

# SAFE SLEEP: PARTNERING WITH TREATMENT PROVIDERS

**TELLING STORIES TO SAVE LIVES** 



#### **KEY FUNDING PARTNER**

#### **Federal Acknowledgement**

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#### **Prioritizing Personal Wellbeing**

Considerations for Fatality Review Convenings

The content of today's meeting may include information about individual or aggregate fetal, infant, or child deaths. This may evoke strong feelings or other distress. Please prioritize your own wellbeing during this meeting, even if you need to step away from the meeting. Contact the Suicide & Crisis Lifeline at 988 via phone or text for additional support.

#### **HOUSEKEEPING**

Before we get started

- This webinar is being recorded and will be available on the National Center's webpage (URL: <a href="www.ncfrp.org">www.ncfrp.org</a>).
- Participants are muted. Use the question-and-answer box ask questions.
- Contact the National Center (email: <u>info@ncfrp.org</u>) for any tech problems.





### EVALUATION

https://www.surveymonkey.com/r/32BRMMX

#### Diane Pilkey, RN, MPH

**Federal Welcome and Introductions** 

#### **Senior Nurse Consultant**

Division of Child, Adolescent and Family Health

Maternal and Child Health Bureau

Health Resources and Service Administration





HRSA'S VISION FOR THE NATIONAL CENTER

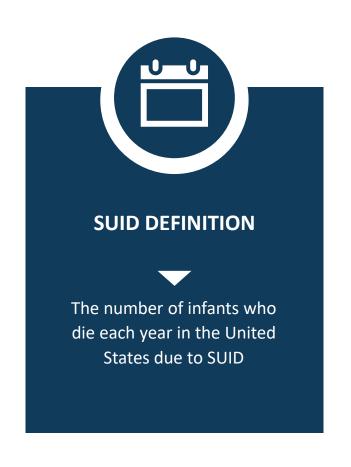
# Improving Systems of Care and Outcomes for Mothers, Infants, Children, and Families

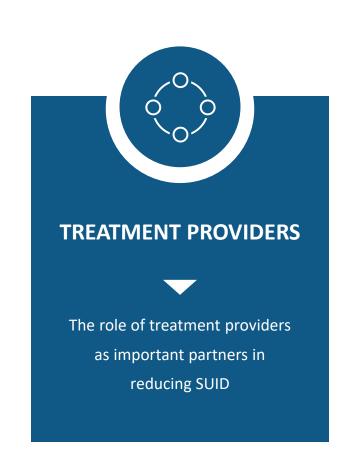
Assist state and community programs in:

- Understanding how CDR and FIMR reviews can be used to address issues
   related to adverse maternal, infant, child, and adolescent outcomes
- Improving the quality and effectiveness of CDR/FIMR processes
- Increasing the availability and use of data to inform prevention efforts and for national dissemination

#### **Agenda**

At the end of this presentation, attendees will have increased knowledge about







#### **Speakers**

The speakers have no financial relationships or interests to disclose



Tierney Morrison, MD Boston Children's Hospital



Alexa Erck, MPH
Centers for Disease Control
and Prevention



Abby Collier, MS National Center



### DEFINING SUID

The Need for More Information than Available on Death Certificates

### **Centers for Disease Control and Prevention**National Center for Chronic Disease Prevention and Health Promotion



#### Sudden Unexpected Infant Death and Safe Sleep

Alexa B Erck Lambert, MPH

National Center for Fatality Review and Prevention Webinar Safe Sleep: Partnering with Treatment Providers



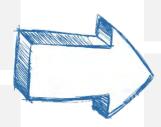
- O CDC's SUID and SDY Case Registry
- Sudden Unexpected Infant Death
- Safe Sleep
- Risk Factors for Suffocation and Unexplained Causes of Infant Death

- O CDC's SUID and SDY Case Registry
- 2 Sudden Unexpected Infant Death
- Safe Sleep
- **4** Risk Factors for Suffocation and Unexplained Causes of Infant Death

