



Sleep-Related Infant Deaths in Maryland 2016-2020

Sudden Unexpected Infant Deaths (SUIDs) in Maryland

According to the U.S. Centers for Disease Control and Prevention, approximately 3,400 infants die suddenly and unexpectedly each year in the United States.

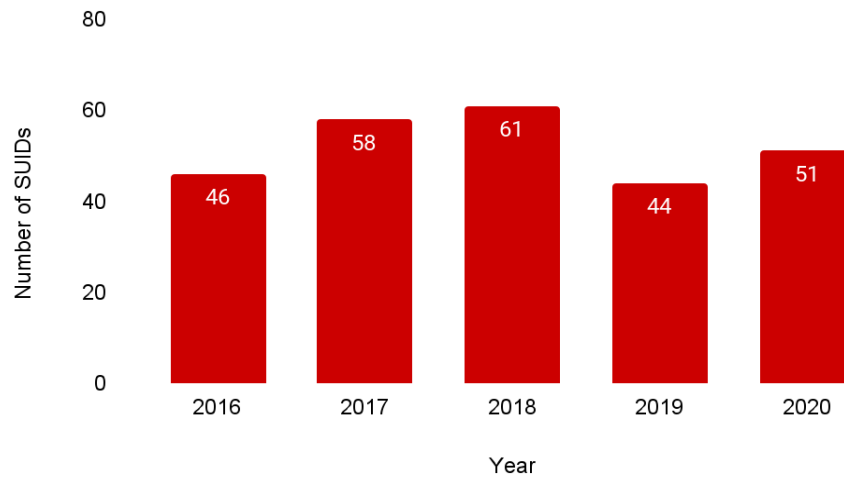
While the exact cause of these deaths cannot always be determined, unsafe sleep factors are present in most cases, indicating the importance of safe sleep practices. Key components of a safe sleep environment are placing infants to sleep alone on their backs, on a firm sleep surface with no soft objects, and in a smoke-free environment.¹

To understand the burden of unsafe sleep practices on infant deaths in Maryland, data from 2016-2020 on sleep-related SUIDs infant deaths linked to how or where the baby sleeps or slept were examined. This five-year timeframe was selected to align with the most recent publicly available Child Fatality Review (CFR) Annual Report.

During these five years, local CFR teams reviewed 260 SUIDs, an average of 52 SUIDs per year. The highest number of SUIDs reviewed in a single year was 61 in 2018 (Figure 1).

¹ Centers for Disease Control and Prevention. *Helping Babies Sleep Safely*. <https://www.cdc.gov/reproductive-health/features/babies-sleep.html>. Accessed: 09/03/2024

Figure 1. Annual Number of SUIDs, Maryland, 2016 - 2020

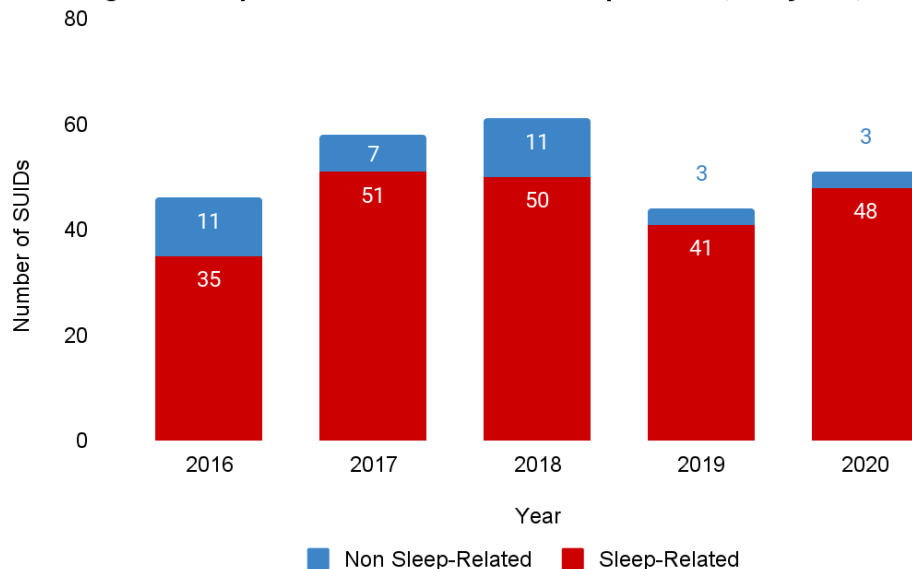


Data Source: Child Death Review Case Reporting System (CDRCRS), as of 7/31/24.

