2022

Safe Sleep Oregon

Safe Sleep Workgroup Report and Recommendations







Oregon Health Authority
PUBLIC HEALTH

Contents

Intro

Raise Up Oregon: A Statewide Early Learning System Plan[1] identified prevention of sleep-related infant deaths as a priority for Oregon's early learning system. The Raise Up Oregon Agency Implementation Coordinating Team formed a workgroup tasked with developing recommendations for a statewide coordinated effort.

The charge of the workgroup was to:

1. Identify vulnerable populations and risk factors in Oregon for sleep related infant deaths
2. Identify and recommend effective, culturally appropriate prevention strategies

The workgroup met September 2020-February 2021 develop these ecommendations.

Workgroup Members

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Tami Kane-Suleiman	ODHS	Child Fatality Prevention and Review Program Manager
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- Tam Lutz, Maternal Child Health Programs Director, Northwest Tribal Epidemiology Center, Northwest Portland Area Indian Health Board
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1 https://oregonearlylearning.com/raise-up-oregon

Background

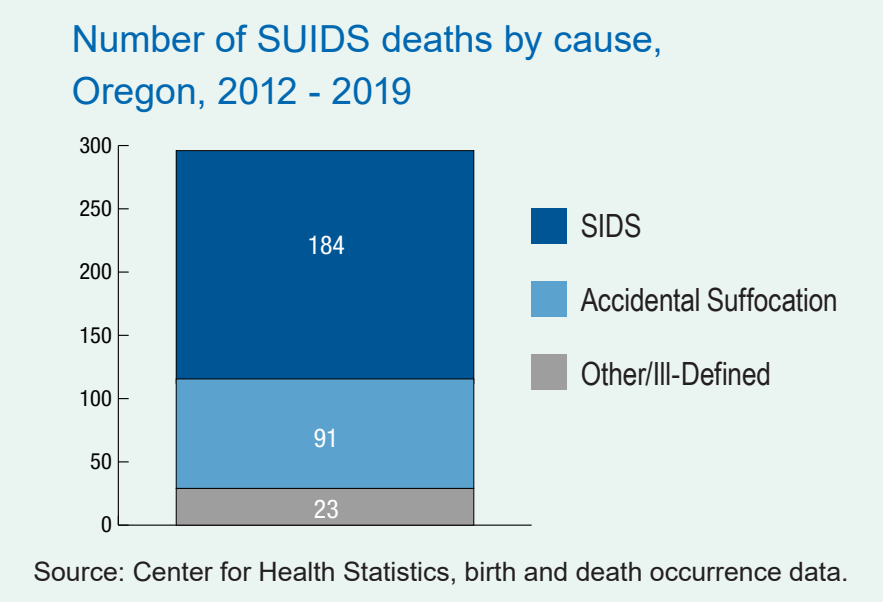
Definitions

Sudden Unexpected Infant Death (SUID) is the sudden, unexpected death of an infant less than one year old. The cause of a SUID can be attributed to suffocation, asphyxia, entrapment, infection, ingestion (e.g. choking), metabolic disorders, cardiac arrhythmia, and injuries. Sudden Infant Death Syndrome (SIDS) is a subcategory of SUID, which is a sudden death of an infant less than one year's old whose cause of death cannot be explained or classified after a detailed case investigation, autopsy, and clinical history review (American Academy of Pediatrics [AAP] and Centers for Disease Control and Prevention [CDC]).

The distinction between SIDS and other SUIDs, particularly those that occur during an unobserved sleep period (i.e. sleep-related infant deaths), such as accidental suffocation, is challenging, cannot be determined by autopsy alone, and may remain unresolved after a full case investigation.

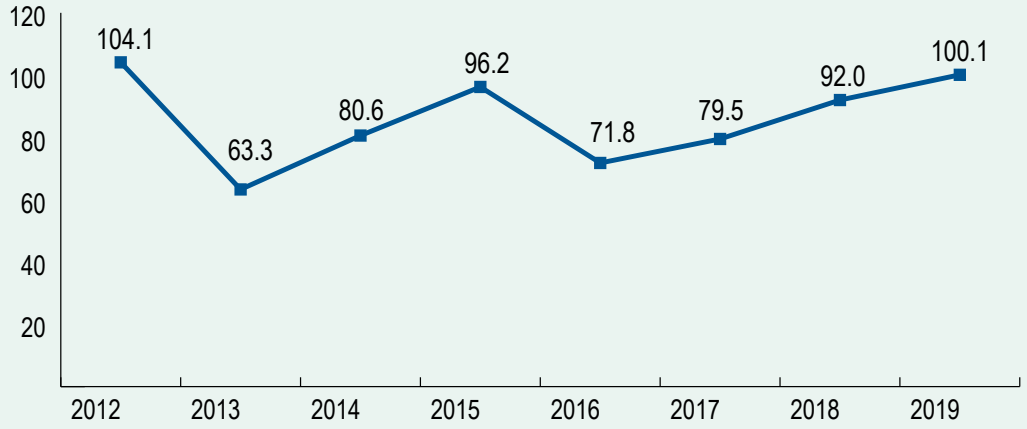
SUID Data

In Oregon, about 40 babies die in their sleep every year. The overall rate of SUID per 100,000 births in 2019 was 100.1. The rate of SUID by race/ethnicity in Oregon (and the U.S overall) demonstrates significant disparities. The large and persistent disparities seen are similar to that of other MCH outcomes.