#### SUID and SDY Case Registry Goals

Conduct populationbased SUID and SDY surveillance

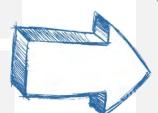
Improve data quality and consistency



Understand and monitor trends and characteristics associated with SUID and SDY

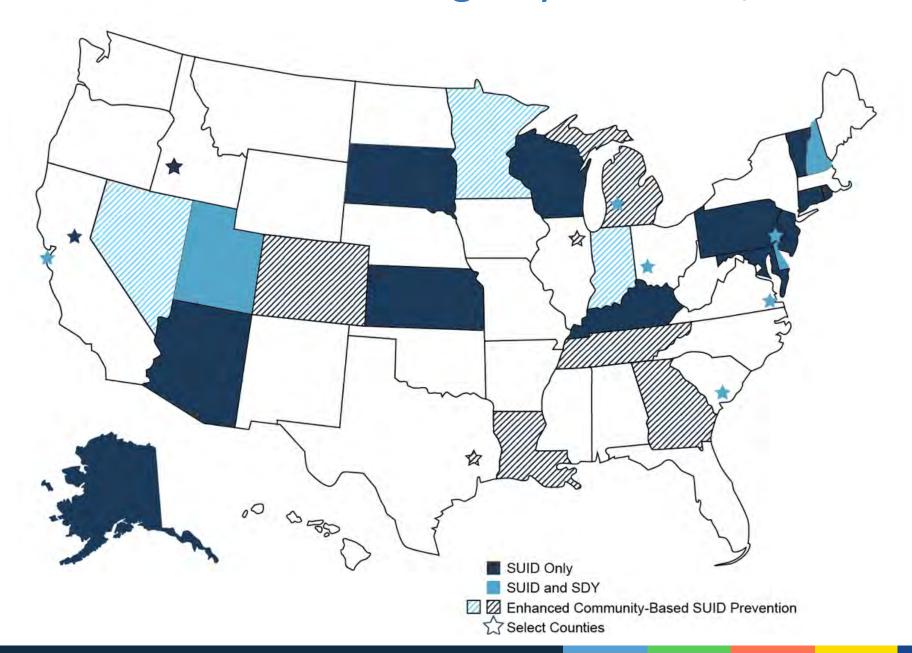
Identify factors that may affect risk

Improve death investigations



Use data to inform prevention activities and reduce infant and child death rates

#### Current SUID and SDY Case Registry Awardee, 2023-2028



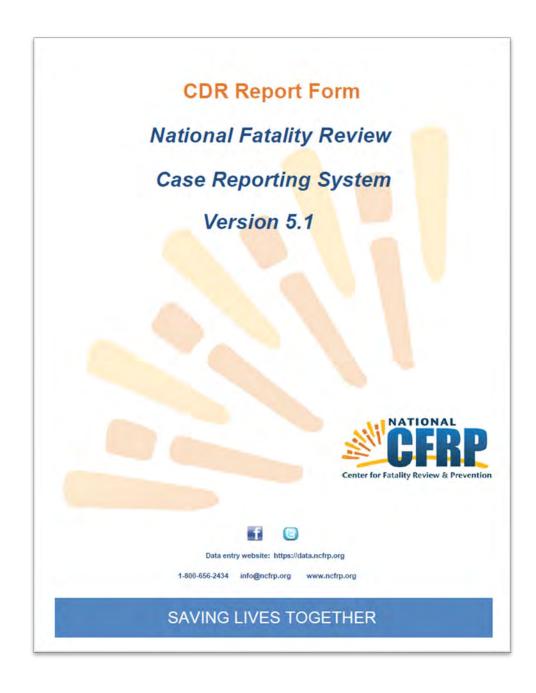
## The SUID and SDY Case Registry is built on existing Child Death Review programs which are supported by the National Center for Fatality Review and Prevention





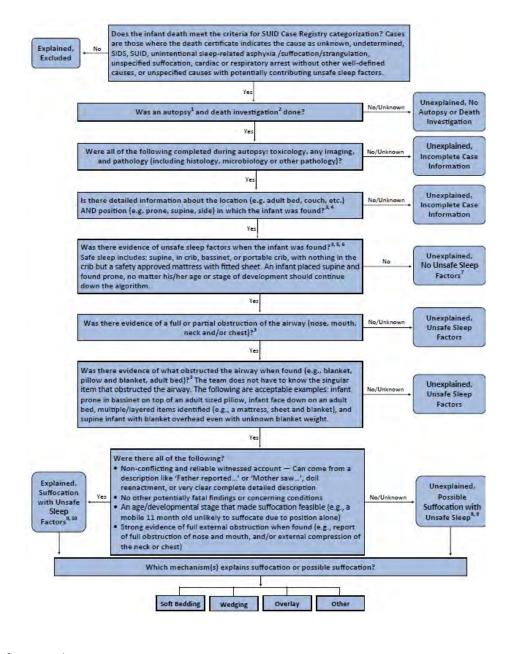
Multidisciplinary Child Death Review Teams review and compile information on SUID and SDY cases, including data from multiple sources such as:

- Death certificates
- Autopsies
- Death scene investigations
- Law enforcement reports
- Child protective services records
- Medical records



Information about SUID and SDY cases shared at Child **Death Review Team** meetings is entered into the **National Fatality Review-Case Reporting System** which houses the SUID and **SDY Case Registry data** 

# Child Death Review and SDY Advanced Review Teams categorize cases using Case Registry classification algorithms



- O CDC's SUID and SDY Case Registry
- **2** Sudden Unexpected Infant Death
- Safe Sleep
- 4 Risk Factors for Suffocation and Unexplained Causes of Infant Death

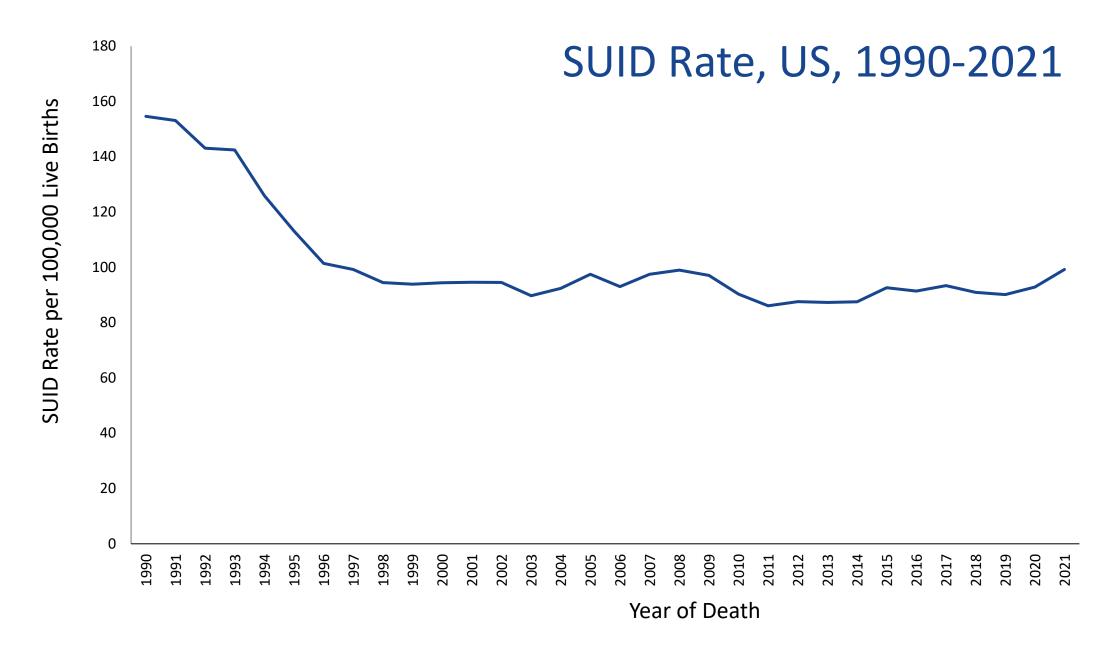
#### Sudden Unexpected Infant Death (SUID)

