

## Population-based Survey of Infant Bed Sharing

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### Background

- Previous child sleep studies have found varying levels of bed sharing among infants.
- Prior studies of the prevalence of bed sharing have asked the general question "How often does your child share a bed or sleeping surface with someone?"
- The 2006 National Infant Sleep Position Study survey asked about bed sharing in the previous two weeks. Respondents could chose from "half the time" or "less that half the time."
- This study attempted to quantify the specific number of hours of bed sharing during the prior 24 hours.



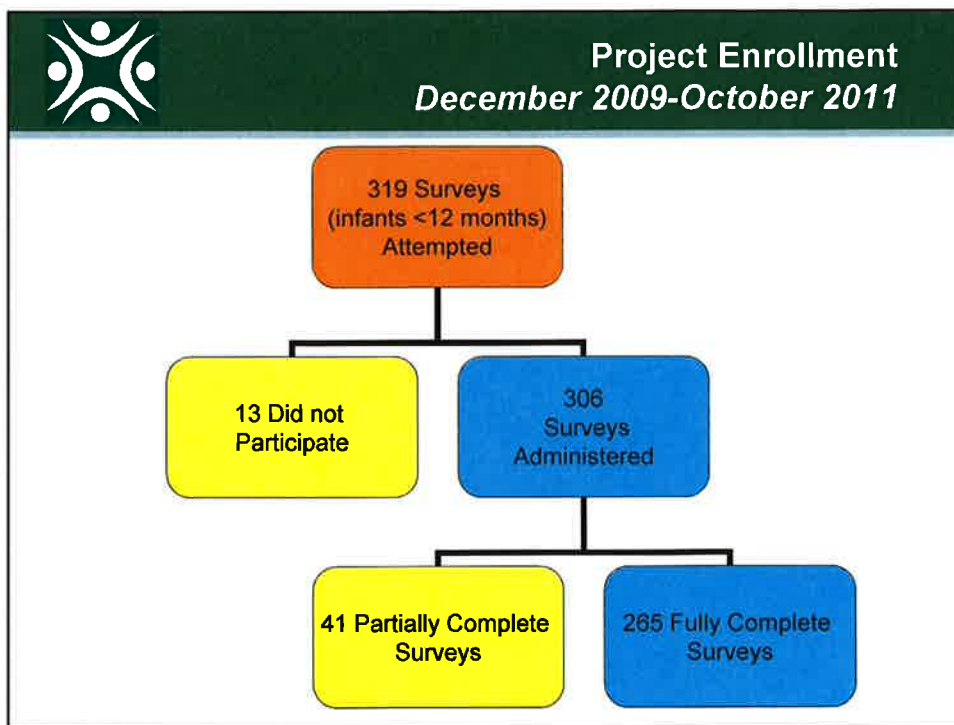
## Bed Sharing Project Overview

- Infant sleep patterns in the previous 24 hours.
- Random sample stratified by size of clinic in Dallas County.
- 17 private and 3 public multi physician pediatric clinics.
- December 2009 - October 2011, every infant who attended the clinic one day during clinic hours.
- Parents of infants (defined as < 1 year of age) while waiting to be seen by a pediatrician.
- Interview-based, 44 item survey of caregivers.
- Univariate and multivariate analyses were weighted by clinic stratum, based on the proportion of eligible clinics using Stata and EpiInfo.




## Bed Sharing Survey

- Verbal consent
- English or Spanish
- Basic demographic information and sleep behavior questions related to nap and night time sleep
- Quantify number of hours of bed sharing in the previous 24 hours during nap and night time sleep
- Study deemed exempt by our institutional IRB




Infant Demographics*		Mother Demographics*	
48.5%	Male	<b>Average level of Education:</b>	
51.5%	Female	45.2% College or Higher	
<b>Race/Ethnicity:</b>		<b>Mean Age:</b> 29 years old	
54.6%	Hispanic	<b>Range:</b> (15-43 years)	
24.5%	Caucasian	<small>*weight adjusted for clinic stratum</small>	
10.9%	African American		
8.9%	Asian		
1.0%	Other		
<b>Mean Age</b> 3.9 months			
<b>Range:</b> (0-11 months)			