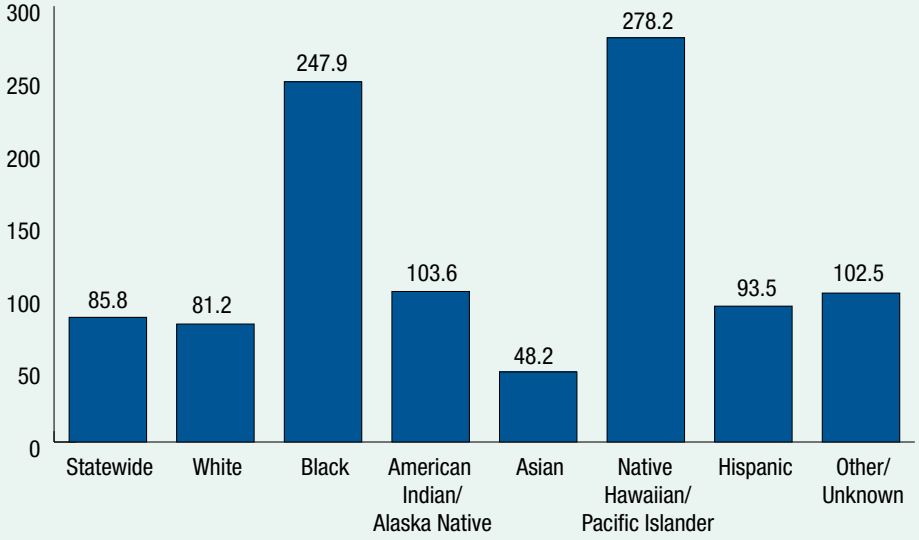
Source: Center for Health Statistics, birth and death occurrence data.

SUID Rate, Oregon, 2012 - 2019



Source: Center for Health Statistics, birth and death occurrence data.

SUID rate, by Race/Ethnicity, Oregon, 2012 - 2019



Source: Center for Health Statistics, birth and death occurrence data.

Safe Sleep Recommendations

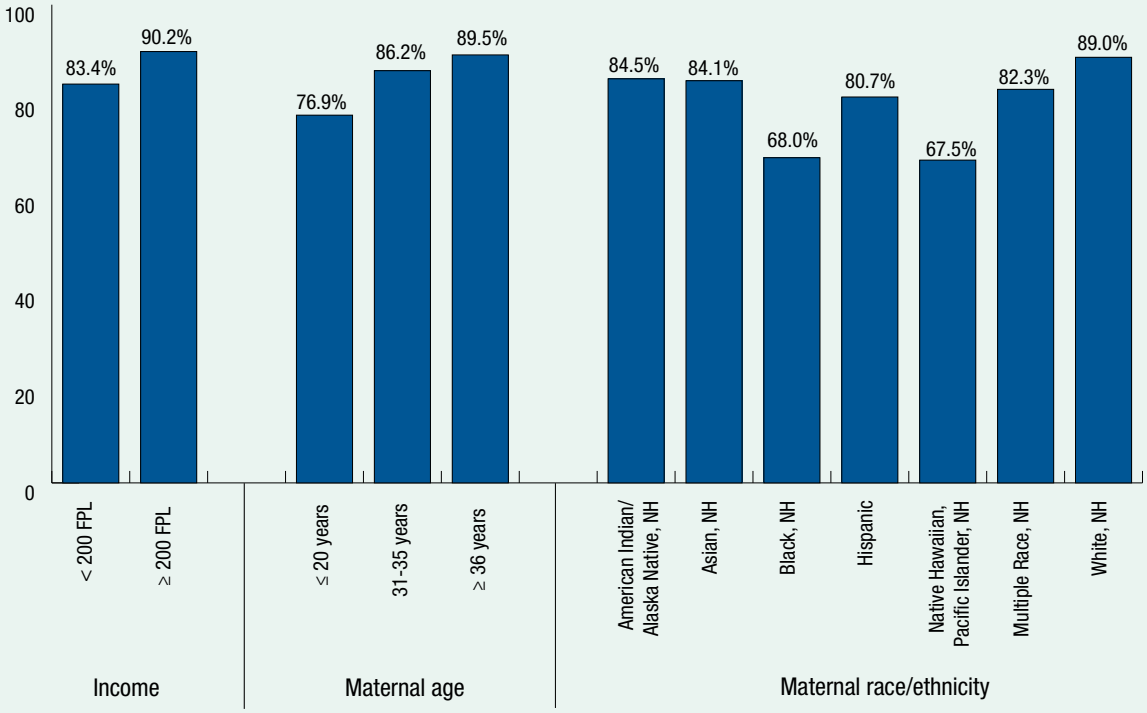
The American Academy of Pediatrics (AAP) policy statement, SIDS and Other Sleep-Related Infant Deaths: Updated 2016 Recommendations for a Safe Infant Sleeping Environment provides recommendations for building safe sleep environments. The AAP recommendations include:

- Back to Sleep for every sleep.
- Use a firm sleep surface.
- Breastfeeding is recommended.
- Room share without bed sharing.
- Keep soft objects and loose bedding away from the infant's sleep area.
- Consider offering a pacifier at nap time and bedtime once breastfeeding has been firmly established.
- Avoid smoke exposure during pregnancy and after birth. Encourage families to set strict rules for smoke-free homes and cars and eliminate exposure to secondhand smoke.
- Avoid alcohol and illicit drug use during pregnancy and after birth.
- Prenatal alcohol and/or illicit drug use in combination with bed-sharing places the infant at particularly high risk.
- Avoid overheating and head covering in infants.
- Pregnant women should obtain regular prenatal care.
- Infants should be immunized in accordance with recommendations of the AAP and Centers for Disease Control and Prevention (CDC).
- Avoid the use of commercial devices that are inconsistent with safe sleep recommendations.

