National Action Partners Forum
Plenary #2
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Safe Sleep Interventions:
What Next?

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The current status of the evidence behind safe sleep

• Safe Sleep Recommendations – firm evidence base
• Safe Sleep Interventions – less of an evidence base
  – Intervention science is still new
  – Some evidence for effectiveness in certain interventions (will discuss)
  – As you think about interventions, think about how you will evaluate them
Three categories of interventions

• **Awareness**
  – Increase awareness through public health messaging and education materials
  – Address challenges to consistent messaging in the media & consumer environment

• **Reinforcement**
  – Transmit knowledge about safe sleep practices to professionals who interact with expectant and new parents
  – Support the implementation of safe sleep practices in these settings through policies, accreditation, and legislation

• **Problem Solving**
  – Focus on populations at highest risk, special concerns
  – Interventions that reach non-primary caregivers with consistent messages and practices
  – Identify and address barriers
Diffusion of Innovations

Category #1: Awareness

Category #2: Reinforcement

Category #3: Problem Solving
Campaigns to Conversations

• **Awareness**: public health campaigns
  – Standardized, blast messages

• **Reinforcement**: answering frequently asked questions; consistent messaging
  – Individualized, but standardized messages

• **Problem Solving**
  – Individualized, focused on making it work
  – Requires knowledge of the barriers
  – Requires a conversation
Category #1: Awareness

- Increase awareness of safe sleep practices through public health messaging and education materials
- Address challenges to consistent safe sleep messaging in the media & consumer environment
- “Blast” messages
- Not personalized
- Examples:
  - Back to Sleep campaign
  - Text4Baby
  - B’more for Healthy Babies
    - Tries to find messages that resonate – “This can happen to anyone, including you”
Sleep-Related Infant Death: Sleep Environment

Unexpected Infant Deaths that Occurred During Sleep: Cases Reviewed by Baltimore City Child Fatality Review 2002-2013

<table>
<thead>
<tr>
<th>Year</th>
<th>Deaths</th>
<th>Unconfirmed</th>
<th>Confirmed</th>
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<tbody>
<tr>
<td>2002</td>
<td>13</td>
<td>3</td>
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<td>2003</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>2013</td>
<td>16</td>
<td>1</td>
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</tr>
</tbody>
</table>

*Deaths for which the evidence did not indicate an unsafe sleep environment, however, data on unsafe sleep risk factors may have been missing or unknown. Baltimore City Health Department analysis of data from cases reviewed by the Baltimore City Child Fatality Review.*
• Unsafe sleep environment comprised of:
  – Not in crib/bassinet: 83%
  – Bedsharing: 74%
  – Bedding/toys: 57%
  – Not supine: 39%
  – Smoke exposure 56%

• Began public service campaign
• Video focuses on babies sleeping in crib without other things in the crib
  – Video testimonials from parents who have lost babies
  – Multiracial, multi-ethnic
  – Video is shown to all mothers who give birth in birthing hospital in Baltimore
“Scary” health messages

• Try to resonate with families in a different way
• Horrible things will happen to you if you don’t follow our recommendations
  – Cigarette smoking
  – Bedsharing
• Controversial
Cigarette smoking messages

WARNING: Cigarettes cause fatal lung disease.
Anti-Bedsharing messages

Milwaukee, Wisconsin
• Bedsharing deaths a huge problem
• <18% of caregivers had used alcohol or drugs
• 68% of infants exposed to smoke
Charlie’s Kids

• Board book for babies
  – Provides timely and repetitive safe sleep messaging in approachable, easy to read book
  – Targets all levels of education, language and literacy abilities
  – Promotes parent/child bonding
• Goal is to get *Sleep Baby Safe and Snug* to every family of a newborn!
Since June 27, 2013

- Distributed over 350,000 books
- 31 States
- Partnered with
  - Cribs for Kids-Donated 60,000 books for each safe sleep survival kit
  - Tennessee Health Department- Every baby born in TN in 2014
  - Ohio Department of Health, Georgia Department of Health
  - Over 180 other health Departments, Hospitals, early literacy groups, pediatricians, injury prevention groups and more
Sleep Baby Safe and Snug

- In English and now in Spanish (*Duerme bebe comodo y seguro*)
- Interested in working with others on additional languages
- Randomized controlled trial: book vs. traditional brochures in home visiting programs
Answering FAQs

• Todaysbaby: uses a combination of text messages, email messages, and videos to provide messages to parents
  – NICHD/CJ Foundation for SIDS funding
14 Ways to Protect Your Baby from SIDS
Safe Sleep Advice from the Experts
Rachel Y. Moon, M.D., and Fern R. Hauck, M.D., M.S.

