



North Carolina Office of the Chief Medical Examiner Spotlight on Infant Death Report, 2023

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Introduction

According to N.C. General Statutes § 130A-383, a medical examiner is notified to investigate the circumstances surrounding deaths due to violence, poisoning, accident, suicide, or homicide; occurring suddenly when the deceased had been in apparent good health or when unattended by a physician; or occurring under any suspicious, unusual, or unnatural circumstance.

Cases investigated by the Medical Examiner system, a trusted authority in determining the cause and manner of death, included several natural deaths, as well as accidents, homicides, suicides, and deaths for which no cause or manner of death could be determined. The system assigns a cause of death for each case, indicating how the death occurred. Means included unknown, motor vehicle, natural, firearm, asphyxia, drowning, blunt, fire, toxicology, other, SIDS, fall/jump, animal, electrocution, exposure, medical treatment, environmental, falling object, and sharp.

The data presented here begin with information from the OCME clinical case management system and include data and categories abstracted from OCME reports and documents received from outside agencies. These sources may have differing definitions or reporting criteria, which can affect data completeness and comparability. Deaths reviewed under Medical Examiner jurisdiction will be included in the total number of child fatalities in a report produced by the North Carolina State Center for Health Statistics (SCHS). This SCHS report publishes the total number of child deaths in North Carolina each year based on data in NC Vital Records, which may not always align with initial OCME data.

Methods

Case Identification

Infants, defined as children under one year of age, accounted for a total of 215 deaths in North Carolina in 2023. The details below provide a data spotlight on the 213 finalized infant fatality cases as of January 2026. Numbers are subject to change. It is important to note that this report focuses exclusively on North Carolina residents and infant fatalities within the North Carolina Medical Examiner (ME) System. This report:

- Excludes pending cases
- Includes NC residents only
- Includes infants only, defined as children under one year of age
- Includes only infants under the Medical Examiner's jurisdiction.

Data Abstraction

Infant death information was captured through abstraction of the Report of Investigation of Medical Examiner (RIME), autopsy reports, and call logs for sleep-related data. Other data

was directly available from the Medical Examiner Information System (MEIS) as entered by clinical staff.

Analysis

The preparation of the annual report begins with abstracting data from RIME, autopsy reports, and sleep-related data call logs. Other data was directly available from MEIS. Infant fatality cases are identified, and documents within each decedent’s case folder are systematically reviewed to capture relevant details for inclusion in the report. These details are abstracted to ensure consistency and accuracy across cases.

Data visualizations are created using Microsoft Excel to support analysis and interpretation. Findings are presented through a combination of visualizations, numerical counts, percentages, and rates to provide a comprehensive overview of child fatality trends.

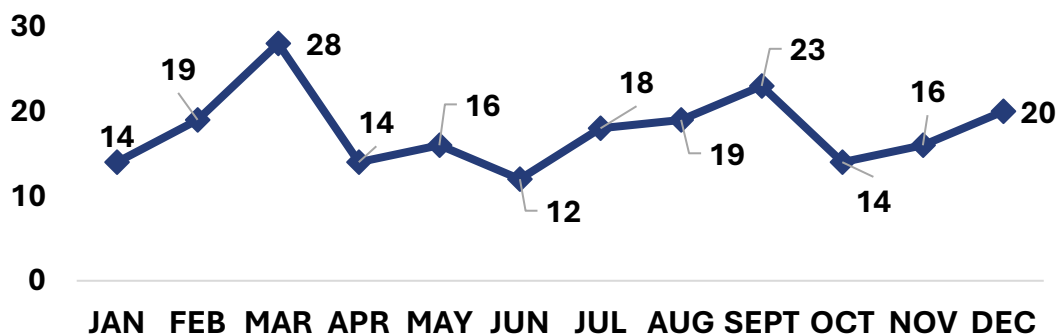
The data included in this report is restricted to finalized cases as of the time of analysis. Which may exclude current pending or recently updated cases. Figures presented are therefore provisional and subject to change as pending cases are finalized and additional data are received. These limitations mean findings should be interpreted with awareness that they may not capture all infant fatalities for the period or reflect forthcoming changes in classification or case numbers as more information becomes available.

Section I: Trends and Patterns in Overall Medical Examiner System Infant Fatalities

Monthly Trends of ME System Infant Fatalities

Figure 1 shows the number of infant fatalities by month in North Carolina in 2023. ME system infant fatalities increased from January to March and peaked in March with 28 fatalities. In contrast, June experienced the lowest infant fatalities (12). This analysis highlights the significant monthly variations in infant mortality rates throughout the year.

