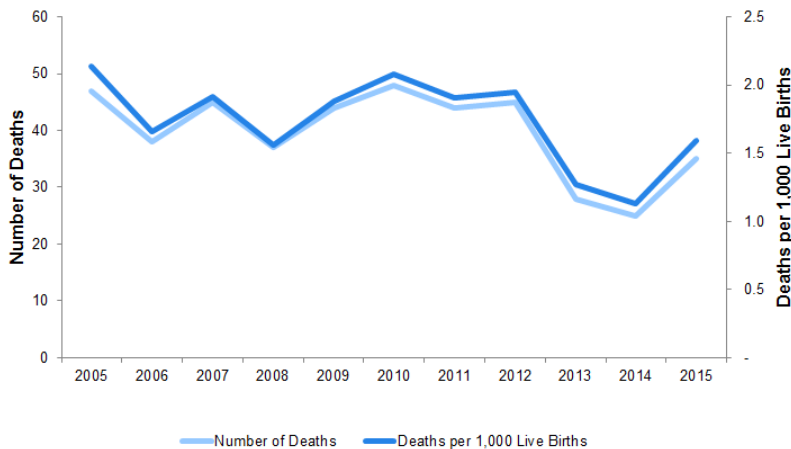


Sleep-related Infant Deaths in Philadelphia

Sleep-related infant deaths account for approximately half of all deaths that occur between one month and one year of age in Philadelphia. This issue of CHART examines sleep-related infant deaths in Philadelphia, drawing upon findings from investigations conducted by the Medical Examiner’s Office. This includes deaths before the first year of age due to unintentional suffocation or strangulation, sudden infant death syndrome (SIDS)*, and undetermined causes.¹

The findings highlight opportunities for reducing sleep-related infant deaths by encouraging caregivers to put infants to sleep in their own safe place—a crib, bassinette, or “Pack n’ Play,” on their backs, and without any blankets, crib bumpers, pillows or toys.

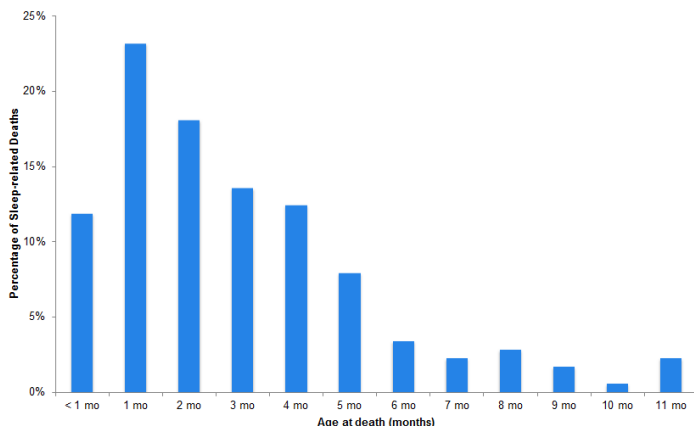
Sleep-related Infant Deaths have Declined



- From 2006-2010 to 2011-2015, the average number of sleep-related infant (less than 1 year of age) deaths per year declined 17% from 42 to 35, (from 1.8 to 1.6 deaths per 1,000 live births).
- During 2011-2015, there were 177 sleep-related deaths.† The annual rate of sleep-related infant deaths for 2011-2015 was 75% higher than the national rate of 0.9 deaths per 1,000 live births for 2014.

(Source: Philadelphia Department of Public Health, Medical Examiner’s Office)