### Circumstances Related to Infant Sleep in Past 24 Hours

	Number	Percentage	*Adjusted percentage
Prone placement	23/265	8.7%	8.8%
Pacifier use	112/265	42.3%	42.4%
Crib in the house	232/265	87.5%	88.5%
Crib in parent's bedroom	168/265	63.4%	62.4%
Crib in another room	48/265	18.1%	19.5%
Crib in parent's bedroom and another room	15/265	5.7%	6.2%
Presence of a fan in room	176/265	66.4%	67.7%
Breastfeeding	143/265	54.0%	53.9%
Smoking	20/265	7.5%	7.4%
Bed sharing, nap or night (any)	113/265	42.6%	41.1%

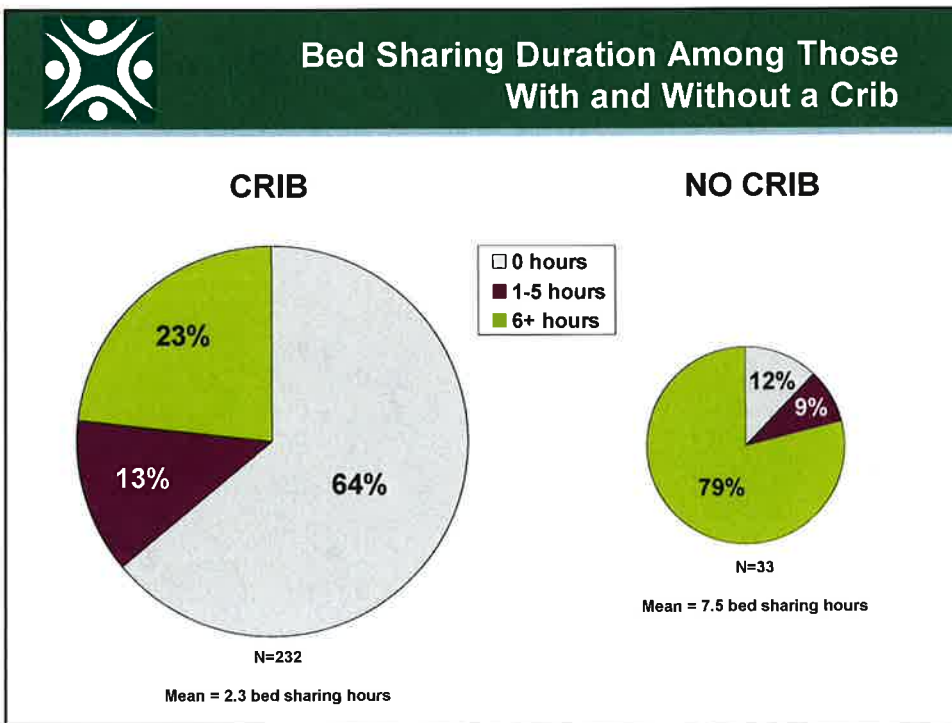
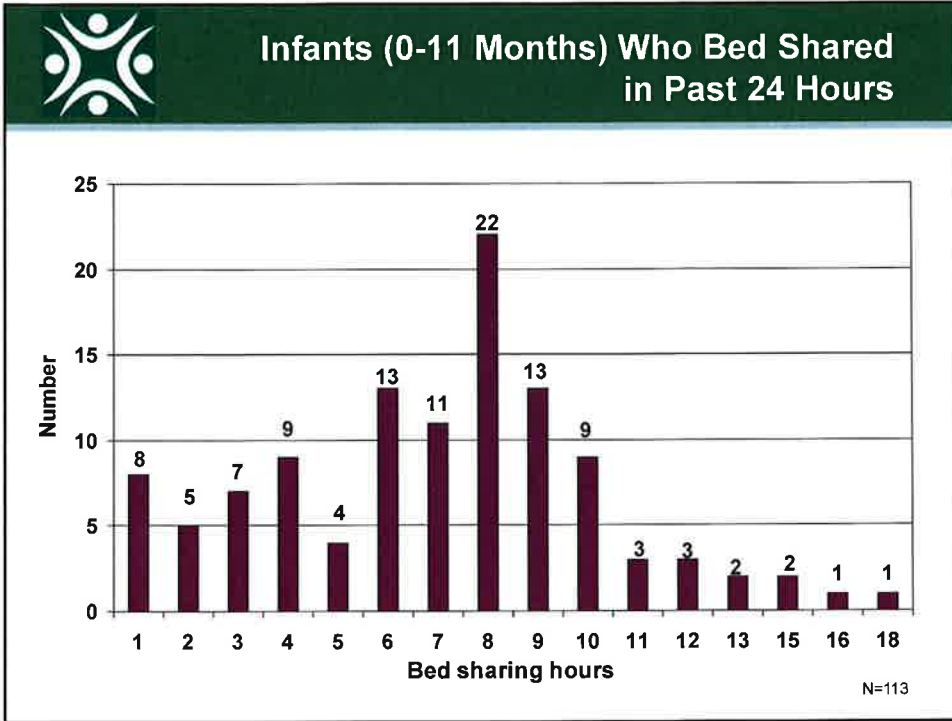
\*weight adjusted for clinic stratum