A Parenting Press Qwik Book
Other interventions that address challenges to awareness of safe sleep messages

• Images of unsafe sleep practices/environments in media
  – 4A’s media guidelines developed with First Candle and Cribs for Kids
  – Store advertisements

• Inconsistent information on the web

• Sale of baby products that do not align with safe sleep recommendations
  – Consumer Products Safety Commission standards and recalls
  – Bumper legislation
Awareness messaging: Advantages

• Well established
• Easy to implement
• Reaches large part of population (innovators, early adopters, late adopters)
• Begins to create a cultural norm and expectation
Awareness messaging: Disadvantages

• Sound bites
• Not nuanced
  – Example: “no bedsharing” = “sofa sharing is okay?”
• People feel that it doesn’t apply to them
• “Noise” in the media and popular culture that is inconsistent with safe sleep practices
• Controversy about and push back against scare message tactics
Making Awareness Interventions More Effective

New alliances?

• Population-specific media
  – National Associations of Black Owned Broadcasters
  – Native Health News Alliance

• Bloggers
  – Wendy’s Bloggers: Mom’s Opinion Matters

• Stores and manufacturers
  – Juvenile Products Manufacturers Association
Category #2: Reinforcement

• Transmit knowledge about safe sleep practices to professionals who interact with expectant and new parents
  – Health professionals (physicians, nurses, childbirth educators, lactation consultants, home visitors, WIC, pharmacists)
  – Fire fighters
  – Child protective service providers
  – Child care providers
  – Other influential professionals (faith community, community organizations) that have ongoing contact with families

• Support the implementation of safe sleep practices in these settings through policies, accreditation, and legislation

• Interactive but standardized
Quality improvement programs

• Used by most hospitals
• Small incremental changes in policy and practice
• Goal is to standardize and improve care so that it is more efficient and effective
• Example: Todaysbaby.org (NICHD- and CJ Foundation-funded project)
  – Ongoing randomized controlled trial
PDSA Cycle

- Hallmark of QI programs

<table>
<thead>
<tr>
<th>Act</th>
<th>Plan</th>
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<tbody>
<tr>
<td>• What changes are to be made?</td>
<td>• Objective</td>
</tr>
<tr>
<td>• Next cycle?</td>
<td>• Predictions</td>
</tr>
<tr>
<td></td>
<td>• Plan to carry out the cycle (who, what, where, when)</td>
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<td></td>
<td>• Plan for data collection</td>
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<table>
<thead>
<tr>
<th>Study</th>
<th>Do</th>
</tr>
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<tbody>
<tr>
<td>• Analyse data</td>
<td>• Carry out the plan</td>
</tr>
<tr>
<td>• Compare results to predictions</td>
<td>• Document observations</td>
</tr>
<tr>
<td>• Summarise what was learned</td>
<td>• Record data</td>
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Example of PDSA cycle

• Problem: Staff report that 60% of infants have thick blankets in their bassinets.
• P: Coach nurses on strategies to talk to parents about the dangers of thick blankets
• D: Nurses use these strategies for 1 week
• S: Assess through observational audits if there is a change
• A: Discuss what worked and what didn’t
• Start cycle all over again
Tracking “sentinel events”

• Sentinel event: “An unexpected occurrence involving death or serious physical or psychological injury, or the risk thereof.”
  – Examples of sentinel events: central line blood infections; patient falls

• Commonly heard by doctors, nurses, and other providers:
  “I’ve taken care of babies for XX years, and none of them have ever died...”
Sentinel events (Baltimore)

- MedStar Franklin Square Medical Center (Baltimore) considers any sleep-related infant death to be a sentinel event for the birth hospital.
- Tracks all infant deaths through Child Death Review Team and provides that feedback to staff at birth hospital.
  - Staff review what education was given to that family, and how they can improve.
Interventions (through PDSA cycles)

- All parents of newborns receive sleep safety alert, education
- Training of nurses, non-professional staff, physicians (least receptive)
- Periodic “bed checks”
- Signed commitment statement by nursing and physician staff
- Video available and placed on baby channel
- CONSISTENT MESSAGING
- In 2012, there were 0 sleep-related deaths reported among their discharged newborns
Child care provider training