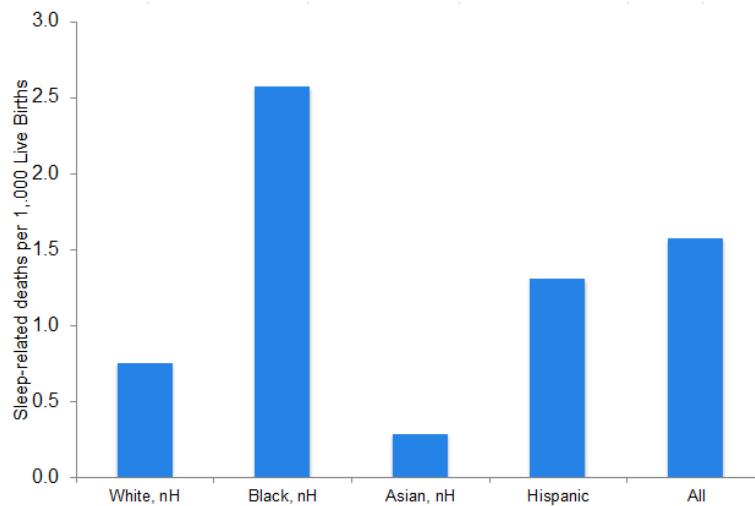
Sleep-related Infant Deaths are Most Common Among Infants <6 Months of Age



- Nearly 90% of sleep-related infant deaths occurred among infants less than 6 months of age, with the peak occurring during the 2nd and 3rd months of life.

(Source: Philadelphia Department of Public Health, Medical Examiner’s Office)

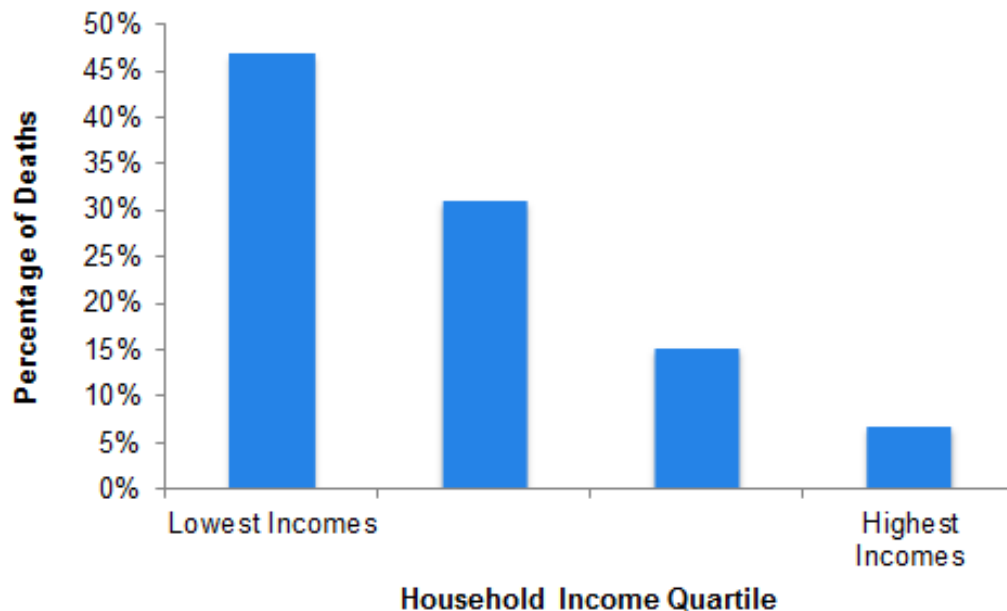
Sleep-related Death Rates are Highest Among Black Infants



- The rate of sleep-related deaths per 1,000 live births for black infants was more than 3 times the rate for white infants. Black infants represented 44% of all births during this time period; but 72% of sleep-related deaths. (nH= non-Hispanic)

(Sources: Philadelphia Department of Public Health Medical Examiner's Office and Vital Statistics Report, Philadelphia 2012)

