



PRAMS

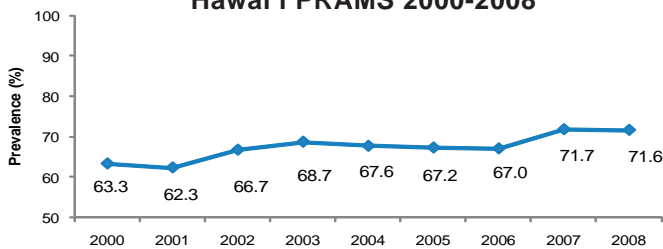
Infant Sleep Position Fact Sheet

Pregnancy Risk Assessment Monitoring System

Importance of Sleep Position

Sudden Infant Death Syndrome (SIDS), the sudden, unexplained death of an infant under 1 year of age, is the leading cause of post-neonatal mortality (death between 1 month and 1 year of age).^{1,2} SIDS accounts for 41% of all post-neonatal deaths in Hawai'i.³ Putting infants to sleep on their stomach or side, rather than their back, is a major preventable risk factor for sudden infant death syndrome (SIDS). This is because infants are more likely to suffocate when placed on their stomach or side to sleep. The "Back to Sleep" public health campaign dramatically improved supine (back) sleep position from 13% in 1992 to 67% in 1999 with a corresponding 50% decline in SIDS.^{2,4} The National Healthy People 2010 objective was to increase the proportion of infants placed on their backs to sleep to 70%.

Trends in Supine Sleep Position by Year, Hawai'i PRAMS 2000-2008



Prevalence of Supine Sleep Position in Hawai'i

The proportion of mothers who place their infant on their back to sleep increased from 63% in 2000 to 72% in 2008. The rates now exceed the National Healthy People 2010 objective.

PRAMS Sleep Position Question

How do you most often lay your baby down to sleep?

- On his or her side
- On his or her back
- On his or her stomach

About 5% of mothers selected multiple responses. For this analysis, mothers who selected only back were considered to practice supine sleep position. Analysis was also limited to children born at term, were not low birth weight, and did not spend time in the intensive care unit

Data Highlights

- About 1 in 3 mothers place their infants to sleep in a high risk, non-supine position (side or stomach)
- Mothers more likely to practice a non-supine position were Black, Samoan, Other Pacific Islander, Hawaiian, or Hispanic, younger, less educated, unmarried, Medicaid/QUEST recipients, were on WIC during prenatal care, and lived in Hawai'i or Kauai County
- Women who delivered at Kona and North Hawai'i Community Hospitals or Wilcox Memorial and Kauai Veterans Hospitals were more likely to practice a non-supine sleep position; staff training may be warranted
- WIC is an ideal location for educational interventions given that mothers with risk factors associated with non-supine sleep are more likely to utilize WIC services
- In addition to sleep position, educational efforts should address other SIDS risk factors including soft bedding, bed sharing, and smoking

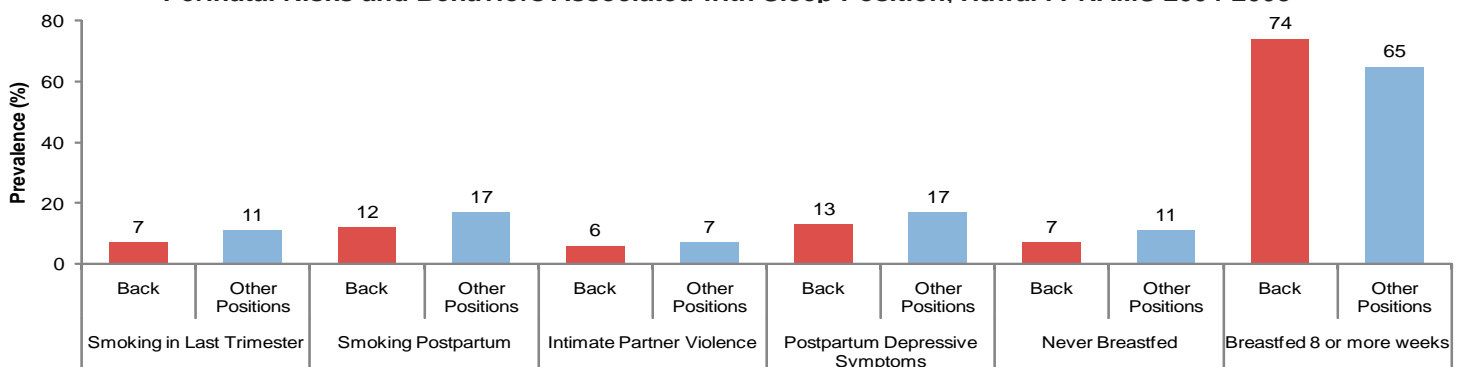
"My granddaughter suffocated and I am now involved in raising awareness of safe sleep practices. This information will prevent any family from experiencing the pain we suffered and still do."

-- Hawai'i Grandparent

Perinatal Risks and Behaviors Associated with Sleep Position in Hawai'i

Mothers that used the recommended back sleeping position for their infants tended to have a healthier behavior profile. They were less likely to smoke during pregnancy, smoke postpartum, and report always/often being depressed compared to those that used non-supine sleep positions. The recommended back sleeping position was associated with initiating breastfeeding, and breastfeeding for 8 or more weeks compared to those that used the non-supine sleep position.