#### 3,400 deaths occur each year in the U.S.

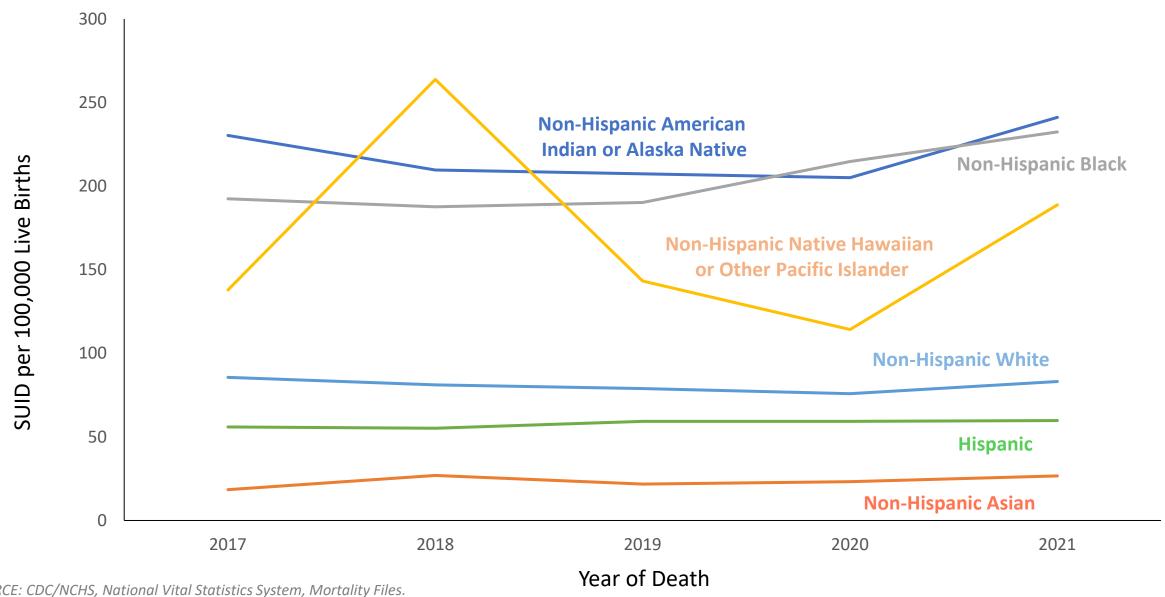
- Deaths of infants less than 1 year old
- Often occur during sleep or in a sleep environment

#### SUID includes:

- Sudden Infant Death Syndrome (SIDS)
- Accidental suffocation and strangulation in bed
- Undetermined causes