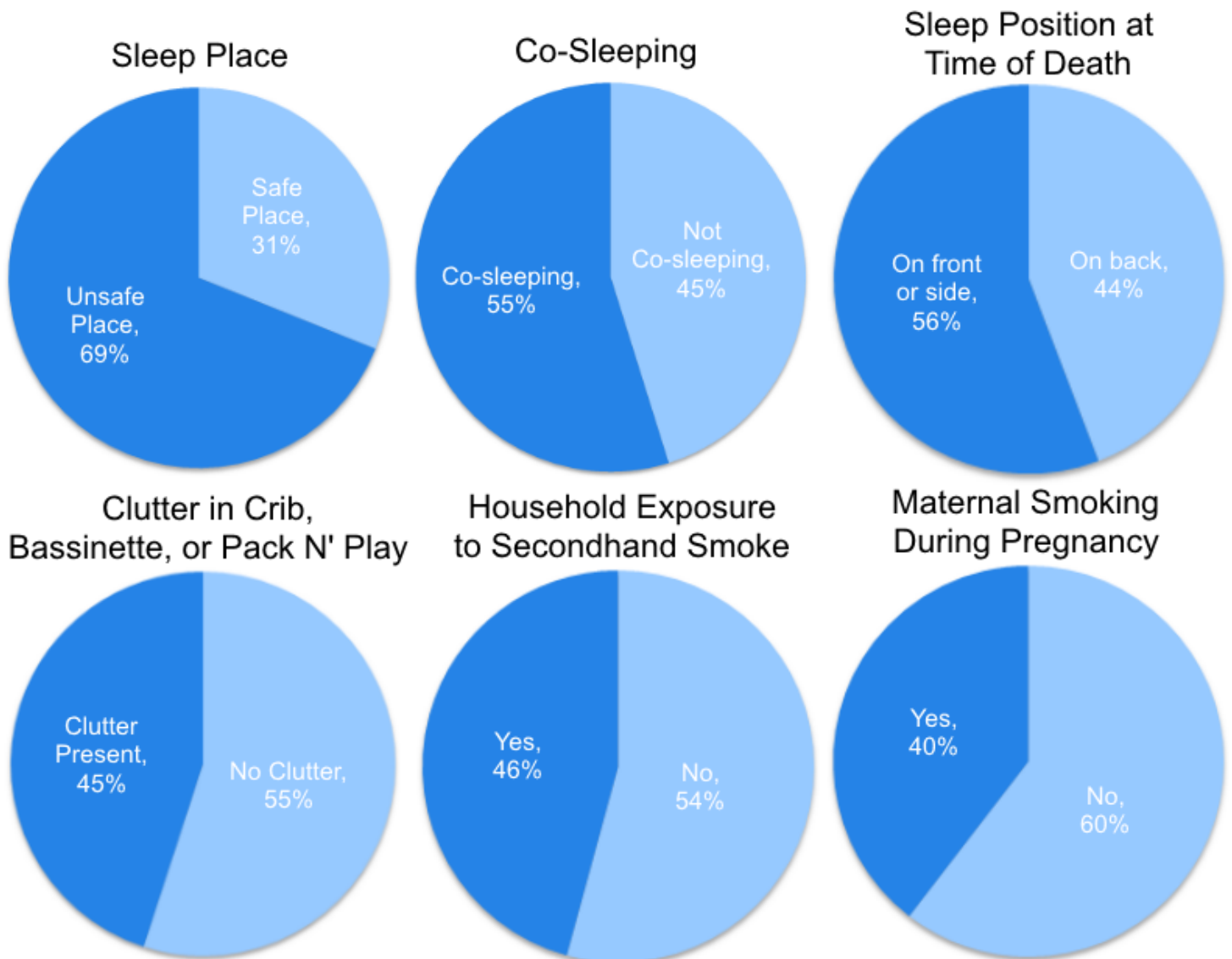
Sleep-related Infant Deaths Occur Mostly in Low-income Neighborhoods



- Among all infant sleep-related deaths during 2011-2015, 85% occurred in the child's primary residence. Nearly half of sleep-related infant deaths occurred among residents in the quarter of census tracts where median household incomes were the lowest. Less than 10% of sleep-related infant deaths occurred among residents in the quarter of census tracts with the highest household incomes.