Sleep-Related Deaths in Maryland

Of the 260 SUIDs reviewed from 2016-2020, 225 or 85.6%, were determined to be sleep-related. While the *number* of SUIDs that were sleep-related was highest in 2017 at 51, the highest *proportion* of SUIDs that were sleep-related was 94.1% in 2020 (Figure 2).

Figure 2. Proportion of SUIDs that are Sleep-Related, Maryland, 2016 - 2020

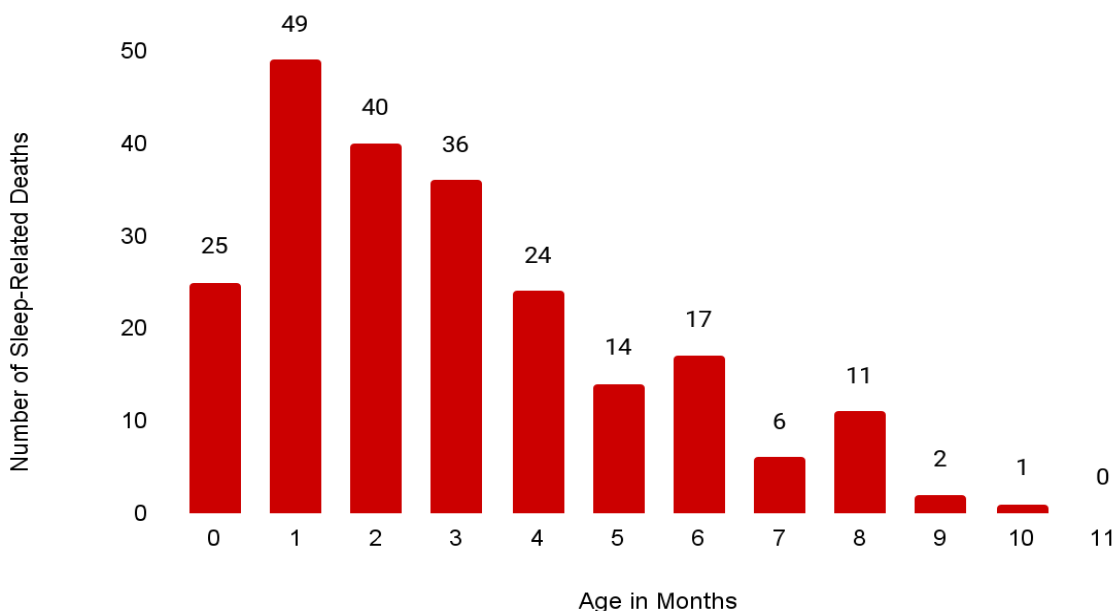


Data Source: Child Death Review Case Reporting System (CDRCRS), as of 7/31/24.

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Over 77.3% of deaths occurred between zero and four months old, while about 1% of deaths occurred between 9 and 12 months old (Figure 3).