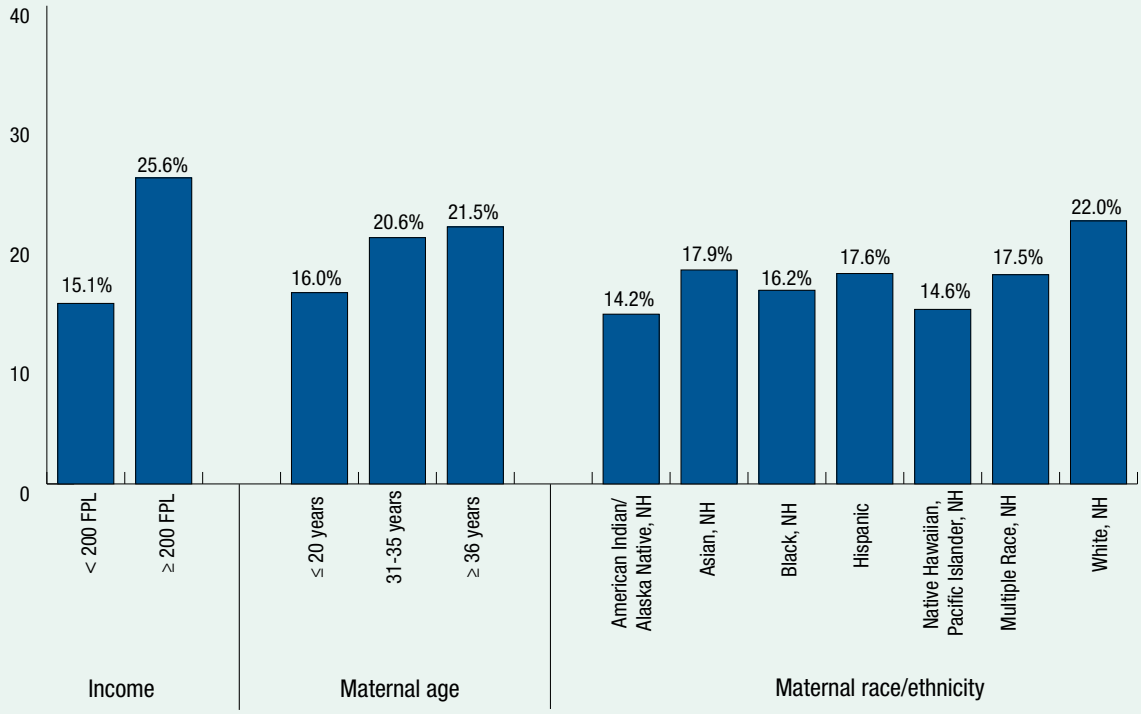
Safe Sleep Practices in Oregon

The Oregon PRAMS survey of post-partum mothers highlighted that 86% of people were placing their infant to sleep on their back, 44% reported babies sleeping without soft things, and 20% reported that their baby always slept alone in a crib. Mothers who have reported placing their babies on their sides or stomachs to sleep are more likely to be Non-Hispanic Black or Pacific Islander, younger (<20 years of age), and have lower incomes. Mothers who report that their baby does not sleep alone in a crib and sleeps with soft items are more likely to be Native Hawaiian/Pacific Islander or American Indian/Alaska Native, younger and have lower incomes.

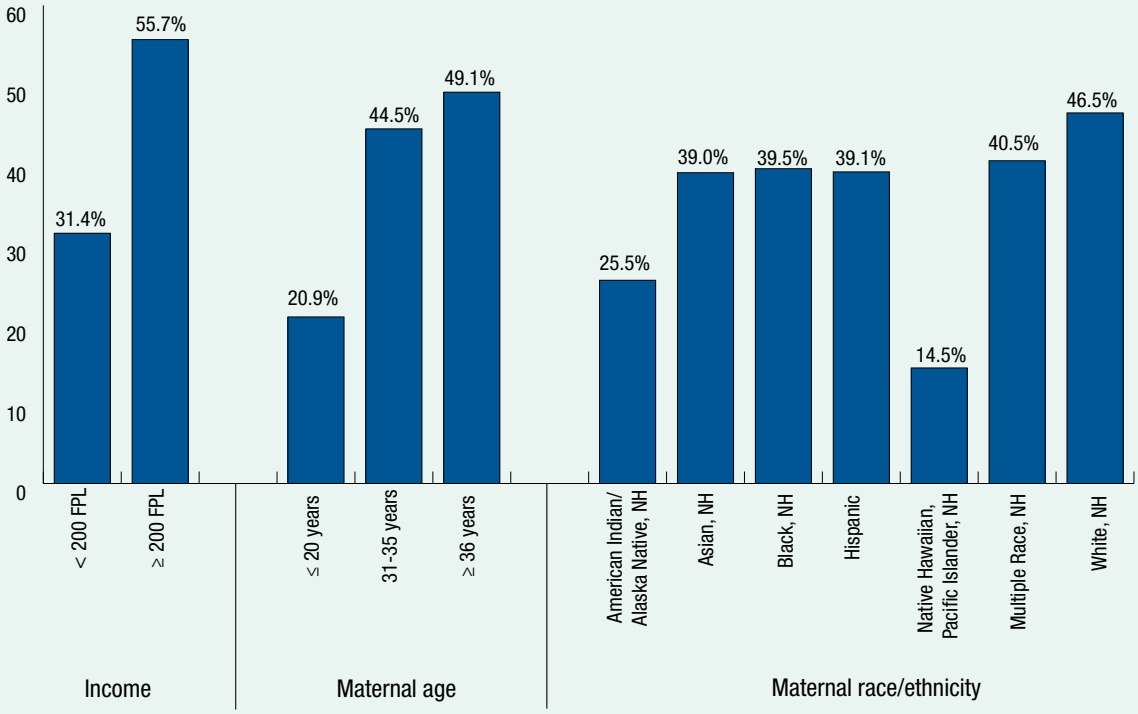
Baby is put on back to sleep, Oregon PRAMS, 2017 - 2019



Baby sleeps alone in crib, Oregon PRAMS, 2017 to 2019



Baby sleeps without soft items, Oregon PRAMS, 2017 to 2019



Framing the Work

The workgroup used scientific studies and national policy documents as the building blocks for their work in developing recommendations. Key among these were:

NICHQ Change Package

The goal of the NICHQ Safe Sleep Change Package summarizes the four primary drivers (PD) to help accomplish the goals of decreasing sleep-related infants deaths and improving safe sleep practices, followed by the secondary drivers (SD) to support the PD, the necessary recommended changes for every SD, and the states that are implementing those interventions.

Evidence- Based and Evidence- Informed Safe Sleep Practice: A literature review to Inform the Missouri Safe Sleep Strategic plan

This analysis reviews and compiles literature and evaluations of existing evidence-based safe sleep practice recommendations, regulations, and programs that include training and modeling for health care professionals, improve awareness and education for infant caregivers, and encourage local, state, and federal safe sleep policies.

Promising practice for Safe Sleep to Inform the Missouri Safe Sleep Strategic Plan

This document outlines emerging and promising state and national practices to support safe sleep- in states and communities.