Perinatal Risks and Behaviors Associated with Sleep Position, Hawai'i PRAMS 2004-2008



Maternal Characteristics Related to Non-Supine Sleep Position

Mothers more likely to practice a non-supine position were Black, Samoan, Other Pacific Islander, Hawaiian, or Hispanic, younger than 25 years old, a high school or lower education, unmarried, were on The Special Supplemental Nutrition Program for Women, Infants, and Children (WIC), had Medicaid/QUEST insurance, and lived in Hawai'i or Kauai County. Mothers who delivered at Kona and North Hawai'i Community Hospitals on the Big Island or Wilcox Memorial and Kauai Veterans Hospitals on Kauai were more likely to practice non-supine infant sleep position. This may suggest a need for staff training regarding safe sleep practices and/or increased resources for patient education at these hospitals.

WIC as a Point of Intervention

WIC serves approximately 44% of all mothers, and these women generally have higher socio-demographic risk factors for non-supine infant sleep position. Therefore, WIC may be an ideal place to provide education on safe sleep practices. A non-supine sleep position is nearly 10 percentage points higher among mothers on WIC. If the proportion of non-supine sleep for WIC recipients were reduced to the level for non-WIC recipients, Hawai'i would meet the National Healthy People 2010 objective. Further, if a WIC-based educational intervention were completely successful in eliminating non-supine sleep practices (100% supine), the overall prevalence of non-supine sleep would be cut about in half to 16% making the supine sleep prevalence 84%.

Discussion

The greater likelihood of non-supine sleep position among mothers that deliver at Kona Community and Kauai Veterans Hospitals is concerning and may suggest a need for staff trainings and revisions of discharge protocols. Studies show many nurses are unaware of hospital policies, believe that supine sleep position can lead to aspiration, and still recommend lateral (side) sleep position to new parents.² Because most infants placed on their side to sleep will naturally roll to their stomach, this sleep position is considered to be equally dangerous. It is important to note that having Medicaid/QUEST or participating in WIC did not cause the observed differences; as the association likely reflects the populations of women with higher associated risks that these programs serve. The higher rates of non-supine sleep position among mothers who use WIC, suggest it may be an ideal location to deliver educational interventions. WIC is evaluating the most effective way to provide education around safe sleep positioning.

Education of child care centers and all who care for mothers and infants should be aware of proper sleep positioning and the other risks for SIDS such as soft bedding and bed-sharing.^{1,2} Educating mothers in the hospital with reinforcement in the outpatient setting may decrease some preventable infant deaths and improve the health of families in Hawai'i.

References

- 1 Moon RY, Horne RS, Hauck FR. Sudden infant death syndrome. *Lancet* 2007;370:1578-87.
- 2 AAP Policy Statement. The changing concept of sudden infant death syndrome: *Pediatrics* 2005;116:1245-55.
- 3 Office of Health Status Monitoring, Hawai'i Department of Health, 2003-2007 Infant Death by Cause.
- 4 National Infant Sleep Position Public Access Web site at http://dccwww.bumc.bu.edu/ChimeNisp/Main_Nisp.asp

Non-Supine Sleep Position by Maternal Characteristics, Hawai'i PRAMS 2004-2008

	Non-Supine % (95% CI)*
Race/Ethnicity	
White	24.4 (22.5-26.4)
Black	48.8 (41.5-56.2)
Hispanic	30.8 (24.0-38.6)
Hawaiian	38.5 (36.4-40.7)
Samoan	46.2 (39.7-52.9)
Other Pacific Islander	43.3 (38.3-48.5)
Filipino	29.4 (27.3-31.5)
Japanese	19.4 (17.1-22.0)
Chinese	20.5 (18.3-22.9)
Korean	24.4 (21.0-28.2)
Other Asian	28.9 (22.1-36.9)
Maternal Age	
Under 20 years	43.3 (39.3-47.3)
20-24 years	36.7 (34.6-38.9)
25-34 years	28.3 (26.9-29.6)
35 or more years	24.7 (22.7-26.9)
Maternal Education	
< High School	42.9 (39.1-46.8)
High School	37.3 (35.6-39.1)
Some College	28.4 (26.6-30.3)
College Graduate	19.9 (18.4-21.5)
Marital Status	
Married	27.7 (26.6-28.9)
Unmarried	36.7 (34.9-38.6)
Insurance Coverage at Delivery	
Private Insurance	27.4 (26.3-28.6)
Medicaid/Quest	38.6 (36.6-40.6)
None	33.6 (25.4-43.0)
Prenatal WIC participation	
No	26.8 (25.5-28.0)
Yes	36.4 (34.8-38.0)
County of Residence and Birth Hospital	
<i>Honolulu</i>	29.3 (28.1-30.4)
Castle Medical Center	32.8 (28.0-38.0)
Kaiser Foundation	25.2 (22.3-28.2)
Kapiolani	30.4 (28.7-32.2)
Queens	26.9 (24.4-29.6)
Tripler Army Medical	30.1 (27.5-32.8)
Wahiawa General	36.0 (26.1-47.2)
<i>Hawai'i</i>	35.0 (32.0-37.9)
Hilo Medical Center	31.1 (27.1-35.3)
Kona Community	41.8 (35.2-48.8)
North Hawai'i Hospital	34.7 (29.2-40.6)
<i>Maui</i>	33.8 (30.8-37.0)
Maui Memorial	34.0 (30.8-37.4)
<i>Kauai</i>	38.8 (34.0-43.8)
Kauai Veterans	36.1 (26.6-46.8)
Wilcox Memorial	39.4 (33.8-45.3)
Overall	30.9 (29.9-31.9)

* 95% CI refers to the 95% confidence interval around estimate.

About the Data

The Hawai'i Pregnancy Risk Assessment Monitoring System (PRAMS) is a mixed mode self-reported survey conducted by mail with telephone follow-up of recent mothers. It is designed to monitor the health and experiences of women before, during, and just after pregnancy. Every year, about 2,000 women who deliver a live infant are randomly selected to participate.

For More Information Contact:

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