Background

Unexpected infant death that occurs during sleep is the leading cause of death nationally among infants aged 1 to 12 months.1 These deaths are attributable to sudden unexplained death of an infant (SUDI), sudden infant death syndrome (SIDS), or asphyxiation (related to position of child during sleep).2

Unexpected Infant Deaths that Occur During Sleep Are Often Associated with Unsafe Sleeping Practices

Baltimore City’s Child Fatality Review identified 89 child deaths (out of 117 reviewed infant deaths) that were unexpected infant deaths that occurred during sleep in 2002-2006.3 An unsafe sleeping environment was implicated in 81 of the 89 deaths (91%).

An unsafe sleep environment means:
- Placing young infants to sleep on stomach or side; or
- Co-sleeping – infant sleeping in a bed or couch with another person; or
- Soft bedding, toys, or soft objects under or around the infant during sleep; or
- No crib available or improper use of crib; or
- Smoking in house

In just under three quarters of the 89 deaths, the infant was co-sleeping when the death occurred. Use of soft bedding in the infant’s sleeping environment was reported in 67 of the 89 deaths (75%). In 54 of these 89 unexpected infant deaths (61%), the infant was both co-sleeping and placed in soft bedding.4

Summary

- From 2002 to 2006, 89 Baltimore City infants died unexpectedly while sleeping.
- 81 of these infants (91%) were in unsafe sleeping environments.
- The Baltimore City Health Department is implementing a multi-faceted approach to prevent these tragedies.
Efforts to Reduce Infant Deaths

The Baltimore City Health Department is implementing a multi-faceted strategy to prevent the tragedy of infant death. This approach includes addressing the problem of unsafe sleep by:

- **Launching a Safe Sleep Campaign on September 17, 2007** consisting of public service announcements (PSAs) on local radio stations and placement of posters in bus shelters. PSA messages convey safe sleep practice recommendations and information on how pregnant moms can request a free crib;
- **Providing Safe Sleep trainings** to Obstetric/Labor and Delivery staff at all birthing hospitals in Baltimore, home visiting staff, outreach workers, and caregivers on current safe sleep research findings, recommended practices, and the importance of patient education;
- **Distributing “onesies”** with Safe Sleep messaging and safe sleep education to women giving birth in Baltimore City hospitals and to women enrolled in home visiting programs;
- **Distributing free cribs** to pregnant women and women with young babies through the establishment of the Baltimore City Crib Fund, in collaboration with Baltimore Healthcare Access.

### Case Examples of Unexpected Infant Death During Sleep:

**Case 1:** Mom awoke to find her previously healthy 2-month baby girl cold to the touch. The baby was sleeping in a full size bed with mom and dad. She was found on her stomach with her head to the left side.

**Case 2:** Mom awoke to find an older sibling sleeping on top of her 2-week old baby girl. There was no crib in the house.

### Notes and References


2. Very few unexpected infant deaths that occur during sleep have a cause that is evident upon autopsy or examination of the death scene. SIDS is defined as: the sudden death of an infant under 1 year of age, which remains unexplained after a thorough case investigation, including performance of a complete autopsy, examination of the death scene, and review of the clinical history*. The death is described by the term SUDI if it is sudden and unexplained, but does not satisfy the definition of SIDS. *(Willinger M, James LS, Catz C. Defining the sudden infant death syndrome (SIDS): deliberations of an expert panel convened by the National Institute of Child Health and Human Development. Pediatr Pathol. 1991;11:677–684).

3. The Child Fatality Review (CFR) is a multidisciplinary collaborative among several city agencies including the health department that reviews any child death that is unexplained. The primary aim of the CFR is to understand how and why children in Baltimore City are dying in order to identify means of preventing such deaths and to improve the health and safety of Baltimore’s children. Data collected by the CFR was obtained from the Chief Medical Examiner’s reports, police reports, and death certificates.

4. **Risk factors associated with unsafe sleep among the 89 unexpected infant deaths that occurred during sleep in Baltimore, 2002-2006.**

<table>
<thead>
<tr>
<th>Risk Factor</th>
<th>Present</th>
<th>Absent</th>
<th>Missing/Unknown</th>
</tr>
</thead>
<tbody>
<tr>
<td>One or more of following: Co-sleep, soft bedding, placed to sleep on stomach/side in infants &lt;4 months old, smoking, no or improper crib use</td>
<td>81</td>
<td>0</td>
<td>8^</td>
</tr>
<tr>
<td>Soft bedding</td>
<td>67</td>
<td>3</td>
<td>19^</td>
</tr>
<tr>
<td>Co-sleep</td>
<td>66</td>
<td>19</td>
<td>4^</td>
</tr>
<tr>
<td>Both co-sleep and soft bedding</td>
<td>54</td>
<td>0</td>
<td>35^</td>
</tr>
</tbody>
</table>

a) Deaths for which the evidence did not indicate an unsafe sleep environment, but the data on unsafe sleep risk factors were incomplete.  
b) Information on these risk factors was not available.  
c) Remaining cases either had one of the two risk factors alone, or did not have one risk factor and were missing information about the other. There were no deaths where both risk factor were known to be absent.

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