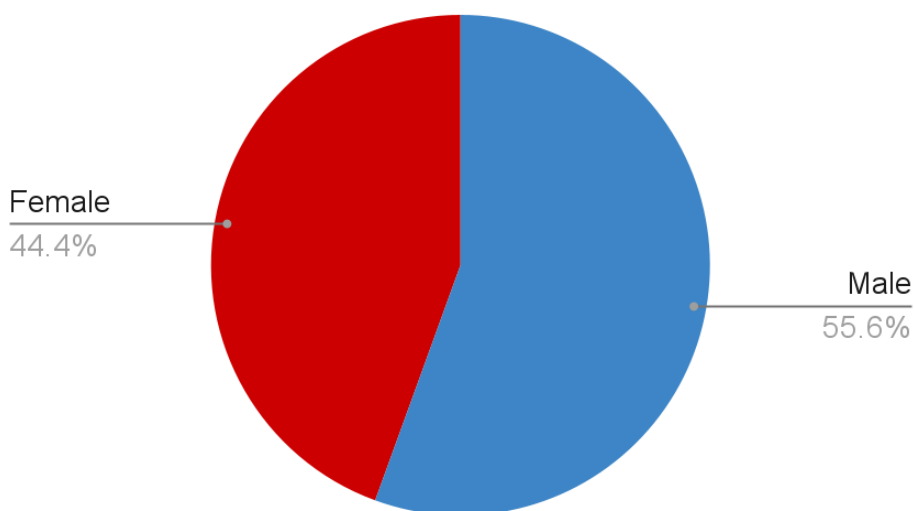
Figure 3. Sleep-Related Deaths by Age in Months, Maryland, 2016 - 2020



Data Source: Child Death Review Case Reporting System (CDRCRS), as of 7/31/24.

Sleep-related deaths were slightly more common among male infants at 55.6% (Figure 4).

Figure 4. Sleep-Related Deaths by Sex, Maryland, 2016 - 2020

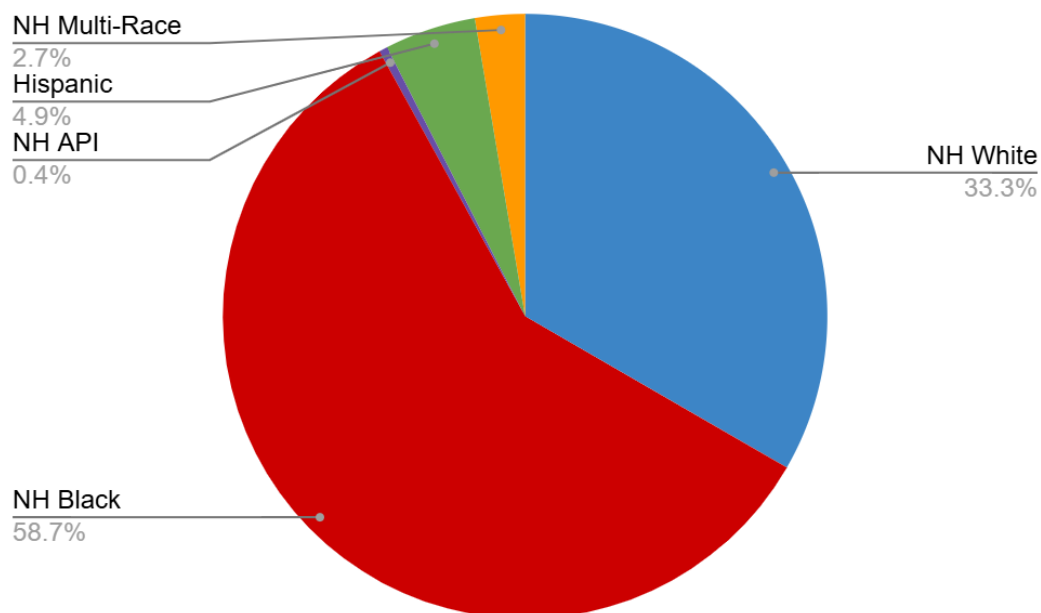


Data Source: Child Death Review Case Reporting System (CDRCRS), as of 7/31/24.

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Sleep-related deaths were more common among non-Hispanic Black infants at 58.7% than non-Hispanic White infants at 33.3% (Figure 5).

Figure 5. Sleep-Related Deaths by Race/Ethnicity, Maryland, 2016 - 2020



Data Source: Child Death Review Case Reporting System (CDRCRS), as of 7/31/24.

Of the 24 jurisdictions in Maryland, Baltimore City had the most sleep-related deaths during the 2016-2020 time period, followed by Baltimore, Prince George's, and Anne Arundel Counties. Garrett, Kent and Talbot Counties had the fewest (Table 1).