Literature Review

A literature review was conducted with the intention of understanding safe sleep practice, risk factors, and interventions. Three databases were used for this literature search, which included PubMed, Scopus, and Google Scholar. The search phrases were "safe sleep," OR "safe sleep practice," OR "safe sleep education," "high-risk population," "risk factors," AND to narrow down the articles by pairing with keywords "modeling," "quality improvement," "teaching," "intervention*," "SUID," and "SIDS." Limited articles search to publications in English. After inputting the key terms and limiting the published articles to the last ten years, between 2015-2020, and removing duplicates, 38 articles were found. Each article was reviewed for relevance, and relevant articles were selected for the review. Finally, six articles were included in the literature review. The table was divided into three sections for participants/study design, result, and discussion. See appendix for summary of findings from scientific studies.

Opportunities and Challenges

While the overall rates of sleep-related infant deaths in Oregon are lower than the United States, there are major and persistent disparities by racial/ethnic group and there has not been a significant change in the rate in more than 20 years. We know that sleep is a major issue for parents and caregivers of infants and a complex one for the professionals who work with them.

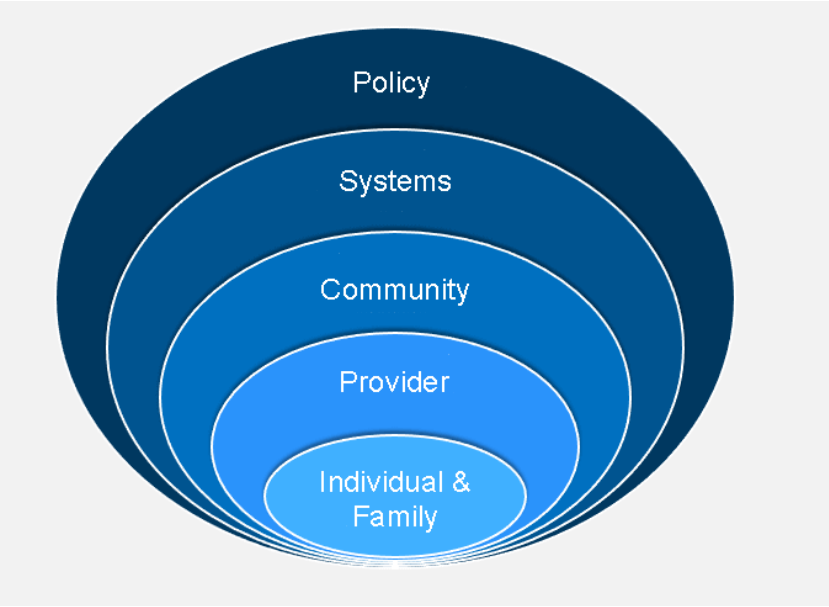
There are a number of activities in place aimed at decreasing sleep-related deaths in Oregon. Multiple state agencies, hospitals and community organizations are working to promote safe sleep. However, there is not a sustained, coordinated, statewide approach. In response, the work group framed a set of recommendations which can engage multiple partners and provide critical direction for promoting safe sleep in Oregon.

See appendix for more information about the recent safe sleep work of Oregon Department of Human Services (ODHS), Oregon's Early Learning Division (ELD) and the Oregon Health Authority (OHA).

Recommendations

It is important to note that the significant and persistent racial/ethnic disparities in sleep-related infant deaths and risk factors associated with these deaths are similar to those of preterm birth and other causes of infant mortality. Systemic racism, housing and food insecurity, poor access to prenatal care, smoking, and poor breastfeeding support all contribute to adverse health outcomes seen. An article in the Journal of Maternal and Child Nutrition suggests that a coordinated emphasis on reducing infant mortality by reducing tobacco use and preterm birth, addressing disparities, and promoting breastfeeding would be more effective than addressing sleep-related deaths in isolation. (Barktick and Tomori (2018). Sudden infant death and social justice: A syndemics approach)

The most successful public health interventions have been based on an understanding of health behaviors and the contexts in which they occur. The social ecological model (SEM) of health promotion considers the interplay between individual, provider, community, organizations/systems and societal factors. The model suggests that in order to prevent sleep-related deaths, it is necessary to act across multiple levels of the model at the same time. This approach is more likely to sustain prevention efforts over time than any single intervention. (McLeroy KR, Bibeau D, Steckler A, Glanz K. An ecological perspective on health promotion programs. Health Educ Q 1988, 15:351–377)



The workgroup recommendations were considered and presented here addressing multiple levels of intervention.

Policy

1. Support federal, state and community policies and practices that work to ensure safe sleep is a standard that is upheld across the state.

Policies and practices for state agencies and professionals including childcare providers, surveillance systems, hospitals, professional societies, and others are foundational to ensuring that safe sleep is a standard that is upheld across the state. Policies and practices that provide a supportive environment to reinforce messaging, impact parent and caregiver knowledge and behaviors, and keep babies safe are needed.

Activities

1a. Establish a Safe Sleep Coalition to coordinate and lead an integrated approach to safe sleep across health, education, addictions and mental health, public health, and early childhood systems at both the community and state levels.

1b. Promote the adoption of hospital/birth center safe sleep policies that require staff trainings on safe sleep recommendations, correct modeling of safe sleep practices, and parent education.

1c. Partner with Medicaid and commercial health plans to provide reimbursement for safe sleep education and/or for cribs.

1d. Advocate for additional safety testing of infant sleep products by the US Consumer Product Safety Commission.

1e. Ban crib bumpers in Oregon.

Systems

2. Work to understand and address barriers to safe sleep practices

Addressing contextual factors around health equity, culture and tradition is important. There may be multiple barriers, systemic disparities and cultural norms that prevent adherence to safe sleep recommendations.

Activities

2a. Provide portable cribs, sheets and sleep sacks to families who cannot afford a safe place for their babies to sleep.

2b. Develop an inventory of community-based safe sleep resources; identify service gaps in Oregon.

2c. Expand/enhance a statewide information and referral to link providers and the public to available community resources for safe sleep.

2d. Promote safe use of traditional sleep areas (e.g. cradleboards).

