for your initiative.

The 2 components of the SAFE-T program are an educational session and a cardboard bassinet.

Prior to hospital discharge, these patients received additional safe infant sleep education based on the American Academy of Pediatrics safe infant sleep recommendations delivered in person by a select group of registered nurses, under the direction of a pediatrician; visitors and family members were encouraged to attend the educational session. To reinforce infant safe sleep, each mother was given a summary of the teaching points on a laminated door hanger. The sessions were provided in the preferred language of the mother, using interpreter services as necessary.

In addition, a cardboard bassinet was provided for the use of each infant at the time of discharge (purchased from The Baby Box Company, <http://www.babyboxuniversity.com>). Each box was made of cardboard, had a firm, nontoxic foam mattress, and a cotton fitted sheet (26 3/4 X 16 3/4 X 11 1/2 inches; Figure 1). The boxes were certified by the Consumer Product Safety Commission. Each box also contained baby supplies (purchased or obtained separately from the boxes): a onesie, hat, wearable blanket, thermometer, nasal aspirator, baby wash, diapers, baby wipes, 1 pair of socks, children’s book about safe sleep, condoms, immunization card, list of community resources (including information on programs for free portable cribs), information on free smoke detector installation from the Philadelphia Fire Department, safety tips from the Philadelphia Police Department, and a pamphlet addressing breastfeeding and/or formula feeding tips.

7. How can this initiative be replicated through the region? (Please limit this description to 100 words.)

The SAFE-T Program's educational session can be expanded throughout the other hospitals in the area with a Labor and Delivery Unit. The educational session uses existing staff with additional training. The materials used in the session are widely available. Our program has emphasized the importance of safe sleep by removing the safe sleep education session from standard nursing discharge instructions, in a format which engages all newborn caregivers.

Cardboard bassinets are currently available free of charge through governmental agencies in 5 states (New Jersey, Texas, Ohio, Alabama, and Colorado). The Baby Box Company is willing to distribute to our region.

8. Explain how the initiative demonstrates innovation (Please limit this description to 100 words.)

Since the 1930s, Finland has distributed a similar cardboard bassinet to all mothers as a way of providing infant supplies. However, our program was the first in the United States to distribute a cardboard bassinet to all mothers discharged from an urban academic health system, coupled with an educational session to combat unsafe sleep practices. Not only filled with infant supplies, our bassinets also contain information to access community and medical resources. This bassinet and educational program is a pioneer in the increasingly popular "baby box" distributions going on throughout the United States and around the world.

9. How does this initiative demonstrate collaboration with other providers within the continuum of care? (Please limit this description to 100 words.)

Our program starts in obstetrical prenatal offices when mothers learn about the boxes as a tangible representation of safe infant sleep environment. Following the birth of the baby, the nurses, obstetricians and pediatricians collaborate to ensure the safety of the mother and infant after leaving the hospital. The outpatient care of the baby by the pediatrician then mirrors the safe sleep recommendations provided in the hospital. The consistency of the messaging of safe sleep occurs across the continuum of care, emphasized by the cardboard bassinet.

10. Explain ways in which senior leadership exhibited commitment to the initiative (Please limit this description to 100 words.)

Senior leadership was essential to the implementation and sustainability of this multidisciplinary program. Our initiative encompasses several different divisions of the health system. Senior leadership contributed time, appropriation of funding, guidance, and the coordination of multiple departments to launch this initiative. Through their involvement in international media attention, senior leadership has also been very supportive of the program, which allowed for the start of the other "baby box" programs in the USA and abroad.

11. Appendices (i.e., tables and graphs)

Table 1: Bed-sharing rates in all subjects		
Bed-Sharing	Control Group	Intervention Group
	n = 1687	n = 1076
% Yes (95%CL)	6.3 (4.2, 7.5)	4.7 (3.5, 6.0)
p_c/p_i	1.340	
95% LCL	0.922	
95% UCL	1.790	
Probability of ratio > 1	0.955	
p_c = posterior simulated proportion for Control 1 prior: Control 2 prior with 100,000 repetitions		
p_i = posterior simulated proportion for Intervention 1 prior: Intervention 2 prior with 100,000 repetitions		
LCL: lower credible limit		
UCL: upper credible limit		

Table 2: Bed-sharing rates in breastfeeding subjects		
Bed-Sharing	Control Group	Intervention Group
	n = 417	n = 298
% Yes (95%CL)	11.3 (8.5, 14.3)	5.9 (3.4, 8.7)
p_c/p_i	2.000	
95% LCL	1.010	
95% UCL	3.150	
Probability of ratio > 1	0.993	
p_c = posterior simulated proportion for Control 1 prior: Control 2 prior with 100,000 repetitions		
p_i = posterior simulated proportion for Intervention 1 prior: Intervention 2 prior with 100,000 repetitions		
LCL: lower credible limit		
UCL: upper credible limit		

Figure 1: Cardboard bassinet provided to patients



<https://www.babyboxco.com/collections/baby-boxes>