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Table 1: Sleep-related deaths by Jurisdiction, Maryland, 2016 - 2020

County by Percent	Number	Percent
Baltimore City	56	24.9%
Baltimore	32	14.2%
Prince George's	27	12.0%
Anne Arundel	22	9.8%
Montgomery	12	5.3%
Wicomico	11	4.9%
Washington	9	4.0%
Frederick	8	3.6%
Calvert	6	2.7%
Howard	6	2.7%
Allegany	5	2.2%
Carroll	4	1.8%
Cecil	4	1.8%
Charles	4	1.8%
Dorchester	4	1.8%
Harford	3	1.3%
Queen Anne's	3	1.3%
Somerset	2	0.9%
St. Mary's	2	0.9%
Unknown	2	0.9%
Garrett	1	0.4%
Kent	1	0.4%
Talbot	1	0.4%

Data Source: Child Death Review Case Reporting System (CDRCRS), as of 7/31/24.

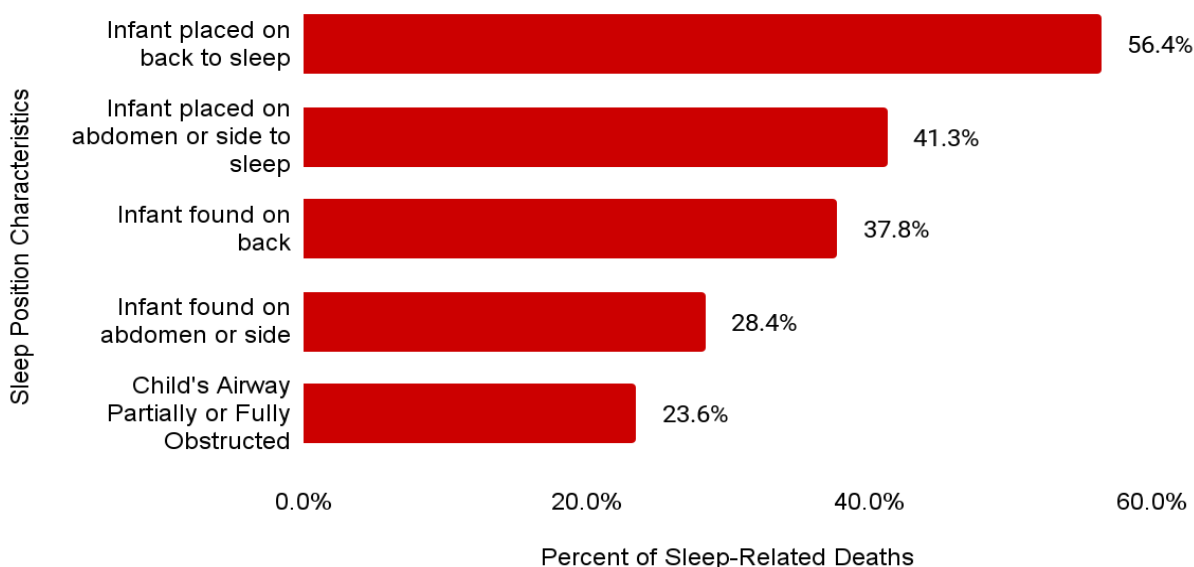
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Note: Counties not included in the table had no sleep-related deaths during this time period.

Sleep-Related Deaths by Incident Characteristics

More than half of infants who died from sleep-related causes (56.4%) had been placed on their backs to sleep, while 41.3% had been placed on their abdomen or sides. The infants were found on their backs in 37.8% of these cases and on their abdomen or sides in 28.4%. The infant's airway was partially or fully obstructed in 23.6% of cases (Figure 6).