Figure 1. Number of ME system infant fatalities by month in North Carolina, 2023



Manner and Means of ME System Infant Fatalities

Table 1 lists finalized infant fatalities within the ME System of the State of North Carolina categorized by manner, means, and the number of deaths for 2023. Due to pending cases, numbers are subject to change. **Figure 2** describes the manner of medical examiner system infant deaths in North Carolina in 2023.

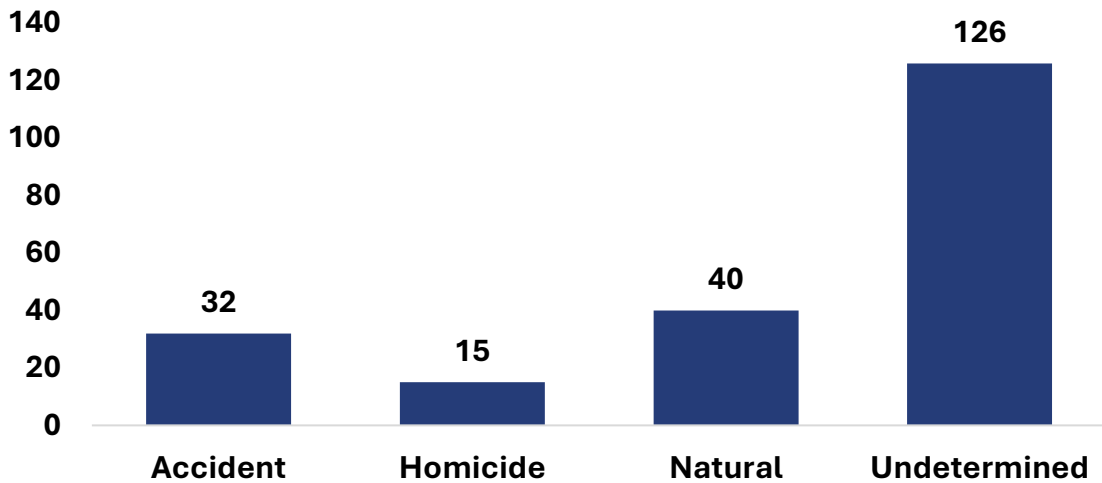
The leading causes of medical examiner system infant fatalities were undetermined (59.2%), followed by natural (18.8%). The leading means of accident infant fatalities were asphyxia (53.2%), environmental (12.5%), motor vehicle (9.4%), and poisoning/toxin (9.4%). The leading means of homicide infant fatalities are blunt (46.7%) and gun (20.0%).

Table 1. Manner and Means of ME system infant fatalities in North Carolina, 2023

Manner	Means	Number
Accident (32)	Asphyxia	17
	Blunt	2
	Drowning	2
	Environmental	4
	Motor Vehicle	3
	Poisoning/Toxin	3
	Unknown	1
Homicide (15)	Asphyxia	1
	Blunt	7
	Gun	3
	Other	1
	Poisoning/Toxin	2
	Unknown	1
Natural (40)	Natural	37
	SIDS	1
	Unknown	2
Undetermined (126)	Asphyxia	1
	Other	3
	Poisoning/Toxin	2
	Unknown	120
Total Fatalities		213

Note: Excludes 2 pending cases

Figure 2. Manner of ME system infant fatalities in North Carolina, 2023



Basic Demographics of ME System Infant Fatalities

Table 2 describes infant fatalities in North Carolina in 2023 by demographic characteristics of sex, race/ethnicity, and age. The number of infant fatalities in North Carolina is displayed in **Figure 3** by sex, **Figure 4** by race/ethnicity, and **Figure 5** by age group.

Figure 5 shows infant fatalities at different ages, underscoring the vulnerability of North Carolina’s newborns. This mortality curve emphasizes the need to prioritize resources for parents and caregivers facing infant care challenges. Ultimately, ensuring ongoing education on safe sleep and access to healthcare is vital to protecting the state’s most vulnerable residents.

Table 2: Demographics of ME system infant fatalities in North Carolina, 2023

	Number	%
Sex		
Female	98	46.01
Male	115	53.99
Race/Ethnicity		
White*	74	34.74
Black*	107	50.23
Asian*	4	1.88
American Indian*	5	2.35
Hispanic	19	8.92
Other/Unknown	4	1.88
Age Group (Months)		
< 1 MTH	56	26.29
1 MTH	28	13.15

2 MTH	34	15.96
3 MTH	21	9.86
4 MTH	19	8.92
5 MTH	16	7.51
6 MTH	12	5.63
7 MTH	8	3.76
8 MTH	5	2.35
9 MTH	7	3.29
10 MTH	4	1.88
11 MTH	3	1.41
Total Fatalities	213	100