(Source: Philadelphia Department of Public Health, Medical Examiner's Office, and American Community Survey, U.S. Census Bureau)

Modifiable Risks for Sleep-related Infant Deaths were Common



Investigations identified several modifiable risks for sleep-related infant deaths:

- Nearly 7 of 10 (69%) Philadelphia infants who died unexpectedly while sleeping were put to sleep in an unsafe place, which was most often an adult bed.
- Nearly 6 of 10 (55%) of infants were co-sleeping with an adult, older child, or another infant.
- In over half (56%) of the deaths, infants were found to be lying on their stomach or side at the time of death, rather than on their backs, the recommended sleep position to reduce the risk of SIDS.¹
- For 45% of the infant deaths that occurred in a crib, bassinette, or Pack N' Play, the baby's sleep space was cluttered with items that can cause suffocation, such as pillows, "boppies," bumpers, and stuffed animals.
- An additional and important modifiable risk for sleep-related infant deaths is smoking, including exposure to second-hand smoke and maternal smoking during pregnancy. Almost half of the infants who died (46%) were exposed to second-hand tobacco smoke in the home.
- For 40% of infants who died, their mothers had smoked during pregnancy.

(Source: Philadelphia Department of Public Health, Medical Examiner's Office)

Conclusions

The frequencies of unsafe sleep practices reported here likely under-estimate their actual frequencies because caregivers might be reluctant to acknowledge sleep practices that are contrary to widely publicized recommendations. Investigations of sleep-related infant deaths in Philadelphia identify multiple opportunities for prevention by promoting safe infant sleep practices.

In the United States, sleep-related deaths declined by 70% since the early 1990s following the launch of the “Back to Sleep” campaign. That campaign emphasized placing babies on their backs to sleep. During the same period, infant sleep deaths with an unexplained cause and those due to unintentional suffocation or strangulation, which together represented 56% of sleep-related infant deaths in the United States in 2014, increased slightly.¹

Safe infant sleep requires parents and caretakers to do multiple things every time an infant is put to sleep. It appears that parents may have heard one message—for example, the baby must sleep on her back—but missed other sleep messages, particularly that the baby must sleep in her own safe sleep space.

What Can Be Done

City agencies will:

- Develop clearer messages for parents about how to place infants to sleep safely.
- Continue investigations of infant deaths by the Philadelphia Fetal and Infant Mortality Review committee. This group will review not only information collected by death scene investigators but also information from social service agencies that might have engaged with families before the death of a child.

Health care providers and community organizations can:

- Deliver consistent, simple, clear messages to parents about infant sleep safety.

Parents and other infant caregivers can protect their infants with the following advice:

Your baby should:

- Sleep in a safety-approved Pack n’ Play, bassinet or crib;
- Never sleep in an adult bed, or on a couch alone, with you, or with anyone else;
- Never sleep in the same bed with another adult or child—you can share your room with your baby but not your bed;
- Always be placed to sleep on his or her back;
- Never sleep with loose sheets, pillows, blankets, bumpers, “boppies,” stuffed animals, or toys;
- Not be exposed to tobacco, meaning that pregnant women should not smoke and that you should not smoke or allow smoking in your home.

In addition, the American Academy of Pediatrics² further recommends:

- Breastfeeding, because it is associated with a lower risk of sleep-related deaths, and
- Fully immunizing infants reduces the risk of sleep-related deaths by half.

Resources

- Additional guidance for parents and families on safe sleep: <http://www.phila.gov/dhs/pdfs/sleepingSafely.pdf>.

Notes

- * SIDS is defined by the Centers for Disease Control and Prevention as, “The sudden death of an infant less than 1 year of age that cannot be explained after a thorough investigation is conducted, including a complete autopsy, examination of the death scene, and a review of the clinical history.”¹
- † These data exclude deaths that occurred in Philadelphia among infants who were not Philadelphia residents and four deaths in infants who were Philadelphia residents but who died elsewhere. Deaths that occur outside Philadelphia are not under the jurisdiction of, nor are they investigated by, the PDPH Medical Examiner’s Office.
- ‡ Although some of these infants might have changed position between the times they were put to sleep and died, in the majority of cases this is unlikely because they were too young to be able to roll over independently.

References

1. CDC. Sudden Unexpected Infant Death and Sudden Infant Death Syndrome, updated October 3, 2016. URL: <http://www.cdc.gov/sids>.
2. American Academy of Pediatrics Task Force on Sudden Infant Death Syndrome. SIDS and Other Sleep-Related Infant Deaths: Expansion of Recommendations for a Safe Infant Sleeping Environment. *Pediatrics* 2011, 128(5):1030-1039.

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