2e. Host Community Baby Showers with a safe sleep theme.

3. **Conduct ongoing monitoring and evaluation of safe sleep interventions and sleep-related deaths in Oregon.**

Data can allow local communities to pinpoint and find solutions for challenges in safe sleep practices. These activities help monitor the reasons for infant deaths and, with analyses, point communities in the direction for resolution.

Activities

3a. Evaluate local safe sleep interventions

3b. Standardize policies and practices for reporting and reviewing infant deaths.

3c. Consistently analyze and disseminate PRAMS and infant fatality data to inform interventions.

Community

4. **Develop consistent and clear public messaging campaigns.**

Many state agencies, hospitals, and community organizations in Oregon have used the AAP recommendations as a foundation for safe sleep messaging however messaging and communications outreach may not have addressed parent and caregiver concerns from their cultural perspectives and in the mediums and modes that are most accessible to target audiences. Having multiple settings share consistent safe sleep messages supports safe sleep practices by helping make them community-wide norm and expectation.

Messages and communications outreach should:

- Start prenatally
- Keep in mind that images that accompany messages can have a greater effect than the language
- Address language and literacy barriers
- Promote and support breastfeeding initiation and duration
- Consider harm reduction messages
- Address dangerous sleep products
- Set realistic expectations for infant sleep and acknowledge parent's need for sleep
- Provide rationale for recommendations

Activities

4a. Engage community members in message development in a meaningful way to better understand what messages resonate with community.

4b. Develop safe sleep messaging and images that can be used as a foundation in building local campaigns to meet the needs of their populations.

4c. Support targeted, community-level campaigns to populations with increased risk for sleep related deaths and those with increased barriers to accessing support services.

4d. Designate and support a state agency to coordinate development and dissemination of the educational materials.

4e. Convene partners to plan and implement activities for Safe Sleep and SIDS Awareness month in October each year.

4f. Distribute the Sleep Baby Safe and Snug book. The Charlie's Kids foundations has produced a board book for babies, entitled Sleep Baby Safe and Snug, which provides safe sleep messaging within the context of an easy-to-read story. Currently, the book is available in English and Spanish (Duerme bebe comodo y seguro).

Provider

5. Train professionals to provide both safe sleep messages and appropriate role modeling for families.

Health professionals, human service providers, community health workers, child care providers, home practices visitors, and peer supporters who interact with families applying and modeling safe sleep is critical to keeping infants safe, reinforcing messaging, and impacting parent knowledge and behaviors.

Activities

5a. Develop a statewide coordinated effort to support a range of providers who interact with families to understand and address safe sleep. Trainings should include standardized components applicable to all provider types as well as individualized components targeted to specific providers and settings (medical, public health, early childhood).

5b. Support all Oregon birthing hospitals in using quality improvement methodology to improve safe sleep practices.

Individual

6. Provide individual and group education and training for parents and caregivers

Education should focus on the individual parent or caregiver and their infant in a way that builds infant caregiver knowledge, skills and efficacy in safe sleep and can be implemented by hospitals, health care providers, service organizations and community settings.

Activities

6a. Develop a website that provides safe sleep education basics and messaging for all caregiver audiences including parents, grandparents, aunts, uncles, babysitters, childcare providers, and all other potential caregivers.

6b. Support peer education models and provide education to community members, including extended family, friends and local businesses—anyone who wants to support safe sleep messages and practices.

6c. Support culturally relevant safe sleep education in culturally specific programs.

6d. Partner with maternity care providers to provide safe sleep education during prenatal visits.

6e. Ensure individualized, culturally and linguistically appropriate safe sleep education is provided on all home visits to newborns.

The most successful public health interventions have been based on an understanding of health behaviors and the contexts in which they occur. The social ecological model (SEM) of health promotion considers the interplay between individual, provider, community, organizations/systems and societal factors. The model suggests that in order to prevent sleep-related deaths, it is necessary to act across multiple levels of the model at the same time. This approach is more likely to sustain prevention efforts over time than any single intervention. (McLeroy KR, Bibeau D, Steckler A, Glanz K. An ecological perspective on health promotion programs. Health Educ Q 1988, 15:351–377).

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Appendix A: Literature Review

Brief Citation **(Full reference at end)**	**Participants/Study Design**	**Results**	**Discussion**	**Comments**

Woods (2017). "Same room, safe place": The need for professional safe sleep unity grows at the expense of family	• Comparing different professional stances on safe sleep and the reality of caring for a newborn
	• Safe sleep recommendations from the American Academy of Pediatrics (AAP) VS. Safe Infant Sleeping to the co-sleeping recommendations from the Mother-Baby Behavioral Sleep Laboratory at the University of Notre Dame
		• **American Academy of Pediatrics (AAP) safe sleep recommendation**: 1) always place a baby, 2) always on use a firm surface, 3) infant should be place in the same room but different bed, 4) no soft items or blankets in crib, 5) no wedges or sleep positioners, 6) no smoking during pregnancy or after birth, 7) breastfeeding is recommended, 8) encourage use of a pacifier during sleep, 9) do not cover infant's head, 10) avoid use of home monitors/devices marketed to reduce the risk of sudden infant death syndrome, and 11) supervised tummy time while infant is awake is recommended.
		• **Mother- Baby Behavioral Sleep Laboratory co-sleeping recommendation:** 1) smoke-free pregnancy and health gestation is key for safe sleep environment, 2) breastfeeding, 3) placing infants on their backs to sleep, 4) on firm surfaces, 5) on clean surfaces, 6) in the absence of secondhand smoking, 7) under light blankets, and 8) with their hands uncovered
		  ○ Only sleeping on firm mattress with mom/dad no children, no stuffed animal, medication that dustups arousal and awareness are not recommended
		  ○ Obese individuals are discouraged with co-sleeping
		  ○ Long hair tied up.
		• Main difference between the sets of recommendation id the location of the infant
			• **The lack of consistent and uniform safe sleep recommendations raised** professional ethical dilemma
			• Less than 50% of safe sleep information on the internet follow AAP recommendation
			• Professional literature citing improved health and breastfeeding secondary to maternal-infant co-sleeping
			• Despite increased intervention and education related to safe sleep, the number of sleep related deaths have doubles in Wichita, Kansas and many other communities across the United State in 2016
			  ○ Be the answer for the community in need
			• Use language like 1) safe place, 2) close proximity
			• Avoid using language like 1) alone, 2) separate → lacks social value
			• Safe place
			  ○ Bassinet
			  ○ baby box (Finnish tradition from the 1930s)
			• Create a unified and mother-centered message.
				• **Inconsistent** recommendation with location of sleep
				• **Confusing** for the public
				• We need a safe sleep message all health professionals can agree on
				• Vulnerable population **same** message across the community, medical care services

