EASE: A Comprehensive Quality Improvement Program to Increase Infant Safe Sleep Practices

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• I do not intend to discuss an unapproved/investigative use of a commercial product/device in my presentation.
Objectives

- Understand the importance of promoting inpatient safe sleep behaviors and providing safe sleep-related education
- Learn about available resources to promote safe sleep education, counseling, and quality improvement methodology
Background

• The US has one of the highest infant mortality rates in the developed world
  – Ohio ranks 40th in state IMR’s

• SIDS/sleep-related deaths are the leading cause of death in the post-neonatal period (28-364 days)
  – ~15% of all infant deaths
History

• 1992—AAP published 1st recommendations on infant safe sleep
• Multiple updates published over next two decades
Latest Updates

• 2011: AAP expanded its focus towards creating a safe sleep environment for infants
  – SIDS vs SUID
  – ABC’s
    • Alone
    • Back
    • (Empty) Crib

• 2016: Newest recommendations
  – Reinforced importance of room-sharing (NOT bed-sharing) to 1 year of age
The Issues

• Healthcare workers have a great opportunity to model safe sleep behaviors in hospital setting

• Families tend to model infant safe sleep behaviors that they observe in the hospital
The Issues

• Unfortunately, only 25% of hospitalized infants are found in appropriate safe sleep environments\(^1\)

\(^1\)Mason, B et al. Improving Safe Sleep Environments for Well Newborns in the Hospital Setting. *Clinical Pediatrics* 2013, 52(10); 969-975.
Does This Surprise You?
The EASE Program

- Education and Sleep Environment
- One of eight Ohio AAP QI programs
- Quality improvement collaborative developed by Ohio AAP
  - First wave February 2014-January 2015
  - Second wave May 2015-April 2016
- Overall goal to improve compliance with ABC’s (Alone, Back, in empty Crib) in hospital setting
EASE Project Goals

- To improve safe sleep behaviors among hospitalized infants <12 months of age by the end of the collaborative
  - Greater than 80% of sleeping infants would be in a safe sleep environment (Alone, on Back, in an empty Crib) during hospital observations
  - Greater than 90% of parents/caregivers would receive safe sleep information while in the hospital
The Methods

• Hospitalists recruited to participate
  – Six birthing hospitals and six free-standing children’s hospitals in Ohio
  – Received MOC Part IV credit for participation
  – Nursing staff, PT/OT, Child Life, QI, admin, etc.
Audit Tool Development

• One page tool
• Tool was piloted for clarity and ease of use
  – Nationwide Children’s Hospital
• Main components
  – Age
  – Location
  – Position
  – Crib environment
  – Caregiver reports of education
Exclusion Criteria

• Awake infants
• NICU (<32 WGA)
  – SCN infants allowed
• Ventilator/NIPPV
• Tracheostomies
• Recent spinal surgery
Baseline Data Collection

- Goal 10 audits/week per institution
- 2 month Baseline
- Conducted between 9pm and 7am
- Paper form
- Submitted monthly into SurveyMonkey®
Group Learning Sessions

- Physician Education on QI methodology
  - Team Creation
  - Key Driver Diagrams
  - PDSA Cycles
- Baseline data reviewed
Project Methodology

• Random weekly audits
  – Goal 10 audits/week per institution
• Completion of at least 3 PDSA cycles to improve outcomes
  – Policy Development/Revision
  – Education
  – Environmental Changes
Supplemental Education

• Monthly Action Period Calls
  – Monthly data from audits reviewed
  – Best practices shared
  – Safe sleep education provided
  • Cribs for Kids Hospital Program, HALO Sleep Sacks, Child Fatality Review, Hospital Safe Sleep Policies, Injury Prevention
Study Analysis

- Frequencies determined to assess percentage of infants in safe sleep environment
- Parameters reviewed individually and as a bundle
- Comparisons between birthing and children’s hospitals
The Results