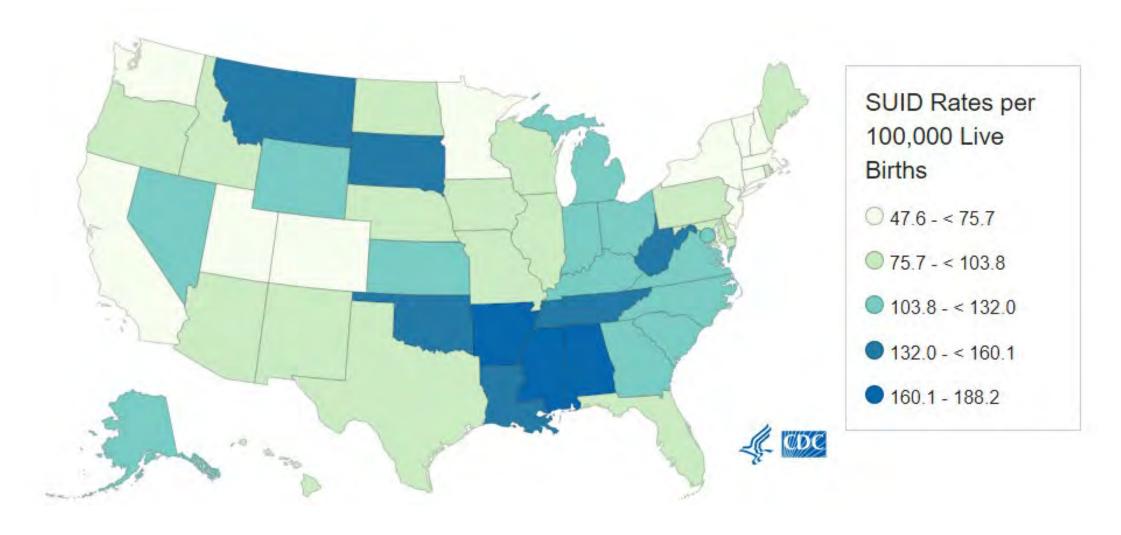


#### Racial and Ethnic Disparities Exist and Persist in SUID



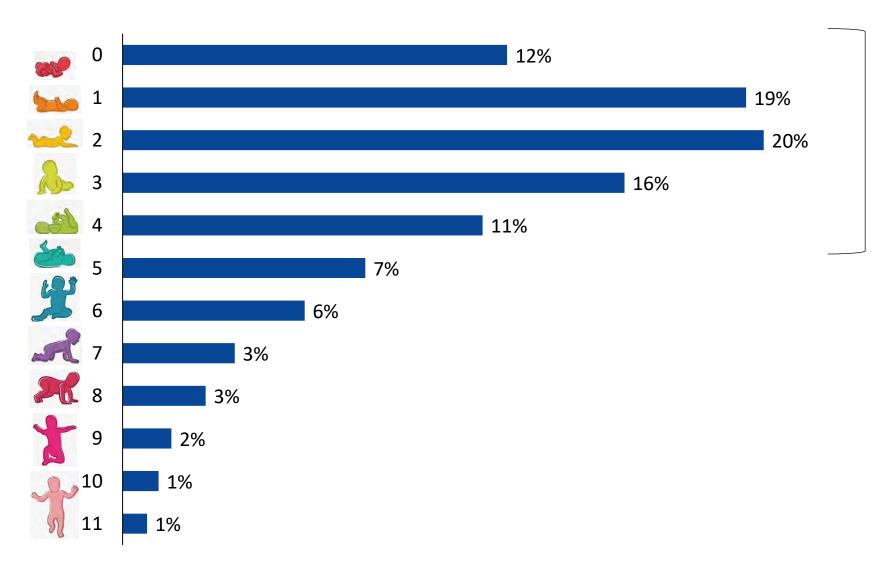
SOURCE: CDC/NCHS, National Vital Statistics System, Mortality Files. SUID includes ICD10 codes R95, R99 and W75.

#### SUID Rates Vary Widely By State, 2016-2020



<u>Data and Statistics for SIDS and SUID | CDC</u>

#### Age at Death in Months

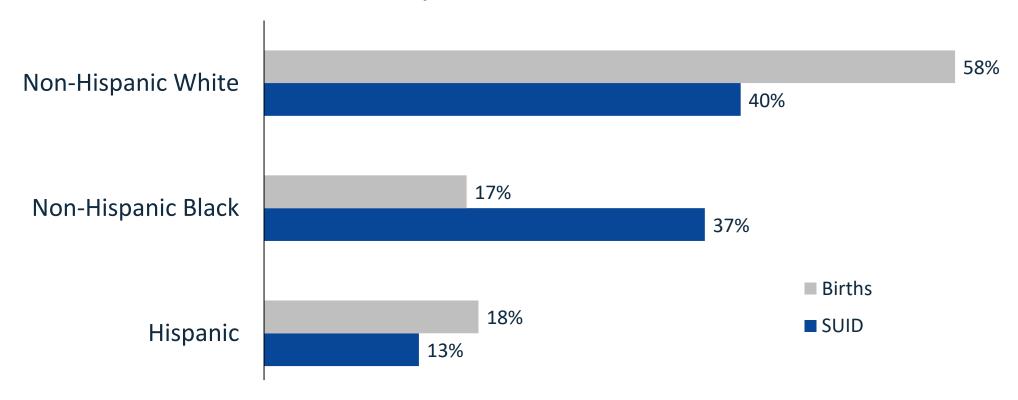


Most (78%) SUID were less than 5 months of age

SOURCE: SUID and SDY Case Registry, 2010-2020



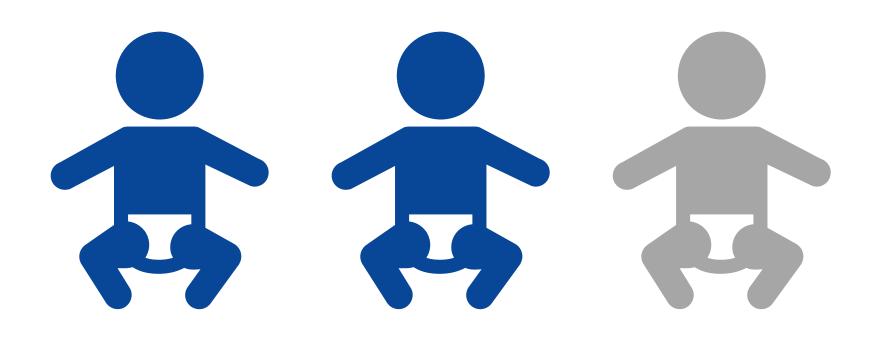
#### Infant Race and Ethnicity



#### 2% missing or unknown among SUID

Births represent the same years and jurisdictions as the SUID Case Registry - United States Department of Health and Human Services (US DHHS), Centers for Disease Control and Prevention (CDC), National Center for Health Statistics (NCHS), Division of Vital Statistics, Natality public-use data 2007-2020, on CDC WONDER Online Database

### Two thirds of infants were publicly insured (e.g., Medicaid)



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- 2 Sudden Unexpected Infant Death
- **3** Safe Sleep
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# WHAT DOES A SAFE SLEEP ENVIRONMENT LOOK LIKE?



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Room share: Give babies their own sleep space in your room, separate from your bed.



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Use a firm, flat, and level sleep surface, covered only by a fitted sheet.\*



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Couches and armchairs are not safe for baby to sleep on alone, with people, or with pets.



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Remove everything from baby's sleep area, except a fitted sheet to cover the mattress.

