

Michigan



Native American PRAMS Infant Safe Sleep Report, 2012

Volume 1 Issue 1

Michigan Department of Health and Human Services

Infant Safe Sleep Practices: Introduction

According to Centers for Disease Control and Prevention (CDC), each year in the United States, there are about 3,500 Sudden Unexpected Infant Deaths (SUID). The CDC defines SUID as “ the death of an infant less than 1 year of age that occurs suddenly and unexpectedly, and whose cause of death is not immediately obvious before investigation” (1). Three common causes of SUID include: Sudden Infant Death Syndrome (SIDS), unknown cause, and accidental suffocation and strangulation in bed (1). National studies have shown that placing infants on their back while they sleep is associated with a lower prevalence of infant mortality due to SUID. As such, the American Academy of Pediatrics (AAP) recommends that babies be placed in a back sleeping position, rather than on their belly or side (5).

The AAP also recommends against the use of pillows and loose blankets in a baby’s sleep environment and against bed-sharing with adults

due to the risk of accidental infant suffocation, entrapment or strangulation (2,5).

Nationwide SUID awareness campaigns have been successful in promoting safe sleep practices. In 2009, 74% of American babies slept on their backs, compared to 27% in 1994. SUID-related deaths during this time period dropped by 50%, though the risk for Native American babies has remained higher than for other population groups as measured in national samples (4). SUID death rates per 100,000 live births for American Indian/Alaska Native (213.3) and non-Hispanic black infants (180.9) were more than twice those of non-Hispanic white infants (88.1)(1).

This summary reports on the prevalence of safe sleep habits among the mothers of Native American babies in Michigan using data collected from the 2012 Michigan Native American Pregnancy Risk Assessment Monitoring Survey (referred to as “Native American PRAMS” throughout).

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Native American PRAMS is administered in several states, such as South Dakota, Washington, New Mexico, Oregon, Wyoming and Michigan. Michigan is the first state in which the PRAMS survey was sent to the mother of every American Indian/Alaska Native baby born in the state. The Michigan Native American Pregnancy Risk Assessment Monitoring System project is collaborative and endorsed by the Inter-Tribal Council of Michigan, the Great Lakes Inter-Tribal Epidemiology Center, and the Michigan Department of Health and Human Services.

About Michigan Native American PRAMS

The Michigan Pregnancy Risk Assessment Monitoring Survey (“MI PRAMS”) is an ongoing survey project of all mothers who deliver live births in Michigan. PRAMS generates statewide estimates of important perinatal health indicators among women delivering live infants.

Health disparities among minority groups have long appeared in statewide representative samples—the small proportion of the population that Native American mothers comprise within these surveys has made the true magnitude of these disparities difficult to estimate.

The Michigan Practices to Reduce Infant Mortality through Equity (PRIME), funded by the W.K. Kellogg Foundation, dedicated resources for a standalone survey for mothers of Native infants that will gather data on Michigan’s Native American population that is lacking in MI PRAMS. The Native American PRAMS project began in the fall 2012 and was administered to mothers of babies with at least one parent identifying as Native American on the birth record by phone, mail or web to collect information on the prevalence of maternal and child health practices and outcomes. The NA PRAMS asks many of the same questions as MI PRAMS, but also includes unique questions. A total of 1,352 women responded to the survey. For more information, visit <https://www.michigan.gov/PRAMS>.

Sleep Positioning

Of the mothers surveyed in Native American PRAMS, 78.2% reported positioning their new babies on their backs when putting them to sleep. Rates of back-sleeping among Native American infants were not significantly different from those of babies whose mothers were surveyed in the Michigan PRAMS 2011 cohort (77.1%).

The prevalence of back sleeping among Native American PRAMS infants was examined by the mothers age and pregnancy intention. Mothers of Native American infants

responding to the 2012 survey who were less than 20 years old were equally as likely to place their children to sleep on their backs compared to mothers in older age groups. Young mothers (under 20 years) in both the Native American PRAMS and MI PRAMS surveys both fell short of the National Healthy People 2020 goal of 75.9%, however MI PRAMS was significantly less, while Native American PRAMS was not significantly less than the Healthy People 2020 goal.