* Non-Hispanic

Figure 3. Number of infant fatalities by sex in North Carolina, 2023

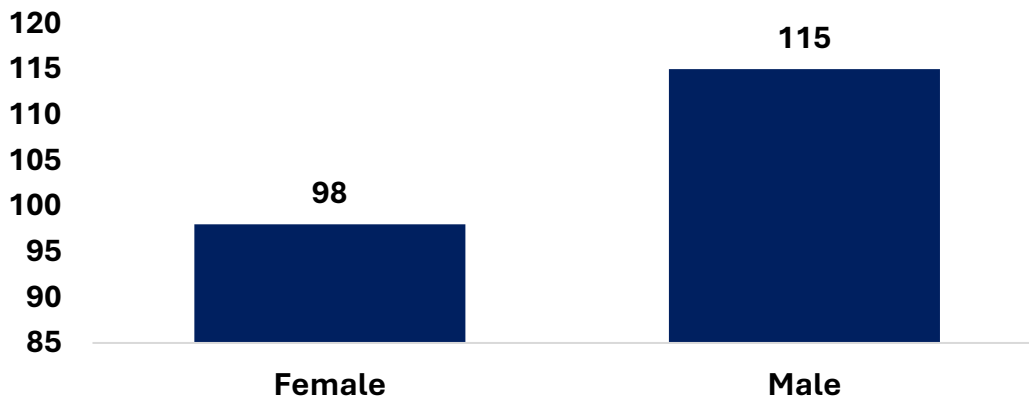


Figure 4. Number of infant fatalities by race/ethnicity in North Carolina, 2023

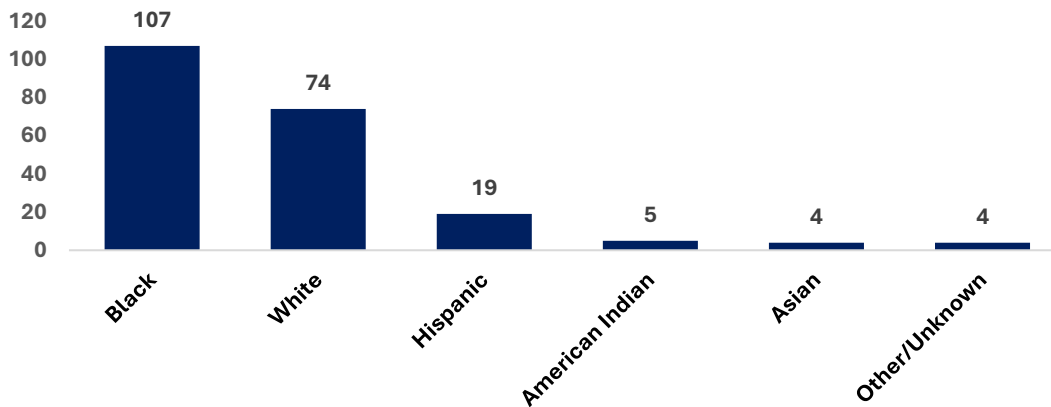
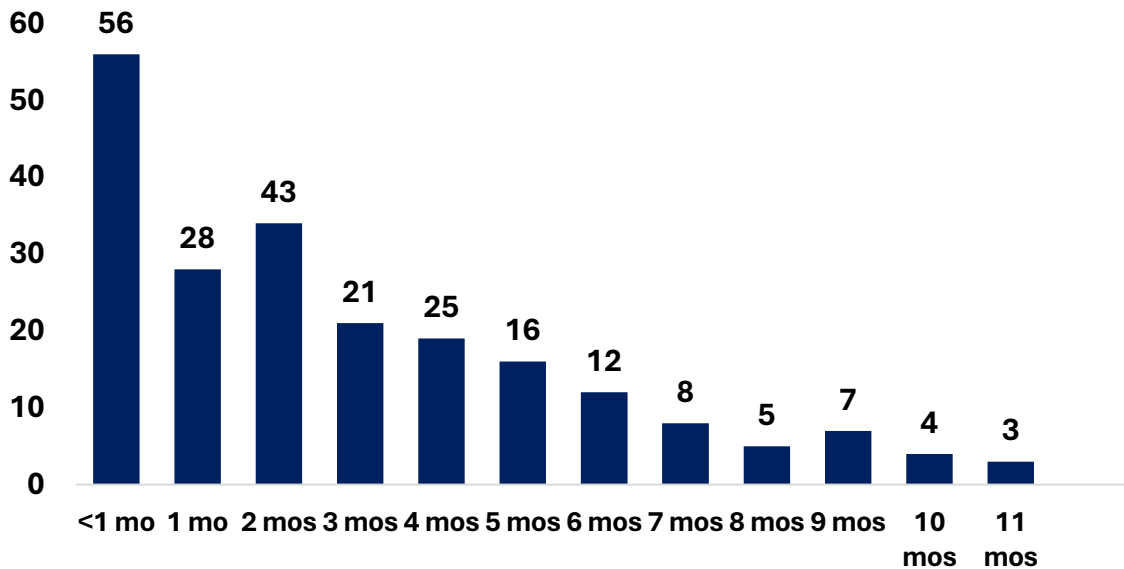