Herman et al. (2015). Knowledge and beliefs of African-American and	• 73 mothers and supporters (partners, grandparents, caregiver, etc.) participated in 9 focus groups (60-90 minutes).	Themes that emerged from focus groups were
		
		• Parents decision about infant sleep practice was based on their perceptions of their infants' physical and emotional comfort and perceptions of what was safe, effective, and convenient in meeting the needs of their infants while also meeting their own need for rest
		  ○ Reasons for not following AAP recommendation
		  ○ learned habit from previous baby → due to lack of bad outcome
			• Infant sleep location and position driven by infant's comfort, safety, and convenience for parents
			• Lack of knowledge about the rationale behind the safe sleep recommendation
			• Disbelief that their infant is at risk for sleep related death as long as they are vigilant
				• Retained education about safe sleep was through home visiting programs
				• Provide rational (how and why)
				• Address individual concerns

Brief Citation (Full reference at end)	Participants/Study Design	Results	Discussion	Comments
American Indian parents and supporters about infant safe sleep.	○ 5 focus groups for mothers ○ 3 focus group for support ○ Must have baby under 2 years of age • Focus group participants were asked about infant safe sleep practices and knowledge • Participants were from 3 major urban areas and 2 tribal communities • Target population were African American and American Indian, other races/ethnicities were not excluded	○ Driven by patient's need for sleep • Infant was safer in bed with mother → feel like they are monitoring their baby ○ Cribs were seen as dangerous • Co-sleeping because they are tired even though they are concerns → accidental suffocation • Almost all community expressed concern that bedsharing with their babies would become a habit when the child gets older ○ This concern results in some patents using a separate sleeping surface **Safe sleep recommendation:** • Parents were aware, but lack rational behind the recommendation ○ Missing the WHY • Confusion due to inconsistent/ changing messages • Healthcare professional not following safe sleep recommendation **Choking** → reason why parent place baby on stomach or side **Education** → safe sleep education and guidelines influence mother's decision **Belief** → it will not happen to them, their infant is healthy **Fathers** → very strong influence babies sleep location	• Decisions are made in the moment, day to day decision • Mothers felt that bedsharing was the most effective way to be vigilant of their baby during sleep • Other qualitative studies with African American mothers reported similar finding • Not following medical recommendations in the past without negative consequences solidified their belief that their practice was safe • Expressed concern bedsharing becoming a habit → decision for not bedsharing	• Health belief Model (make parents aware of the negative consequence of not following safe sleep recommendation) ○ Perceived threat • Role modeling safe sleep behavior • Importance of educating fathers, partners, grandparents, other family members, and friends who care for the baby because they influence decision on how and where the baby sleeps • Addressing common parental concerns
Hirai et al. (2019). Prevalence and factors associated with safe infant sleep practices.	Data derived from the Pregnancy Risk Assessment Monitoring System (PRAMS)→ (2016 data from 29 states) to examine maternal reports of 4 safe sleep practice: 1. back sleep position 2. separate approved sleep surface	Refer to Table 1 (page 3) • 78% of moms reported placing their infant to in their back • 26.3% reported always using separate approved sleep surface ○ 74.4% reported ('always or often') using separate sleeping surface • 41.1% reported always room-sharing without co-sleeping • 42.4% reported avoiding soft bedding ○ Soft bedding normally reported → blankets, crib bumper pads, pillows, cushion, toys (e.g. stuffed animals) • a crib, bassinet, or pack and play is the usual (sole) sleep surface for only 34.9% ○ other sleep surface→ car seat or swing (50.7%), twin or large bed (30.9%, couch or armchair (9%)	• Black moms are least likely to report back to sleep position and had a lower provenance of using separate approved sleep surface • American Indian or Alaska Native moms were least likely to avoid soft bedding, lower prevalence of using separate approved sleep surface ○ Had doubled prevalence of couch or armchair sleeping • Both racial and ethnic group rate of SUIDs are double that of their White counterparts • Receiving advice from multiple sources (e.g. family members, friends, and health care	• Breastfeeding reduces SIDS risk • Receiving education from multiple sources → consistent messaging • Health care providers advice, education, recommendation is an important, modifiable factor to improve safe sleep practice

Brief Citation (Full reference at end)	Participants/Study Design	Results	Discussion	Comments
	3. room-sharing without bedsharing 4. no soft objects or loose bedding and receiving health care provider education about safe sleep practice	• Reporting about receiving safe sleep recommendation from health care provider ranged from 48.8% (room sharing, without bedsharing) to 92.6% (sleeping infant on back) ○ 15% of mothers reported not receiving any advice about room sharing without bedsharing Mother who are more likely to report following the safe sleep recommendation are • Older, White, more years of education, and married • Vs. younger mother, Hispanic, unmarried, and less education were more likely not to follow the AAP recommendation **Lowest prevalence of back to sleep practice** • Black moms had the lowest prevalence of back to sleep practice at 62.3% • Asian or Pacific Islander mothers had the lowest prevalence of using separate approved sleep surfaces at 20.6% • American Indian or Alaska Native mothers had the lowest prevalence of room-sharing without bed-sharing at 50.5% and avoiding soft bedding at 25.6% • Only 25% of teen mons voided using soft bedding	providers) improved room-sharing without bedsharing without negatively affecting breastfeeding rates	
Kellams et al. (2017). Todays Baby Quality Improvement : Safe Sleep Teaching and Role Modeling in 8 US Maternity Units.	Multicenter, randomized control trial of 2 interventions aimed at promoting safe sleep practice • 8 maternity unit hospital staff provided QI education on either safe sleep or breastfeeding practice →Todays Baby Safe Sleep Toolkit • 8 hospitals implemented their own QI independently (not part of the test group)	• More than 20% increase in mother reporting receipt of nursing education on safe sleep practice on 4 primary sleep topics and infant being observed sleeping on their back after the IQ intervention ○ 72% to 95% of the time (a 24%–57% increase over the baseline). ○ 93% of infants were observed sleep on their back ○ 88% of infants were observed in a safe sleep environment (a 24% and 33% increase from baseline). • These improvements and rates were sustained up to 12 months later implementation of intervention	• Bundled intervention • Great emphasis on role modeling • the use of safe sleep toolkits has been successfully used in the NICU (nurse educating families) • tailored their plan-do-study-act (PDSA) cycles on the basis of specific needs • **role modeling of safe sleep practices by hospital personnel is associated with greater caregiver adherence at home** ○ establishes and reinforces the importance of safe sleep practice	• Baby-Friendly discourages pacifiers until breastfeeding is established • Safe sleep education and role modeling together • https://extranet.nichd.nih.gov/nursececourse/Welcome.aspx • Individualized education