Figure 1: NA Infant's Sleep Position

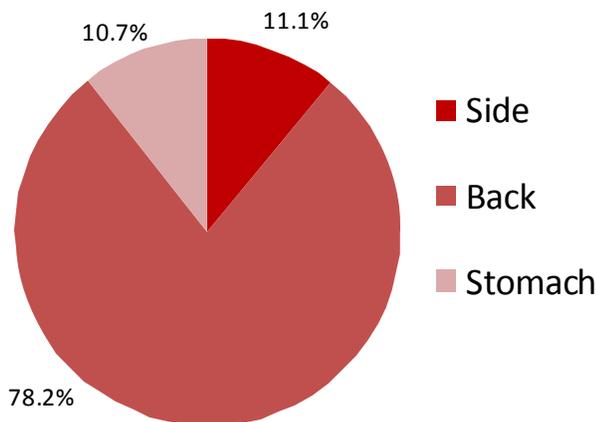
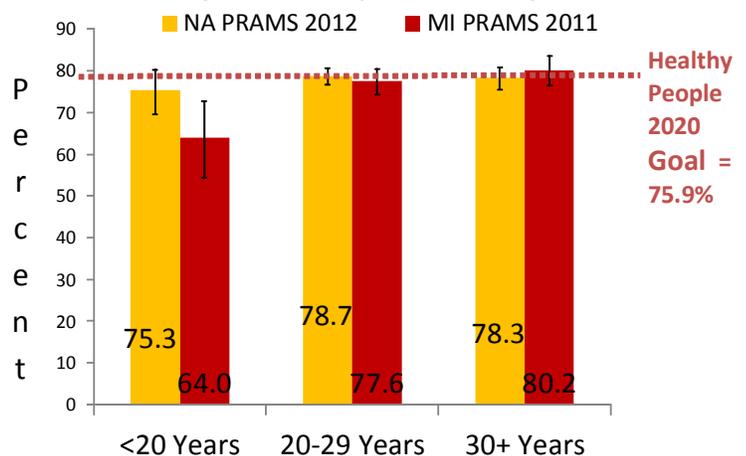


Figure 2: Prevalence of back sleeping among infants - by mother's age



Among mothers of Native American infants surveyed, women whose pregnancy was intended were significantly more likely to put their babies to sleep on their backs than mothers with unintended pregnancy. Mothers in the 2011 MI PRAMS sample whose pregnancy was unintended were significantly less likely to place their baby to sleep on its back than mothers whose pregnancy was intentional. Back sleeping is shown to reduce the baby's risk of SUID.

Sleep Practices

Mothers in the 2012 Native American PRAMS reported putting their babies to sleep in a similar manner to mothers in the 2011 MI PRAMS sample with regard to sleep practices involving crib, firm mattress, bumper pads, blankets, pillows, and toys. On average, mothers from the MI PRAMS sample were more likely to put their child to sleep with a blanket and pillow than mothers in the 2012 Native American PRAMS sample, although differences were not significant.

Rate of Bed-Sharing Among NA PRAMS

Mothers who reported that their babies always, often or sometimes slept with another person* are shown in Figure 5 and Figure 6. The 2011 MI PRAMS did not ask questions about bed-sharing in the same manner, thus no comparison is available.

The rate of bed-sharing among infants within the 2012 Native American PRAMS sample was 33.5% overall. Bed-sharing was significantly more common among infants with mothers under 20 years old (48.3%) than among older mothers (20-29 years and 30+ years) (Figure 5), and with mothers who were listed as Native American on the baby's birth certificate (35.5%) as compared to those mother's with no indication of Native American heritage listed (29.9%)(Figure 6). Infants with mothers with a college degree were significantly less likely to bed-share than infants with mothers who had less than a high school education (26.7% compared to 38.6%), or just some college (35.7%) (data not shown).

Bed sharing is common among various cultures and it is important to provide culturally sensitive education to parents. A common belief is that bed sharing "strengthens the bond between the mother and infant and makes breastfeeding easier" (3). However, according to National Institute of Child Health and Human Development, bed-sharing is a risk factor for sudden unex-

Figure 3: Prevalence of back sleeping among infants by mother's pregnancy intention

