



## PREVENTION OPPORTUNITIES UNDER THE BIG SKY

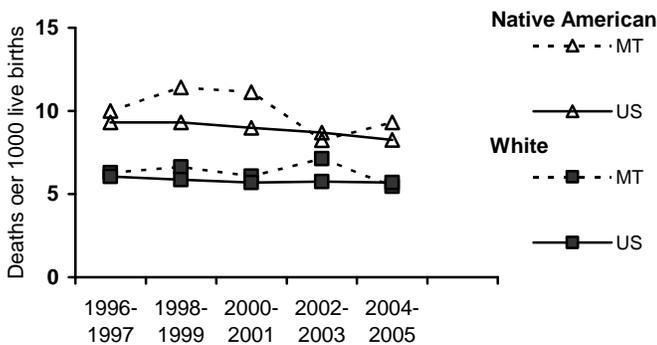
### Unsafe Sleep Environments: A Risk for Infant Death due to SIDS, Undetermined Cause, and Suffocation

In recent years, approximately 70 Montana infants die each year before they reach their first birthday. The leading causes of death for infants in Montana are conditions originating in the perinatal period (such as extreme prematurity and complications of labor and delivery), congenital anomalies, Sudden Infant Death Syndrome (SIDS), and undetermined causes. SIDS and undetermined cause deaths have well-established risk factors related to an infant's sleep environment. Infant suffocation deaths, which can be difficult to distinguish from SIDS and undetermined causes<sup>1,2</sup>, have similar risk factors related to where an infant sleeps. This issue of *Montana Public Health* summarizes the risk factors in the 2005 and 2006 SIDS, suffocation, and undetermined cause infant deaths reviewed by local Fetal, Infant, and Child Mortality Review (FICMR) teams in Montana.

#### Infant Mortality

In 2006, the Montana infant mortality rate (5.8 deaths per 1000 live births) was less than the total US rate (6.7). However, when the infant mortality rate is stratified by race, the race-specific rates in Montana are similar to those in the US (Figure).

Figure. Infant mortality rate, White and Native American, Montana and US, 1996-2005



\*Rates in two-year increments because of the small number of events.

In 2005 and 2006, 38 infant deaths due to SIDS, undetermined causes, and suffocation were reviewed by FICMR teams to identify risk factors and possible prevention opportunities.

#### Fetal, Infant and Child Mortality Reviews

The Montana Fetal, Infant, and Child Mortality Review Program was established by the state legislature in 1997. In 2005-2006, local teams from 31 counties and four tribes conducted mortality reviews. By reviewing the deaths from a multidisciplinary perspective, FICMR teams provide a more complete description of the circumstances than does the death certificate alone. Local FICMR teams include members from a variety of disciplines, such as law enforcement, medical, public health, and social services, among others. The focus

of FICMR teams is on identifying primary risk factors involved in the deaths that can then be used to develop community- or state-level actions to prevent similar deaths from occurring in the future.

#### Modifiable Risks

It can be difficult to identify what specifically contributed to an infant's death from SIDS, suffocation, and undetermined causes. However, information on several well-documented risk factors is collected during FICMR reviews, including the presence of loose pillows or bedding, sleeping on a soft surface, and sharing a sleep surface with others. The risk factors related to the sleep environment collected during 2005-2006 Montana death reviews are described in the Table.

Twenty-four (63%) of the 38 deaths had at least one risk factor noted. A combination of risk factors may increase an infant's risk of death. For instance, infants who share beds with other adults or children may be more likely to encounter heavy bedding or pillows on the bed. At least 13 deaths (34%) had more than one of the risk factors present. Additional factors not collected during FICMR reviews, such as intoxicated adults sharing a bed with an infant, also increase the risk.

Table. Most common risk factors reported for infant deaths\* due to SIDS, suffocation, and undetermined cause, Montana, 2005-2006

Risk Factor	Number (percent)		
	Yes	No	Unknown
Heavy bedding	11 (29)	17 (45)	10 (26)
Soft surface	19 (50)	12 (32)	7 (18)
Sharing sleep surface with others	23 (61)	15 (40)	0

\*Total infant deaths (38) due to: SIDS (19), suffocation (6) and undetermined cause (13).

## **Recommendations to reduce the risk of SIDS, Suffocation, and Undetermined Cause Deaths in Infants:**

### **1) Encourage safe sleep environments:**

- Infant beds should be:
  - free of loose bedding, pillows, and stuffed animals
  - not in an overheated room
  - firm, not soft
- Infants should be laid on their backs to sleep
- Infants should sleep in their own sleep area, such as a crib, cradle, or bassinet. An infant's bed can be close to, but separate from adult beds or other childrens' beds.
- Parents who choose to bed-share should be aware of how to mitigate risks
  - bed should be a flat, firm surface (not a couch or armchair)
  - no drug (illegal or legal, such as sleeping tablets or cold medicine) or alcohol use by anyone sharing the bed
  - no dogs or other children sharing the bed
  - bed should be free of loose bedding and pillows
  - bed should be away from the wall or other furniture where the infant could become wedged
- No tobacco smoke exposure
  - Encourage women to quit smoking as soon as possible prior to or during pregnancy
  - Continue to support women in maintaining smoking cessation after delivery
  - Encourage clients to provide a smoke-free environment for their children

### **2) Encourage parents to provide “tummy time” for infants to assist them in developing strong neck and back muscles**

### **3) Support community FICMR reviews and prevention activities**

For more information about Montana's FICMR Program or the recommendations above, contact Debra Rapaport, RN BSN, Public Health Nurse Consultant and FICMR Coordinator, at (406) 444-3394 or [drapaport@mt.gov](mailto:drapaport@mt.gov). For information on the Maternal and Child Health Epidemiology Unit, contact Dianna Frick at (406) 444-6940) or [dfrick@mt.gov](mailto:dfrick@mt.gov).

#### References:

1. Shapiro CK, Tomashek KM, Anderson RN, Wingo J. Recent national trends in sudden, unexpected infant deaths: more evidence supporting a change in classification or reporting. *American Journal of Epidemiology* 2006;163: 762-9.
2. Camperlengo LT. CDC's Sudden Unexpected Infant Death Case Registry. Presentation at the National Association for Public Health Statistics and Information Systems Annual Meeting. June 4, 2008.

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