Figure 6. Sleeping Position, Sleep-Related Deaths, 2016-2020

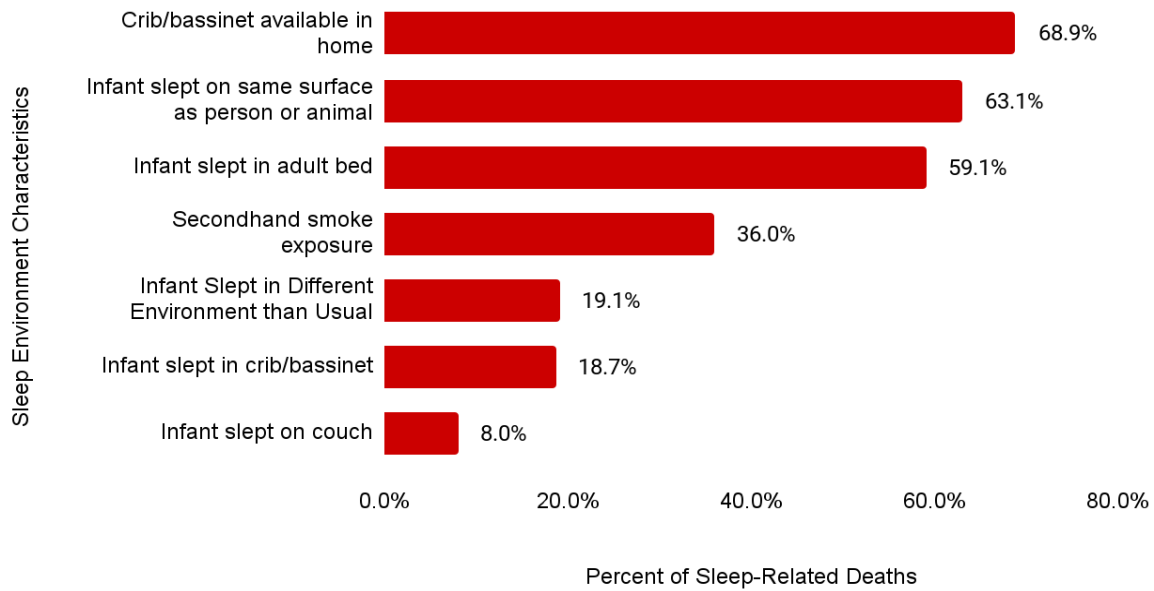


Data Source: Child Death Review Case Reporting System (CDRCRS), as of 7/31/24.

Over 68.9% of cases reported that a crib or bassinet was available in the home; however, the infant slept in a crib or bassinet in only 18.7% of cases. The infant slept in an adult bed in 59.1% of cases and on a couch in 8.0%. The infant shared a sleeping surface with a person or animal in 63.1% of cases. The infant was exposed to secondhand smoke in 36.0% of cases.

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Figure 7. Sleeping Location, Sleep-Related Deaths, 2016-2020



Data Source: Child Death Review Case Reporting System (CDRCRS), as of 7/31/24.

Objects were found in the infant's sleep environment in 84.0% of cases (Table 2). These objects may have been found next to, on top of, underneath, or tangled around the infant. In some cases, it was not known where the object was in relation to the infant. Multiple objects may have been present in the environment. An adult or child was present in the sleep environment for 74.2% of deaths. Other objects commonly present include a mattress (68.9%), a blanket (52.4%), a pillow (49.8%), and a comforter (44.4%).

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Table 2. Soft Objects Present in the Sleep Environment Sleep-Related Deaths, 2016-2020		
Object in Sleep Environment	Number	Percent
Adult or other child	167	74.2%
Mattress	155	68.9%
Blanket	118	52.4%
Pillow	112	49.8%
Comforter	100	44.4%
Fitted Sheet	89	39.6%
Clothing	37	16.4%
Other	32	14.2%
Toy	16	7.1%
Cushion	14	6.2%
Boppy Pillow	12	5.3%
Wall	10	4.4%
Rail	7	3.1%

Data Source: Child Death Review Case Reporting System (CDRCRS), as of 7/31/24.

Note: Percentages do not equal 100 since some cases may have multiple objects in the sleep environment.

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Sleep-Related Deaths by Caregiver Characteristics

Over 96.4% of primary caregivers were the biological parents of the infant (Table 3). Over 70% of the sleep-related deaths were infants on Medicaid. The primary caregiver had a high school education or less in 57.8% of cases, was receiving social services in 55.6% of cases, was unemployed in 28.0% of cases, and was less than 25 years old in 28.0% of cases. The primary caregiver had a history of substance use in 41.3% of cases and had an open Child Protective Services (CPS) case at the time of the infant's death in 12.0% of cases.