Brief Citation **(Full reference at end)**	**Participants/Study Design**	**Results**	**Discussion**	**Comments**

Moon et al. (2016). Safe infant sleep interventions : What is the evidence for successful behavior change	examples of safe infant sleep interventions and evidence of their effectiveness	Grol's conceptual framework (table 1: page 68)
		• Health messaging
		  ○ 'Sound bites'
		  ▪ Back to sleep
		  ○ Making messages that convey that all infants are at potential risk
		  ○ Testimonial → make it relatable
		  ○ 'scary' messaging → short term changes no long-term adherence
		• Education of professionals
		  ○ Increase knowledge and awareness of safe sleep
		  ○ Staff practice are observed closely by parents
		  ○ Nursing staff education on safe sleep altered professional behavior to practice safe sleep recommendation
		  ○ **feedback is provided to the birth hospital staff**
		  ○ Safe Sleep Certification
		• Breaking down barriers
		  ○ Financial inability to purchase a crib→ bedsharing (crib for kids)
		  ○ **Smoking, alcohol, and other drug use → quitting protects against SIDS**
		  ○ Cultural norms → conflicting with safe sleep recommendation
		• Culture and tradition
		  ○ Wahakura used by the Maori (indigenous) communities in New Zealand → similar to bassinet
		  ○ Pepi-pod (baby pod)
		  ○ Finnish baby box
		  ○ Native American community
		  ▪ Talking circles
		  ○ Community Baby Shower
		• Legislation and regulation
		  ○ More likely to adhere if mandated
		  ○ State law requiring education
			• Make it attractive and accessible
			  ○ Relatable
			• Crib and education combo
			• Swaddles
			• Incorporate cultural norms
			• Charlie's kids
			  ○ Safe sleep messaging in an easy to read story
			• American Indian communities have the highest SUID rates in the country
			  ○ Educate elders
			  ○ Talking circles
			• Regulating unlicensed childcare providers education requirement
				• Role modeling
				• "Sound bits"
				• plan-do-study-act (PDSA) cycles
				• multiple forms of education
				• repeated education
				• Swaddles instead of blankets
				• Baby box
				• Policy / legislation mandating safe sleep practice

Brief Citation (Full reference at end)	Participants/Study Design	Results	Discussion	Comments
Barktick and Tomori (2018). Sudden infant death and social justice: A syndemics approach	Publicly available databases and literatures were used to compare SIDS and SUDS prevalence and their risk factors in Australia, Canada, Japan, New Zealand, the Netherlands, Sweden, the United Kingdom, and the United States, as well as specific subpopulations in Australia, Canada, New Zealand, and the United States.	• Lowest SIDS prevalence is found in the Netherlands, followed by Japan and Sweden. → all have universal health care and Netherlands and Sweden have low-income inequality. These nations have paid maternity leave ○ Asian American Rank 4th • Even though breastfeeding and bedsharing are very common among the Japanese, Swedes, and Asian Americans ○ Swedes had the highest bedsharing rate in Western Europe • Japan- ○ only 16.9% of pre-school-aged children have their own bed & only 1.4% have their own room ○ Has had very high male smoking rates • Netherlands has lower breastfeeding rate ○ Dutch population has high rate of smoking but low rate during pregnancy → suggesting access to prenatal care to help them quit • UK ○ 1984-2003 the proportion of SIDS deaths in term infants has decreased ○ But the proportion of SIDS in preterm infants has increased from 12% to 34% ○ families living in **poverty** has significantly increased rate of SIDS from 47% to 74% ○ prevalence of SIDS in infants of **smoking** mom has increased from 57% to 84% ○ in England and Wales the strongest predictor of SUDS is **socioeconomic and ethnicity** (race) ○ low rates of breastfeeding High prevalence rate of SIDS ○ United States and New Zealand were tied for the world's highest rates of SIDS → now the US has surpassed New Zealand ○ Highest rate is SIDS #1 American Indian and Alaskan Natives #2) Blacks/ African Americans #3 Māori (**race related)** ○ smoking during pregnancy rate among European New Zealanders was just above that of Sweden. ○ In the US SUID/SIDS rates among Whites are very high, with SIDS rates nearly approaching those of Māori ○ Māori ○ High rate of smoking and use of alcohol during pregnancy comparatively among the Māori	• The finding suggests links to poverty and discrimination which can have independent effects on perinatal outcome • Low-prevalence populations generally have better health care, less inequality, which is linked to lower prevalence of poverty and fewer harmful health behaviors. • Historical trauma plays important role → structural racism persists among this vulnerable population • Prevalence of SIDS/ SUDs worsens with income inequality, poverty, and racial marginalization • Data indicates suggest that lack of prenatal care may play a large role → related to poverty • According to the CDC in the US SIDS is the third largest component of infant mortality after preterm birth and congenital anomalies • Risk factors may compound one another or work to offset one another ○ Like as in Sweden and Japan even though they have high rate of bedshare ○ On the other hand, the Māori have high rate of SIDS/SUDS even though they have good access to care • Risk factors of SIDS/SUDS is not only bedsharing, breastfeeding, access to good care, tobacco exposure but also poverty and racial discrimination	• In addition to educating families about SIDS/SUDS and how it can be prevented it is important to change societies structure ○ Fixing the income inequity that exists in society ○ And addressing racial discrimination →stop structural racism • There is a need for a culturally appropriate education and intervention • There needs to be relief from stress related to poverty and racism