No objects, toys, or other items should be in baby's sleep area.



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Use a wearable blanket to keep baby warm without blankets in the sleep area.

Make sure baby's head and face stay uncovered during sleep.



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Place babies on their backs to sleep, for naps and at night.



HONOR THE PAST, LEARN FOR THE FUTURE

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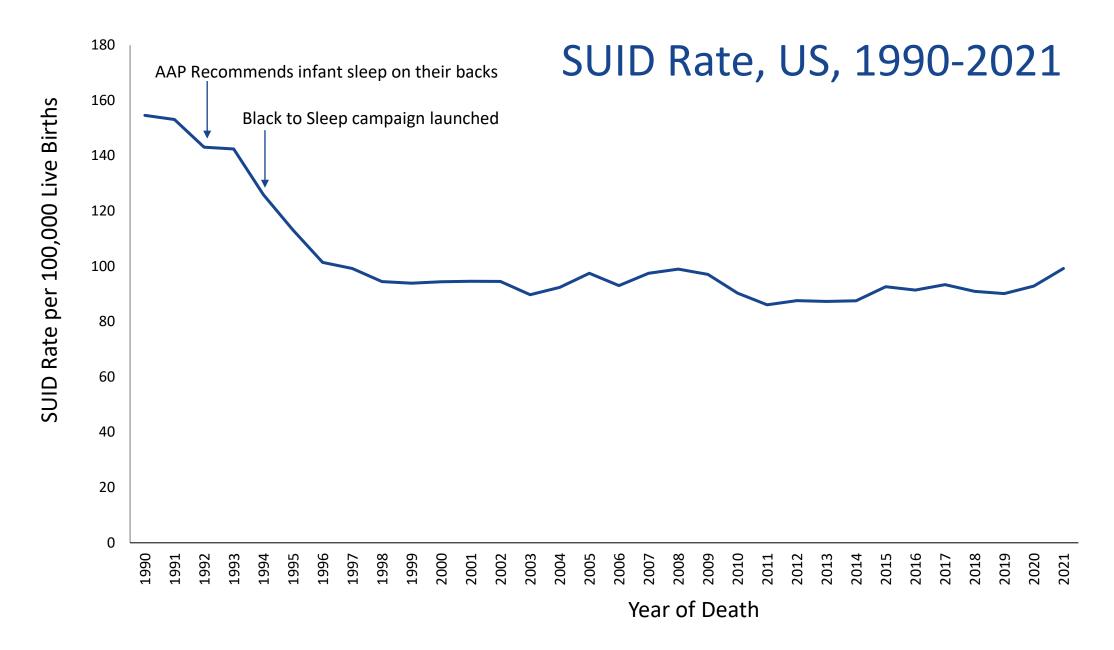
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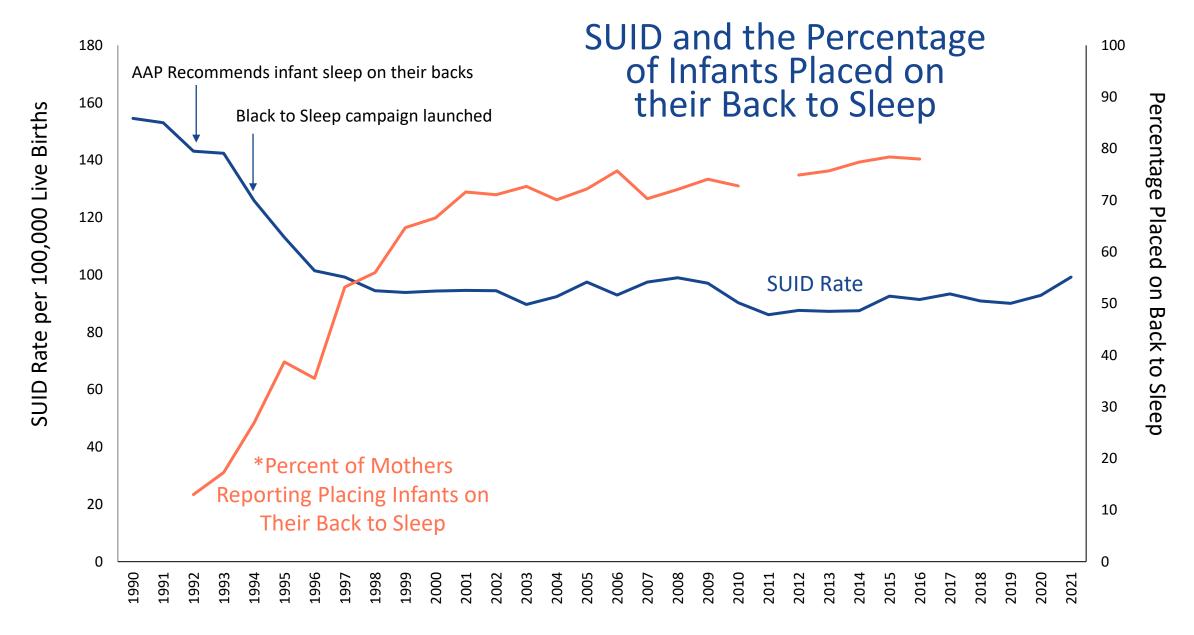


Place babies on their backs to sleep, for naps and at night.



Keep baby's surroundings smoke- and vape-free.



