Infant mortality is one of the basic indicators used to measure the health status of a society. The infant mortality rate recorded in the USA is one of the highest among developed countries. Within the USA, Michigan ranks among the states with a high infant mortality rate (2002 Infant Mortality Rate [IMR]: 8.0 deaths/1,000 live births in Michigan compared to the national rate of 7.0 deaths/1,000 live births) as well as a high disparity between black (18.4 deaths/1,000 live births) and white (6.0 deaths/1,000 live births) women (1,2).

Sudden Infant Death Syndrome or SIDS is defined as the sudden and unexplained death of an infant less than one year of age. It is a definition of exclusion when after the postmortem investigation the death remains unexplainable.

SIDS is one of the leading causes of infant mortality. A large number of infant deaths considered as SIDS were associated with stomach sleeping (3). Consequently, the American Academy of Pediatrics (AAP) set forth recommendations in 1992 to reduce the SIDS cases and thus the infant mortality rate through safer sleeping practices. In 1994, the national partners launched the Back to Sleep Campaign to educate parents about the risks of stomach sleeping. The AAP modified the recommendations in 2000 with particular emphasis on the infant’s sleep environment especially surfaces not designed for infant sleep (4). The 2005 AAP guidelines clarify and strengthen the message that bed sharing is not recommended. Infants should be placed on the back for sleep in a separate but proximate sleeping environment such as a crib in the parent’s bedroom. (5).

The focus of this newsletter is unsafe sleep, particularly bed sharing practices in Michigan.

Prevalence of Infant Bed Sharing

One important modification made to the 2005 AAP guidelines is the statement that bed sharing is not recommended. Information regarding this behavior can be ascertained from the Jul 2001 - Dec 2002 Michigan PRAMS survey which asks mothers “How often does your new baby sleep in the same bed with you or anyone else? (a) Always (b) Almost always (c) Sometimes (d) Rarely (e) Never.” Women who answered never (e) were categorized as “never bed shared” with their infant, while those who had any of the other answers (a-d) were grouped as “bed shared”. This categorization was used to reflect the current 2005 AAP guidelines.

Among the Michigan population, 61.0% of women reported bed sharing with their infants and 39.0% reported never bed sharing (Figure 1).

Figure 1: Prevalence of Infant Bed Sharing, Jul 2001- Dec 2002 MI PRAMS

Over 60% of Michigan women reported bed sharing with their infants.

Black, Non-Hispanic women were almost 25% more likely to ever bed share and over four times more likely to chronically bed share with their infants than White, Non-Hispanic women.

Black, Non-Hispanic women had about a 30% lower rate of back sleep position than White, Non-Hispanic women.
Safe Sleep Information

Safe Sleep may reduce the risk of an infant death. The following is a list of recommendations set forth by AAP to ensure an infant does not suffer a sleep-related death:

- Place infant on the back position for every sleep. Side sleep not recommended.
- A crib with firm mattress, covered by a tight sheet is the recommended sleep surface.
- Bed sharing for sleep is not recommended.
- Remove all soft objects and loose bedding from the crib. No pillows, quilts, comforters, stuffed toys or other soft objects in sleep area.
- A separate but proximate space is recommended, e.g. a separate crib in the parent’s room.
- No smoking anything during pregnancy or around baby.
- Avoid overheating the baby. Dress the baby in as much or as little clothing as you are wearing.
- Make sure all caregivers are aware of these recommendations (5).

Demographics of Bed Sharing

Demographic characteristics are needed to identify which groups are more likely to practice bed sharing (Figure 2).

When stratified by race/ethnicity, women who self-identified as Black, Non-Hispanic reported an almost 25% higher rate of bed sharing (81.5%), than to White, Non-Hispanic women (56.8%). Further, among all of the stratifications used in this newsletter, the Black, Non-Hispanic population were more likely to report bed sharing with their infant than White, Non-Hispanic women.

When race/ethnicity was stratified by maternal age, the highest rate of infant bed sharing among Black, Non-Hispanic women was in those over the age of 35 (79.4%), while the women aged 20-34 had lowest rate (77.9%). Among White, Non-Hispanic, those women less than 20 years of age had the lowest rate (63.5%) of bed sharing.

Insurance status is also an important indicator of economic status. Among Black, Non-Hispanic women, similar rates of bed sharing were reported among those who ever had Medicaid (81.1%) versus those who had never had Medicaid (82.2%). Likewise, among White, Non-Hispanic women, similar rates of bed sharing were reported among those who ever had Medicaid (56.5%) and those who never had Medicaid (55.9%).

The PRAMS survey stratifies Michigan into three areas: Southeast Michigan (Livingston, Macomb, Monroe, Oakland, St. Clair, Washtenaw, and Wayne Counties); Other Urban Cities and Townships (Population greater than 25,000); and All Other Areas. Among the Black, Non-Hispanic women, age of 35 (79.4%), while the women aged 20-34 had lowest rate (77.9%). Among White, Non-Hispanic, those women less than 20 years of age had the lowest rate (63.5%) of bed sharing.