Brief Citation (Full reference at end)	Participants/Study Design	Results	Discussion	Comments
		○ Due to high rate of smoking and bedsharing and low rate of breastfeeding ○ U.S. ○ Even whites have high rate of SIDS/ SUDS, but Black and AI/AN population have a remarkably higher rate ▪ Related to poor prenatal care and certain ethnic group ○ US blacks ▪ family income is significantly lower than whites ▪ experience racism ▪ lower rate of smoking during pregnancy, ▪ Children have a significantly higher rate of exposure to second hand smoking → 67.9% compared with 37.2% for White children ▪ More likely to place their child prone, more likely to sleep outside and adult bed (ex: couch) ▪ Low rate of breastfeeding ○ U.S. American Indians/Alaskan Natives ▪ 27% live in poverty → highest rate than any ethnic group ▪ Historical/ generational trauma → racism and discrimination ▪ Bedsharing is common ▪ Breastfeeding is second lowest following the blacks ○ First Nation and Inuit populations in Canada ○ historical trauma and poverty ○ very high rate of smoking and premature births ○ bedsharing is common ○ poor access to prenatal care ○ Australian Aborigine and Torres Strait Islanders ○ socio-economically disadvantaged → high rate of poverty ○ worse overall health outcome → low rate ○ high rates of smoking, ○ bedsharing and comparatively lower rates of breastfeeding ○ 81% of infants were placed on their sides to sleep & only 8% were placed on their backs		
		Over all the results suggests that access to care, poverty, and racism may be playing a role in rate of SIDS/SUDS		

Appendix B: Child Welfare Prevention Efforts

Too many of Oregon's infants die in sleep related deaths, some of which are preventable. Educating and engaging infant's parents and caregivers effectively requires a community response. Child Welfare is a critical part of the child safety community and as such is committed to educating Child Welfare professionals and ensuring a consistent message across Oregon's communities.

While this is an ongoing collaborative effort, here are some of the steps initiated by Child Welfare to prevent sleep related death in Oregon:

1. Training

A. Safe Sleep for Oregon's Infants self-study training materials were developed. While the safe sleep guidance is the same for all professionals, multiple versions have been and are being developed to emphasize areas and use language relevant for a specific role. All versions include information on traditional tribal sleep practices. The training, including activities, a professional action plan and a ten-question quiz, takes approximately an hour to complete and can be done independently. Here are the specifics:

- A version for Child Protective Services and Permanency professionals is complete. To date more than 1300 professionals have completed this training.
- A version for Certification and Adoption professionals is complete. To date more than 200 professionals have completed this training.
- A version for certified families (foster families) is complete and to be available soon.
- A version for Oregon Child Abuse Hotline Screeners is complete and will be available soon.
- A version for service providers is complete and ready for distribution. This version can be easily modified to meet the specific needs of a group of professionals and Child Welfare is offering support to professionals in the community to develop role specific versions. Community partners

currently engaged in this process and actively partnering with Child Welfare regarding safe sleep and the self-study materials include:

» The Oregon Coalition Against Domestic and Sexual Violence and the domestic violence and sexual assault shelters

» Domestic violence co-located (Self-Sufficiency and Child Welfare) advocates

» Self Sufficiency TADVS grant professionals

» Self Sufficiency TANF case managers

» SNAP navigators

» Family Support and Connections professionals

» Residential substance use disorder treatment

» Oregon Parenting Education Collaborative (all 16 hubs across Oregon)

B. An opportunity to practice having safe sleep conversations with parents and caregivers will also be coming. A facilitator's guide for this training opportunity is being developed. Participants will include those community partners who can support Child Welfare in educating and engaging families on safe sleep, such as community health nurses.

2. Procedure and Oregon Administrative Rule:

New requirements for CPS and permanency caseworkers are now in the Child Welfare Procedure Manual and rule. In addition, links to resources for families are now in the Child Welfare procedure manual.

3. Safe Sleep Checklist:

The checklist is a tool used by the caseworker to document a family's safe sleep practices and related action steps. The Safe Sleep Checklist, DHS 2362, is now available on the DHS forms server and used with every family who has an infant.

4. Child Care:

Child Welfare partnered with Office of Child Care in the development of the self-study to ensure consistent messaging. Child care providers that are not licensed through the state but receive payment from the state as part of the employment related child care program do not have the same safe sleep requirements as licensed providers. Child Welfare is partnering with this program to support changes that would align the safe sleep training and care requirements of these providers with those of licensed providers.

5. Cribettes and more:

Child Welfare has provided cribettes and cribette sheets (Spanish and English messaging

on sheets regarding the ABC's of safe sleep) to the Child Welfare district offices based on their identified needs. A system has been put into place to support future requests to be filled as needed. These resources are available to Self Sufficiency partners to distribute as well. Child Welfare is exploring what funding may be available to have sleep sacks available as well exploring other potential resources such as books and magnets.

6. Lived experience video:

Child Welfare has identified a 5 minute video featuring parents of different races/ethnicities with lived experience losing a child to sleep related death and received permission to use the video for training and education. This video is part of the training materials for Child Welfare professionals, being provided to community partners and is a tool for caseworkers to use with families.

7. Posters and pamphlets:

The OHA posters and pamphlets are being utilized by Child Welfare, including providing the pamphlets to families with infants and also providing links and supporting community partners in accessing these resources.

8. Outreach:

Outreach efforts that have been identified, but where work has either not begun or minimally begun, include:

- Birthing hospitals (Oregon Association of Hospitals and Health Systems provided a list)
- Homeless shelters
- Law enforcement agencies
- Fire departments
- Paramedics

Please direct feedback, questions and ideas about future efforts to:

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