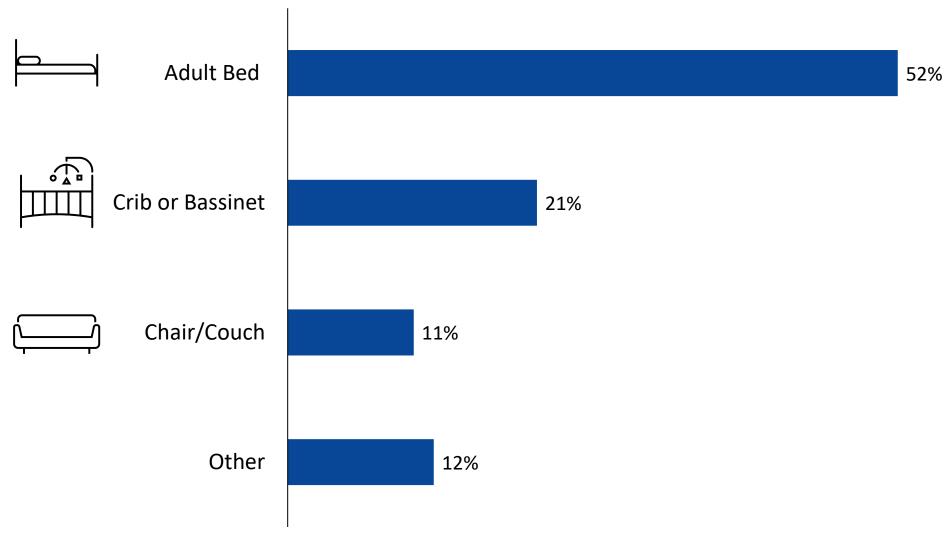


<sup>\*</sup>Data for placing infants on their back to sleep is from 4 data sources: PRAMS 2016 data-unpublished; www.cdc.gov/prams/pramstat/pdfs/mch- indicators/PRAMS-All-Sites-2012-2015-508.pdf; Colson ER, Rybin D, Smith LA, et al. Archives of Pediatric and Adolescent Medicine 2009;163:1122–8; and Colson ER, Geller NL, Heeren T, et al. Pediatrics 2017; 140 (3) e20170596 SOURCE: CDC/NCHS, National Vital Statistics System, Mortality Files. SUID includes ICD10 codes R95, R99 and W75.





### Infant Sleep Place When Found



4% missing or unknown Other includes floor and infant seats. Adult bed includes water beds and futons.

SOURCE: SUID and SDY Case Registry, 2010-2020



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- **4** Risk Factors for Suffocation and Unexplained Causes of Infant Death

## Risk Factors for Suffocation and Unexplained Causes of Infant Death—United States 2016–2017

Sharyn E. Parks, PhD, MPH
Commander, United States Public Health Service

Study Co-authors:

Carla L. DeSisto, PhD, MPH
Katherine Kortsmit, PhD, MPH
Jennifer M. Bombard, MSPH
Carrie K Shapiro-Mendoza, PhD, MPH



#### **Centers for Disease Control and Prevention**

**National Center for Chronic Disease Prevention and Health Promotion** 

— Division of Reproductive Health

DISCLAIMER: The opinions expressed in this presentation are the author's own and do not reflect the view of the Centers for Disease Control and Prevention, the Department of Health and Human Services, or the United States government



### **Study Overview**

## Used population-based case-control study design and CDC surveillance data from 2016-2017





Sudden Unexpected Infant Death and Sudden Death in the Young Case Registry





Pregnancy Risk
Assessment Monitoring
System

### Summary

MAGNITUDE OF RISK		
Sleep-Related Risk Factors	Sleep- related Suffocation	Unexplained death
Non-Supine Position	1.9X	1.6X
Soft Bedding	16.3X	5.0X
Non-Approved Sleep Surface	3.9X	No Association
Not Room Sharing with Caregiver	18.7X	7.6X
Surface Sharing	2.5X	2.1X

- CDC's Classification system allowed the examination of Unexplained death (including SIDS) separate from Suffocation
- Risk factors for Unexplained death, including SIDS, are also risk factors for Suffocation except for non-approved sleep surface

## Acknowledgements

#### **Centers for Disease Control and Prevention**

Carri Cottengim, Sharyn Parks Brown, Carrie Shapiro-Mendoza, Tiffany Colarusso, Yousra Mohamoud, and Emily Osteen Johnston

**SUID and SDY Case Registry Data Coordinating Center** 

**National Center for Fatality Review and Prevention** 

#### **SUID and SDY Case Registry Awardees**

Alaska, Arizona, San Francisco (CA), Colorado, Delaware, Georgia, Cook County (IL), Indiana, Kentucky, Louisiana, Maryland, Michigan, Minnesota, Nevada, New Hampshire, New Jersey, New Mexico, Pennsylvania, Tennessee, Tidewater Region (VA), Utah, Pierce County (WA), and Wisconsin

## Thank You

Alexa Erck xwp5@cdc.gov

For more information, contact CDC 1-800-CDC-INFO (232-4636)
TTY: 1-888-232-6348 www.cdc.gov

The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.





## PARTNERING FOR PREVENTION

SUID-Reducing Infant Care Practices Among Opioid-Exposed Newborns

## SUID-Reducing Infant Care Practices Among Opioid-Exposed Newborns

Tierney Morrison MD
Instructor in Pediatrics, Harvard Medical School
Boston Children's Hospital





## **Disclosures**

• I have no conflicts of interest





## Objectives

 Increase your knowledge about the number of infants who die in sleep environments and identify prevention opportunities.

 Provide resources for encouraging infant safe sleep and problem-solving strategies for parents/caregivers.

Encourage OTPs to discuss safe sleep with their patients.