- Randomized controlled trial of licensed child care centers and family child care homes
- American Academy of Pediatrics safe sleep curriculum
  - Before (intervention) or after (control) direct observations of behavior
- 264 programs and 1212 providers completed study
- Improvements in knowledge & observed behavior
- Now available online: http://www.healthychildcare.org/sids.html
DOSE program (Florida)

- **DOSE** = Direct On-Scene Education
- **Launched April 2012**
  - Collaboration between Healthy Mothers, Healthy Babies Coalition of Broward and Fort Lauderdale Fire Rescue to address issue of sleep-related infant deaths
  - Concept by Lt. James Carroll and Jennifer Combs, MSN, ARNP
- **Fire fighters provide safe sleep education to families**
  - Assess every home that they enter: is there an infant? What is the sleep environment?
  - Give “Baby Safe Sleep Kit” to parents of infants who call fire company for ANY reason
DOSE program

- 1360 first responders trained
- >1000 Safe Sleep Education Kits distributed by first responders
- In Broward Co in 2013, 15 families with no crib in home identified – 14 accepted pack n play from local Cribs for Kids program
- Number of infant deaths in this EMS service area has gone from the highest to the lowest in Broward County, Florida
- Expanding to additional states (DE, TN, LA, MI thus far)
Legislation and Regulation

• Adherence to guidelines is more likely if it is mandated
• Child care regulations
  – 43 states regulate sleep position
  – 17 states require SIDS risk reduction training
Hospital regulations

- Pennsylvania - Sudden Infant Death Syndrome Education and Prevention Act (Act 73 of 2010)
- Requires that SIDS risk reduction information be given to every parent before the infant is discharged from the hospital

Results:
- Increased provision of information to parents
- No change in hospital personnel behavior
Other states have similar laws

- California
- Nebraska
- Illinois
- Michigan
- Texas
- Florida
- Connecticut considering
Others that reinforce safe sleep messages through training, policies, and regulations

• Cribs for Kids Hospital Certification Program
• First Candle “The Most Important Modeling Job of Your Life”
• SIDS of NJ Nurses LEAD the Way
• First Candle pharmacist training
Reinforcement interventions: Advantages

• Train the “trainer” (i.e., professional), who then trains parent

• Consistent messaging
  – Evidence shows that parents are more likely to follow recommendations if the messaging is consistent
  – More people with same messages = increased adherence
Reinforcement interventions: Disadvantages

- Training and increased knowledge ≠ Change in attitude and practice
- Still a single message; not nuanced
- Unregulated professionals (e.g., child care providers)
- Most interventions are focused on a single service sector even though many of the families in high-risk communities are served by multiple programs
Making Reinforcement Interventions More Effective

New partners: What groups are we not yet effectively collaborating with?

• Medical and health care programs
  – Home Visiting programs
  – WIC
  – National Association of Community Health Centers
  – National Center for Health in Public Housing

• Physician and other health professional organizations
  – AAP
  – American Association of Family physicians
  – American College of Obstetricians and Gynecologists
  – NAPNAP
  – AWHONN

• Early childhood education programs
  – Healthy Start
  – Child Care Aware
  – National Child Care Association
Category #3: Problem Solving

• Focus on populations at highest risk
  – African Americans
  – AI/AN
• Special concerns
  – Breastfeeding
  – Bedsharing
  – smoking cessation
• Interventions that reach non-primary caregivers with consistent messages and practices
  – Grandparents
  – Babysitters
• Identify and address barriers
• Provide strategies and products that remove obstacles to practicing safe sleep
• Build a sense of efficacy
Targeting high-risk populations

- Intervention with low-income mothers at WIC
  - 15 minutes educational session
  - Answers frequently asked questions
    - Aspiration/choking
    - Infant comfort
    - Vigilance while sleeping
  - Effective in increasing knowledge and changing behavior

May 20, 2015
Breaking down Barriers

• Free crib programs
  – Bedtime Basics for Babies
  – Cribs for Kids
Cribs for Kids

- Provides a Graco Pack n Play (portable crib) to low-income families who do not have a crib
- Since 1998, >300,000 safe sleep environments have been given to families nationally
- >500 partners in the US
- In Alleghany County (Pittsburgh), PA
  - >23,000 cribs given out
  - Only 1 death (went to grandmother’s house without Pack n Play, died on grandmother’s bed)
  - In 1998, 20 SUID annually in County
  - Now, 6-9 SUID annually in County
Strategies that Remove Obstacles to Safe Sleep