Table 3. Caregiver Characteristics, Sleep-Related Deaths, 2016-2020		
Caregiver Characteristic	Number	Percent
Primary caregiver was a biological parent	217	96.4%
Infant on Medicaid	166	73.8%
Primary caregiver obtained 12 years or less of education	130	57.8%
Infant was ever breastfed	127	56.4%
Primary caregiver receiving social services*	125	55.6%
Low household income	99	44.0%
Primary caregiver history of substance abuse	93	41.3%
Primary caregiver was unemployed	63	28.0%
Primary caregiver <25 years old	63	28.0%
Infant had Open CPS case at death	27	12.0%
Primary caregiver was victim of IPV	25	11.1%

*Social services include Medical Assistance, Temporary Assistance for Needy Families, Special Supplemental Nutrition Program for Women, Infants and Children and Supplemental Nutrition Assistance Program.
Data Source: Child Death Review Case Reporting System (CDRCRS), as of 7/31/24.

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Summary

Between 2016 and 2020, **86.5% or 225 of SUIDs in Maryland were sleep-related**. Approximately **79.8% of sleep-related deaths were determined to be preventable** by local child fatality review teams. This highlights the importance of prevention efforts in sleep-related deaths and represents an opportunity for public health interventions.



Alone: While the infant's airway was partially or fully obstructed by an object in only 23.6% of cases, **objects were found in the infant's sleep environment in 84.0% of sleep-related deaths**. The most commonly found objects were an adult or other child, a mattress, a blanket, a comforter, and a pillow.



Back: The infant was **placed on their back to sleep in just over half** of cases of sleep-related deaths.



Crib: Although a crib or bassinet was available in the home for 68.9% of cases, the infant was **placed to sleep in a crib or bassinet only 18.7% of the time**.



Don't Smoke (Smoke-Free Home): The infant was **exposed to secondhand smoke in the home in 36.0% of cases**. Smoking cessation programming for pregnant people and families with infants may also reduce the number of sleep-related deaths.

As the majority of infants who experienced a sleep-related death were between zero and four months old (76.9%) and were non-Hispanic Black (58.7%), directing additional resources to non-Hispanic Black communities around the time of birth offers a significant opportunity to provide support.

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Programmatic and Policy Interventions

- The **Annual Maryland Infant and Child Loss Summit** convenes stakeholders from across the state to share best practices and innovations in addressing infant safe sleep in Maryland.
- The **[Maryland Safe Sleep Act of 2024](#)** requires hospitals to provide oral and written educational resources on providing a safe sleep environment for infants. The Maryland Department of Health is partnering with Local Health Departments to provide a [list of resources](#) for accessing items necessary to provide a safe sleep environment.
- Local Health Departments in Maryland provide safe sleep **education** and **items necessary to provide a safe sleep environment**, such as portable cribs, bassinets, and sleep sacks.
- The Maryland Department of Health has developed **resources** that partners can use to disseminate infant safe sleep messaging to families and caregivers of infants.
 - Infant Safe Sleep Flyer:
health.maryland.gov/phpa/mch/Documents/Safe%20Sleep/2303_PHA_SafeSleepFlyer.pdf
 - Infant Safe Sleep Social Media Toolkit:
health.maryland.gov/phpa/mch/pages/safe_sleep.aspx
- Supported by the Maryland Department of Health, the Center for Infant and Child Loss has developed a series of **educational videos** in [English](#), [Spanish](#), [French](#) and [Haitian Creole](#) that partners can use to disseminate infant safe sleep messaging to families and caregivers of infants.
- The **Maryland Tobacco Quitline** is a free and confidential service accessible by phone, 1-800-QUIT-NOW (1-800-784-8669), web (quitnow.net/maryland?qnclient=maryland) and text message service (text READY to 34191) available 24/7 to all Maryland residents over the age of 13 to help with quitting any form of tobacco or nicotine. The Maryland Tobacco Quitline also offers the pregnancy program for those planning to become pregnant, currently pregnant, postpartum, and/or breastfeeding. Contact the Maryland Tobacco Quitline for more information.

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