## Background

- Sudden Unexpected Infant Death (SUID)
  - Leading cause of infant mortality
  - 3,700 infant deaths annually
  - Rates are stagnant

### **SUID-Reducing Sleep Practices**



Safe Infant Sleep | Iowa Department of Health and Human Services





<u>Do Babies Need Crib Bumpers, and Are They Safe? – Nursery & Kid's Room Décor Ideas | My Sleepy Monkey</u>

Prenatal Smoke Exposure | SiOWfa13: Science in Our World (psu.edu)





## Review of Research Findings

American SIDS Institute Grant (PI Margaret Parker, MD)

 SUID-Reducing Infant Care Practices Among Opioid-Exposed Newborns

Sleeping, feeding, smoking

## Brief Background

• Exponential increase in births to opioid-exposed infants

- Disproportionate numbers of SUID deaths among infants with prenatal opioid exposure
  - E.g. ~40% of SUID in MA from 2011-2015 occurred in infants with opioid exposure

## Mother-Infant Dyads with Opioid Exposure are Not the Same as those without Opioid Exposure

#### **SLEEP**

Infants have impaired sleep regulation, irritability and tone

Non-pharmacologic hospital care to prevent neonatal opioid withdrawal

syndrome (NOWS)

- Continuous rooming-in
- Swaddling
- Skin-to-skin care



## Unique Experiences of Mothers with OUD BREASTFEEDING

 Associated with decreased rates of pharmacologic treatment, shorter birth hospitalization

- Breastfeeding substantially lower in this population
- Mixed or changing messages about breastfeeding eligibility
- Difficulty latching and/or need fortification with formula

## Unique Experiences of Mothers with OUD

#### **CIGARETTE SMOKING**

 Smoking is highly prevalent (>70%) compared to the general population (5-10%)

## Summary

 Experiences of mothers and infants with opioid exposure are different than the general population

 Must consider the unique experiences of mothers with OUD

 Overarching goal to understand decision making among mothers with OUD to inform larger research studies

## Specific Aims

 Qualitative: Understand maternal decision-making regarding infant sleep practices, feeding practices and smoking cessation and barriers and facilitators

### Qualitative Methods

23 in-depth interviews with mothers with OUD

- Recruited from Boston Medical Center, Washington University, Mass General Hospital, Baystate Medical Center, and a residential treatment facility in Boston
- Eligibility:
  - Term infant 1-6 months old
  - Mother with OUD and infant exposed to opioids
  - Mother caring for infant in the home

## Qualitative Methods

- Question guide based on Theory of Planned Behavior, a framework to understanding decision-making in health behaviors
- Inquired about sleeping, feeding, and smoking practices

TPB Domain	Definition
Attitudes	How favorably or unfavorably someone views a behavior
Perceived control	Belief in one's control over performing a behavior
Self-efficacy	Confidence in one's own ability to perform a behavior
Subjective norms	What one believes others think about engaging in the behavior

Iterative approach to coding and theme development

## Qualitative Results

Characteristics	N = 23
Non-Hispanic white	70%
HS or less than HS education	52%
Live in residential treatment facility	22%
Smoked prenatal and postnatal period	58%
Smoked prenatal only	26%
Initiated breastfeeding	70%
Breastfeeding continuation (n = 16)	
<1 week	25%
1-4 weeks	25%
5+ weeks	50%

## Sleep Practice Results Highlights

Themes	Quotes
Attitudes Mothers chose sleep practices that optimized infant comfort, well-being and sleep duration	"Oh he really likes sleeping [on] his stomach. He finds it really comfortable. It's the only way that he will sleep without needing to be swaddled"
Perceived Control  Mothers engaged in behaviors that they believed mitigated infant withdrawal symptoms, thereby facilitating sleep	"There has been a time or two she needed to be up against me because she was having gas"

#### Perceived control Mothers living in residential treatment facilities described a

**Themes** 

stress

Quotes

"I did it [bed-sharing] like twice, maybe three times, but I wasn't really co-sleeping [bed-sharing] with her. I was up and she was like laying on my bed but they still consider that co-sleeping [bed-sharing] just in case you doze off or something and the baby rolls over and falls off or, you

lack of autonomy regarding decision-making toward infant sleep practices

know? I think it's pretty dumb, but hey, they're rules." "I had so many co-sleeping [bed-sharing] incidents, they [residential home staff] did file a 51A [a report for child abuse or neglect] with DCF [child protective services]."

Self-efficacy Maternal exhaustion and stress impacted their ability to consistently practice safe infant sleep and access

supports; managing one's recovery was a major source of

"I had to develop a schedule for him and get him into his schedule because I was still responsible for going to groups here at the program [the residential treatment program]. So, I had to get him to get on my schedule otherwise I was exhausted from being up all night." "My husband suffers from addiction and he...wasn't doing

well so I was like solo here. Trying to cope with this

[helping baby sleep]."

## Sleep Practice Result Highlights

Themes	Quotes
Subjective Norms  Mothers observed and received conflicting messages about infant sleep from hospital staff, friends and family  Comments on variation of safe sleep adherence by staff (e.g. head of bed up)	"I have to keep his bed high at the top. Because ever since he was in the hospital, he's had his bed high up at the head because of gas or he was spitting up."

# Notable Differences in Infant Sleep Decision Making for Dyads with Opioid Exposure

#### • Infant:

NOWS make it difficult to perform safe sleep

#### Mother:

- Experience of recovery
- Lack of social supports
- External rules



## Feeding Practice Results Highlights

Themes	Quotes
Attitudes Attitudes about the perceived healthfulness and safety of breastfeeding drove decisions	"[My baby] obviously will receive whatever I'm eating or drinking. So, I'd rather be safe than sorry"
Perceived Control  Multiple challenges made breastfeeding difficult and led to early cessation	"I would have been able to breastfeed efficiently if he wasn't in withdrawal."