### Bed Sharing

In the previous 24 hours....	Hours*	Mean	Range
Total number of hours slept	3623	13.56	4 – 23 hours
Total number of bed share hours	793	3.00	0 – 18 hours
Night time bed share hours		2.64	0 – 12 hours
Nap time bed share hours		0.36	0 – 8 hours
% sleep hours of bed sharing	21.9% (793/3623)		

\*weight adjusted for clinic stratum






### Univariate Analysis

**Comparison of Bed Sharing in the Previous 24 hours,  
For Infant and Mother-Related Factors,  
Univariate Analysis**

	<b>Bed sharing with factor (%)</b>	<b>Bed sharing without factor (%)</b>	<b>Odds ratio* (95% conf. limits)</b>	<b>P value</b>
Breastfeeding	74/143 (51.7)	39/122 (32.0)	<b>2.2 (1.33, 3.72)</b>	<0.01
Hispanic	82/155 (52.9)	31/110 (28.2)	<b>2.8 (1.64, 4.75)</b>	<0.01
Smoking	14/20 (70.0)	99/245 (40.0)	<b>3.4 (1.23, 9.37)</b>	<0.01
Crib	84/232 (36.2)	29/33 (87.9)	<b>0.1 (0.02, 0.21)</b>	<0.01
Mother's education	51/165 (30.9)	62/100 (62.0)	<b>0.3 (0.16, 0.45)</b>	<0.01
Pacifier	40/112 (35.7)	73/153 (47.7)	<b>0.6 (0.35, 0.96)</b>	0.04
Mother age	96/239 (40.2)	17/26 (65.4)	<b>0.3 (0.13, 0.74)</b>	<0.01
Premature	6/25 (24.0)	107/240 (44.6)	<b>0.4 (0.16, 1.09)</b>	0.07

\*weight adjusted for clinic stratum



### Multivariate analysis

**Multivariate Analysis of Bed Sharing For Infant and Mother-Related Factors\*  
Dependent variable: Bed sharing in previous 24 hours**

	<b>Odds Ratio (95% Conf. limits)</b>	<b>P value</b>
<b>Breastfeeding</b>	<b>2.09 (1.15, 3.81)</b>	<b>0.025</b>
Hispanic	1.27 (0.63, 2.57)	0.488
<b>Smoking</b>	<b>3.22 (1.06, 9.85)</b>	<b>0.040</b>
<b>Crib</b>	<b>0.12 (0.04, 0.37)</b>	<b>&lt;0.01</b>
<b>Mother's education</b>	<b>0.41 (0.22, 0.74)</b>	<b>&lt;0.01</b>
Pacifier	0.78 (0.42, 1.38)	0.371
<b>Mother's age</b>	<b>0.36 (0.14, 0.92)</b>	<b>0.033</b>
Prematurity	0.42 (0.14, 1.20)	0.196

\*weight adjusted for clinic stratum



## Conclusions

- Bed sharing among infants in Dallas County is common.
- Infant bed sharing was associated with breastfeeding, smoking in household, those without a crib, young mothers and mothers with less education. Possible interventions can target these specific groups.
- The association of bed sharing with smoking also highlights the possibility that smoking may be a confounding variable in studies that examine the relationship of bed sharing to unexplained infant death.



## Limits

- Only multi-physician pediatric practices were included in this study. Family practice physicians were not included in the random sample pool.
- Surveys were conducted at various times of the year, not accounting for possible seasonal variation.
- Survey did not ask about parental drugs/alcohol use.
- Information about hours slept and hours bed shared during the previous 24 hours were an estimate from the parent.



## Next Steps

Despite these limitations, we feel that we have a reasonable baseline of bed sharing of infants in our area. This may be useful for future studies or following trends.

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