• Soft bedding
• Bedsharing
HALO® In-Hospital SleepSack® Program

• Provides free swaddle wearable blankets to hospital NICUs and well baby nurseries to replace traditional blankets
• >1300 hospitals in U.S. and Canada participate in Safer Way to Sleep-Standard of Care program
  – Approximately 1.8 million births annually
  – 80% of these hospitals offer In-Hospital Modeling Program, use HALO® SleepSack® Swaddles instead of receiving blankets
  – Laundered and re-used
  – 40% hospitals offer Take-Home program: send parents home with HALO® SleepSack® Swaddle embroidered with hospital logo

NAPPSS
National Action Partnership to Promote Safe Sleep
A Wake-Up Call to Safeguard Sleeping Infants
HALO® Bassinest™ Swivel Sleeper

• Currently in-home version
• Working on a model that can be used in hospitals
Culturally sensitive strategies

Native American cradleboard

New Zealand wahakura

New Zealand pepi-pod
Cessation in Pregnancy Incentives Trial (CPIT): Phase II pilot study

Professor David Tappin
david.tappin@glasgow.ac.uk

on behalf the CPIT Research Team
Benefits of Smoking Cessation During Pregnancy

• 70% women have babies - pregnancy ideal opportunity to help

• >20% of pregnant women smoke in Scotland - <1 in 20 quit

• Protects from miscarriage, stillbirth, 4000 UK deaths annually pre-term birth & low birth weight

• Lifelong benefits include reduced incidence asthma, ADD & adult CVD

• Children of smokers usually smoke themselves

• Extra pregnancy (£100-£700) & first year health services costs (£150 - £300) per smoker
All women in Greater Glasgow & Clyde HB area who smoked offered enrolment over 15 months

612 pregnant smokers enrolled

306 normal care

Usual NHS support

9% quitters

306 incentives

Up to £400 contingent on setting quit date & abstinence @ 4, 12 & 34-38 weeks PLUS usual NHS support

Primary Outcome
Cessation in late pregnancy (saliva cotinine validated)

23% quitters

Tappin et al, BMJ 2015; 350:h134
Building a sense of efficacy

• Low self-efficacy => Poor adherence
  – SIDS is “God’s will” or “fate”

• SIDS vs Suffocation
  – Will parents have higher levels of self-efficacy?
    – Will that change behavior?

• Testing messages in HRSA-funded randomized controlled trial
Other interventions that problem solve...

• ** Culturally specific education and outreach programs**
  – Safe to Sleep public education campaign (African-American outreach; AI/AN outreach)
  – Church Peer Educators: County public health department of Alameda, CA

• **Outreach to grandparents, siblings, teens, babysitters**
  – The North Carolina Healthy Start Foundation (focus on grandmothers)
  – SIDS of NJ programs in schools
  – Red Cross training for babysitters

• **Interventions that help families meet their breastfeeding and safe sleep goals**
  – Baby Friendly hospitals that incorporate safe sleep practices
  – Lactation consultants that promote safe sleep practices
  – Safe sleep strategies and interventions that promote breastfeeding

• **Interventions that help families address challenges of fatigue, fussy babies within the context of safe sleep practices**
  – Nurse-Family Partnership Home Visiting PRogram
Problem Solving Interventions: Advantages

- Personalized: “for my baby”
- Can be more nuanced
- Family-centered
- Can be more culturally sensitive
Problem Solving Interventions: Disadvantages

• The “solution” that everyone agrees on may not be the safest solution
  – Example: you may not get a parent to stop smoking, but you may be able to get her to smoke fewer cigarettes
  – Weigh risks vs benefits

• Risk of sending inconsistent messages
• Little data on this yet
Making problem solving interventions more effective

• Association of Clinicians for the Underserved
• American College of Nurse Midwives
• Coalition 4 Quality Maternity Care
• American Association of Birth Centers
• Ideas42
• National Council of Urban Indian Health
• Urban Indian Health Institute
• Black Women’s Health Imperative
• United States Breastfeeding Committee
• African American Breastfeeding Network
• Faith-based organizations
From Campaigns to Conversations
Conclusions

• We know a lot about safe sleep
• We do not know a lot about what works in safe sleep
  – Effectiveness = sustainability
  – Need to collect data on effectiveness
• There are a lot of creative and passionate people working on this
  – Want to spur additional creativity and collaboration
  – New collaborations with new people
  – May need to get out of your comfort zone
Don’t be this....
Be this...