## Feeding Practice Results Highlights

Themes	Quotes
Self-efficacy Mothers weighed the efforts to maintain their own well-being, recovery and health against their ability to keep up with constant demands of breastfeeding	"I just couldn't wake up in the middle of the night and pump anymore for my own well-being, like my mental health, what was healthy for me, I couldn't do that."
Self-efficacy Sense of empowerment and motivation to breastfeed	"I hadn't done it before, and I wanted to have that experience."
Subjective Norms  Mothers received an array of advice from healthcare providers, family, friends, and social media  Different degrees of trust in the sources of advice	"The doctor would tell me no, that there was no issue with that, but I still felt deep down inside that there was, so I stopped [breastfeeding] and I started giving her just the bottle."

## Notable Differences in Infant Feeding Decision Making for Dyads with Opioid Exposure

#### Infant:

- NOWS make it difficult to establish breastfeeding
- Mother:
  - Experience of recovery
  - Lack of social supports
  - Varied advice



## Smoking Cessation Result Highlights

Themes	Quotes
Attitudes Mothers believed smoke exposure was harmful to their infants and worsened infant withdrawal	"Unfortunately [my son] did go through a bad withdrawal. I thinkif I wasn't a smoker, then I don't think his withdrawal would have been as bad."
Perceived Control  Mothers used risk mitigation strategies to reduce harmful effects; sometimes these decisions were made by mothers and sometimes by external rules	"They [residential treatment program] don't allow us to smoke in the buildingeverything's outside."
Many comments about details to reduce smoke exposure (behaviors, cut down, etc); also comments from residential treatment facilities	

## Smoking Cessation Result Highlights

Themes	Quotes
Self-efficacy Mothers motivated to quit or reduce smoking to promote health of infants	"I smoked throughout my pregnancy. But the day I had my daughter was the day I quit smoking"
Self-efficacy Mothers continued to smoke because they viewed dealing with the stressors of caregiving and recovery as a higher priority than quitting smoking	"Quitting smoking can be very stressful and having a baby is stressful. Being in recovery can get stressful. Putting all three of those together, I'm only a year and four months in recovery. I don't want to put all those [stressors] together and end up setting myself up [to relapse] [I] don't want to risk anything, even something little like trying to quit smoking"

## Notable Differences in Smoking Decision Making for Dyads with Opioid Exposure

#### • Infant:

- Belief about smoking and influence on infant withdrawal

#### Mother:

- Experience of recovery and other co-morbid conditions
- Lack of social support
- External rules
- Exposure to other smokers



## Strengths and Limitations

Examination of SUID-reducing practices in a unique population

Perspectives may be limited

### Conclusions

Education (re withdrawal), consistent messaging

Development of more robust peer support programs

 Open dialogue between healthcare team members and mothers about safe sleep

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## Questions?



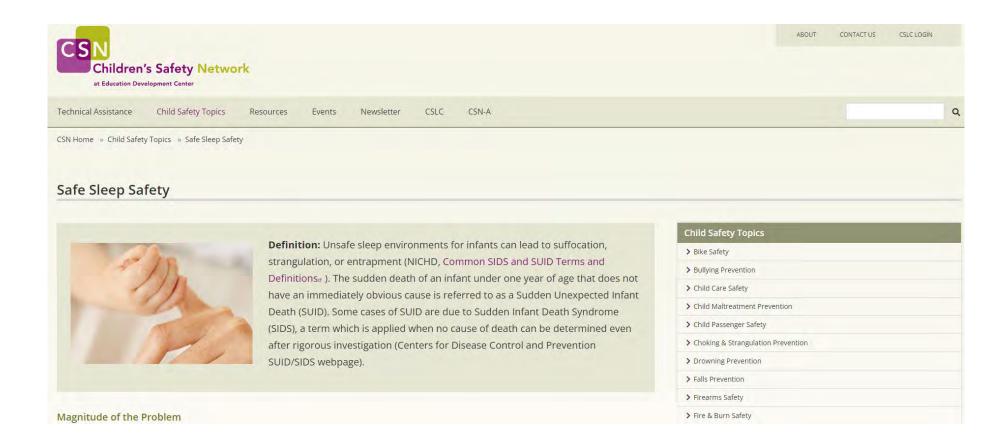
## RESOURCES

Celebrating More First Birthdays



### **Children's Safety Network**

Publications, Infographics, Webinars, Blogs, and Other Resources



### **American Academy of Pediatrics**

#### Sudden Unexpected Infant Death Prevention Program



#### Professional Tools & Resources







#### Safe to Sleep Campaign

Eunice Kennedy Shriver National Institute of Child Health and Development



### **Upcoming Webinars**

From the National Center

"Was it Really Pneumonia?" Challenging Sudden Unexplained Infant Death (SUID) Cases

> Wednesday, October 25, 2023 1:00-2:00 PM ET

This webinar will focus on the unique challenges of reviewing sleep-related infant deaths when pneumonia is listed as the cause of death.

Register here.

### **QUESTIONS**

#### What Additional Information Would Be Helpful?





#### **USE THE QUESTION-AND-ANSWER BOX**

The box is located at the bottom of the screen.



#### **UNANSWERED QUESTIONS**

All unanswered questions will be answered and posted on the National Center's website (URL: <a href="https://www.ncfrp.org">www.ncfrp.org</a>).



# EVALUATION

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Phone: 800-656-2434



info@ncfrp.org