- 7,243 children’s hospital audits
- 2,885 birthing hospital audits
- ~10,000 audits!
Wave 1

Figure 1. Percentage of Infants in All Hospitals Observed to be in Safe Sleep Environments, February 2014 to January 2015

Chart Type: Run Chart

- Baseline Median(s)
- Baseline Period
- Goal(s)
Wave 1

Figure 2. Percentage of Families Who Reported Safe Sleep Education in All Hospitals, February 2014 to January 2015

Chart Type: Run Chart

- **Baseline Median(s)**
- **Baseline Period**
- **Goal(s)**

*Note: The exact data points are not visible in the image.*
Wave 2

Figure 1. Percentage of Infants in All Hospitals Observed to be in Safe Sleep Environments, May 2015 to April 2016

Chart Type: Run Chart

- BETTER

Percentage of Appropriate Sleep Environments

May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Jan | Feb | Mar | Apr
2015 | | | | | | | | | | | 2016

Time

- Percentages
- Baseline Median(s)
- Baseline Period
- Control Limits (N/A)
- Goal(s)
Wave 2

Figure 2. Percentage of Families Who Reported Safe Sleep Education in All Hospitals, May 2015 to April 2016

Chart Type: Run Chart

- Better

- Percentages
- Baseline Median(s)
- Baseline Period
- Control Limits (N/A)
- Goal(s)
Percentage of Infants in Birthing and Children’s Hospitals Observed to be in Safe Sleep Environments
Percentage of Families Who Reported Safe Sleep Education in Birthing and Children’s Hospitals

- **Birthing Hospitals**
- **Children's Hospitals**
- **Goal**

Date:
- May 15
- Jun 15
- Jul 15
- Aug 15
- Sep 15
- Oct 15
- Nov 15
- Dec 15
- Jan 16
- Feb 16
- Mar 16
- Apr 16

Percentage of Families Reporting Safe Sleep Education During Admission:
- 0.0
- 20.0
- 40.0
- 60.0
- 80.0
- 100.0
- 120.0

Diagram showing trends over time with percentages.
What Are Some of the Issues You See in Your Hospitals?
What Has Your Hospital Done to Improve Safe Sleep Practices?
Some Ideas...

- Faculty/trainee education on safe sleep recommendations (i.e. Grand Rounds)
- Work with administration to create or revise current safe sleep policies
- Work with Finance/Purchasing to obtain sleep-sacks instead of loose blankets
Some Ideas...

• RN
  – Nursing/PCA education on safe sleep recommendations (i.e. Skills Days, Nursing Senate)
  – Safe Sleep Nurse Champions
  – Family/caregiver education on safe sleep during admission
    • Brochures
    • Media (Edutainment, DVD’s)
    • Posters/Digital Signage
EASE Online

Introduction to Ohio AAP’s EASE Online

Improving Infant Safe Sleep Practices in Your Hospital

Why Participate in the Online EASE Project?

- Be part of a national project addressing infant mortality for birthing and children's hospitals
- Learn how to utilize Quality Improvement Principles to change behaviors at your institution
- Improve safe sleep modeling in the hospital with an established tool and data collection system
- Expand your QI Portfolio and receive free assistance collecting and analyzing data

Ready to Get Involved? Register for the EASE Project Now!

...If you are ready to learn how you can sleep safely with EASE, then explore this page to learn more!
Coming Soon!

- MOC Part II Certification
- Safe Sleep “Article of the Month”
  - 11-12 articles/year with 4-5 questions each
- Goal roll-out late spring 2017
Take-Home Points

• The country’s infant mortality rate will only be decreased by collaboration of individuals who are passionate about fixing it!
• The hospital setting is a great place to model appropriate safe sleep behaviors and to provide education and resources to caregivers
• Collaboration between children’s and birthing hospitals in one state (through an AAP chapter) improved each hospital’s safe sleep practices
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