Bed Shared

<table>
<thead>
<tr>
<th>Demographic</th>
<th>Black, Non-Hispanic</th>
<th>White, Non-Hispanic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall</td>
<td>81.5%</td>
<td>56.8%</td>
</tr>
<tr>
<td>Geographic Region</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Southeast Michigan</td>
<td>78.6%</td>
<td>53.4%</td>
</tr>
<tr>
<td>Other Urban Areas</td>
<td>89.5%</td>
<td>57.6%</td>
</tr>
<tr>
<td>All Other Areas</td>
<td>**</td>
<td>58.9%</td>
</tr>
<tr>
<td>Maternal Age</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;20</td>
<td>**</td>
<td>63.5%</td>
</tr>
<tr>
<td>20-34</td>
<td>77.9%</td>
<td>55.6%</td>
</tr>
<tr>
<td>35+</td>
<td>79.4%</td>
<td>55.3%</td>
</tr>
<tr>
<td>Medicaid</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ever</td>
<td>81.1%</td>
<td>57.7%</td>
</tr>
<tr>
<td>Never</td>
<td>82.2%</td>
<td>55.3%</td>
</tr>
<tr>
<td>Education</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt; High School</td>
<td>87.3%</td>
<td>55.9%</td>
</tr>
<tr>
<td>High School/GED</td>
<td>81.5%</td>
<td>55.3%</td>
</tr>
<tr>
<td>&gt;High School</td>
<td>77.5%</td>
<td>56.5%</td>
</tr>
</tbody>
</table>

** Figure 2: Prevalence of Bed Sharing Behavior by Demographic Characteristics, Jul 2001 - Dec 2002 MI PRAMS

* DSU = Data Statistically Unreliable
those in the All Other Urban Areas had a higher prevalence of bed sharing (89.5%) when compared to those in the Southeast region (78.6%). In the White, Non-Hispanic population, those who lived in All Other Areas reported the highest rate of bed sharing (58.9%) and women in the Southeast region reported the lowest rate (53.4%).

Further, bed sharing was analyzed as Always/Almost Always, Sometimes, and Rarely/Never. bed sharing to identify which groups had a high rate of chronic or always/ almost always bed sharing. When stratified by race/ethnicity, Black, Non-Hispanic women (41.2%) had an almost four times higher rate of always/ almost always bed sharing when compared to White, Non-Hispanic women (11.0%) (Figure 3).

![Prevalence of Bed Sharing by Maternal Race](image)

**Figure 3:** Prevalence of Bed Sharing by Maternal Race, Jul 2001- Dec 2002 MI PRAMS

- **Infant Sleep Position Trends**
  - Included in the PRAMS survey is the following question pertaining to infant sleep position: “How do you most often lay your baby down to sleep now? (a) On his or her side (b) On his or her back (c) On his or her stomach.”
  - Between July 2001 through December 2002, 71.1% of women reported placing ther infant to sleep on their backs. When stratified by race/ethnicity, White, Non-Hispanic women reported a higher rate of back sleep position (74.3%) when compared to Black, Non-Hispanic women (54.4%).
  - In addition, a trend line was created to illustrate how the rates of back sleep position have changed in the past seven years. This graph was not stratified by Hispanic ethnicity because it was not available for 1996. Further, PRAMS was sampled differently between 1996-2000, and this change in sampling procedure makes it difficult to compare prevalence rates before and after 2000. The overall rate of back sleeping has increased from a rate of 38.2% in 1996 to a rate of 69.3% in 2002. Also, each year, the prevalence of back sleeping in the Black population is about 20% lower than in Whites. (Figure 4).

![Trends of Back Sleep Position by Race Between 1996-2002](image)

**Figure 4:** Trends of Back Sleep by Race, 1996-2002 MI PRAMS


**Recommendations**
- Promote awareness and encourage ownership to change bed sharing practices among Black, Non-Hispanic women.
- Develop strategies to ensure that women learn and follow the safe sleep messages.
- Continue to promote the back sleep position for infants.
- For specific materials and intervention strategies, contact Tomorrow’s Child (6).
### About Michigan’s PRAMS

The Pregnancy Risk Assessment Monitoring System (PRAMS), a population-based survey, is a CDC initiative to reduce infant mortality and low birth weight. It is a combination mail/telephone survey designed to monitor selected self-reported maternal behaviors and experiences of women who delivered a live infant in Michigan that occur before and during pregnancy, as well as early-postpartum periods. Information regarding the health of the infant is also collected for analysis. Annually, over 2,000 mothers are selected at random to participate from a frame of eligible birth certificates. Women who delivered a low-birth weight infant were oversampled in order to ensure adequate representation. The results are weighted to represent the entire cohort of women who delivered during that time frame.

### Tomorrow’s Child

Tomorrow’s Child/Michigan SIDS is the Title V SIDS and Other Infant Death Program in partnership with the Michigan Department of Community Health. It is a statewide program working with Michigan communities to provide materials, education, and training for Back to Sleep and Infant Safe Sleep initiatives. Infant Safe Sleep materials are available at no charge. The program is also the central referral site for grief support to families who have experienced an infant death from any cause. For more information, visit [www.tomorrowschildmi.org](http://www.tomorrowschildmi.org) or contact 1-800-331-7437 (6).

### Suggested Citation