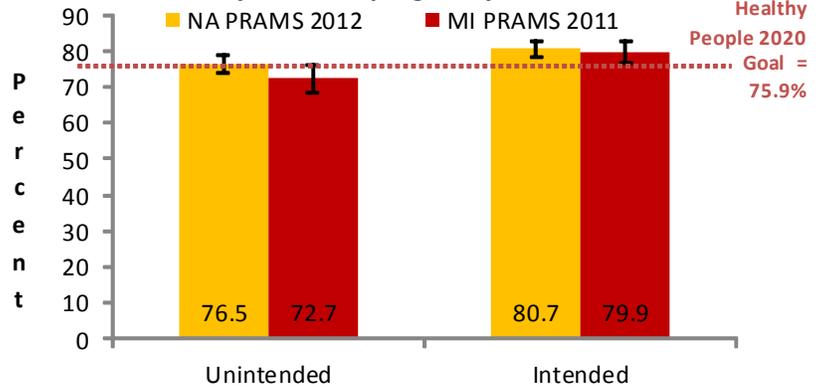
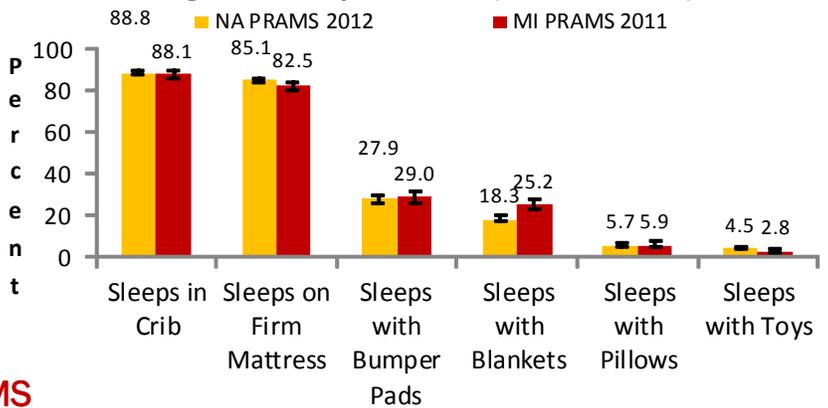


Figure 4: Sleep Practices (non-exclusive)



pected infant death (4). It is recommended that the baby sleep in the same room as the parent(s), in a safety-approved crib, bassinet or pack-n-play in close proximity, but separate from where the parent(s) sleep (5).

Figure 5: Bed-Sharing* by Maternal Age

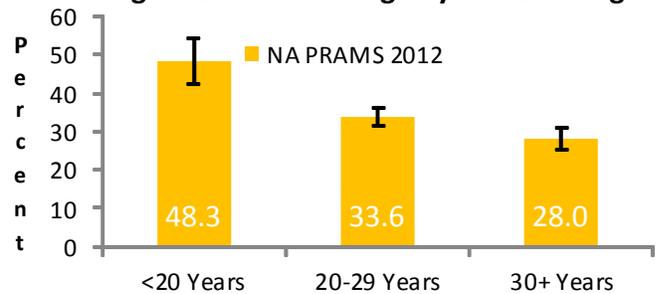
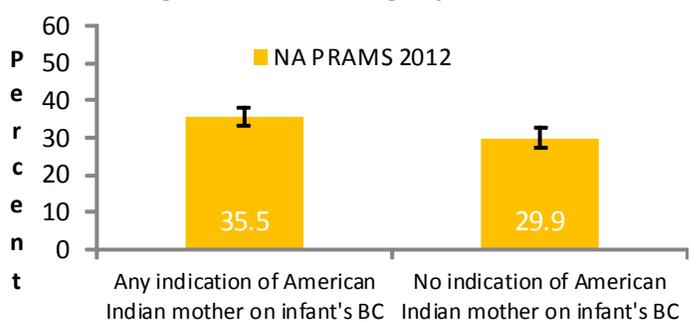


Figure 6: Bed-Sharing* by Maternal Race



Public Health Implications

In comparing prevalence estimates from the 2012 Native American PRAMS and 2011 MI PRAMS, we find less of a difference between the infant sleep practices of Native American babies and all Michigan mothers than reported in national surveys in previous years. Among the mothers of Native American infants surveyed in the 2012 Native American PRAMS, we find that unintended pregnancy, maternal age, maternal education, maternal race are associated with differences in the rates of risky infant sleep practices.

Infant sleep practices are critical for reducing the risk of SUID among Native American infants. The baby's sleeping position, participation in bed sharing, sleep practices such as sleeping surface can all put the infant at a higher risk for SUID. The AAP Task Force recommends that (3,5): the baby is placed in a sleep area close to but separate from where others sleep, the baby is placed on his or her back to sleep for naps and at night and the baby sleeps on a firm sleep surface, such as on a safety-approved crib mattress, covered by a fitted sheet and free of any soft toys or loose bedding.

Future safe sleep education campaigns in Native American communities should keep these risk patterns in mind when targeting their next campaign. It is also important that health care professionals assess the parents' beliefs, determine possible risk factors in the household environment, provide culturally sensitive education, and give explanations for the recommendations aimed at decreasing risk factors associated with SUID.

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Suggested Citation:

Shelder S, Peters C, Hekman K, Jegede B, Kushman E, Porter M, McKane, P. Michigan Department of Health and Human Services. "Focus on Infant Sleep Practices." *Michigan Native American PRAMS Summary Report* Volume 1, Issue 1 (2015).

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