Figure 5. Number of infant fatalities by age (months) in North Carolina, 2023



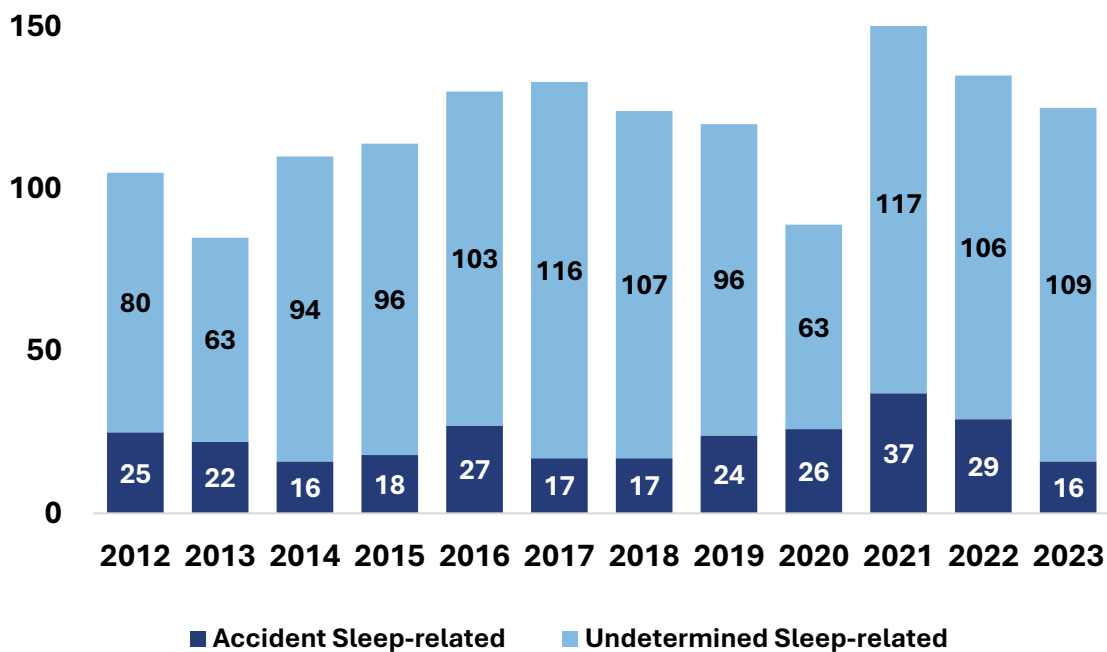
Section II: Trends and Patterns in Sleep-related Infant Fatalities

Among the finalized infant fatality cases within the Medical Examiner (ME) System Jurisdiction, instances where the certifying pathologist was concerned with the infant’s sleep environment or position or both as contributing risk factors to the fatality are detailed below. Infants in compromising sleep spaces accounted for 59% of the 213 finalized infant fatalities during the year, totaling 125 deaths. Of those 125 potentially sleep-related deaths, 16 were classified as accidental manner of death, while 109 were classified as undetermined manner of death. Please note that the total number (1) of Sudden Infant Death Syndrome (SIDS) cases is excluded from the final counts as they are not considered sleep-related deaths.

Manner of Sleep-related Infant Fatalities

Figure 6 shows the number of sleep-related infant fatalities in North Carolina from 2012-2023. Since 2017, the number of sleep-related infant fatalities has gradually decreased until peaking in 2021. Since 2021, the number of sleep-related infant fatalities has declined. In 2023, undetermined manner of death accounted for 87.2% of sleep-related infant fatalities, and accidental manner of death accounted for 12.8% of sleep-related infant fatalities.

Figure 6. Number of sleep-related infant fatalities by manner of death in North Carolina, 2012-2023



Sleep Environment of Sleep-related Infant Fatalities

Table 3 characterizes the classification of sleep environments for Infant Fatalities in North Carolina in 2023.

Co-sleeping for the purposes of the NC OCME includes any location/person, including another child or infant, sleeping with an infant at any time. Regardless of the sleep location, they are sharing a sleep surface with an infant at the time of the death. The circumstances surrounding the sleep environment are collected from various sources (hospital, law enforcement, medical examiner) and must be confirmed during the investigation for the pathologist. Reconstructions are requested to solidify the details and positions.

Unsafe sleep environments can include heavy/soft bedding, cushions, parents' chest, plastic bags, clothing, etc.

Key findings of the sleep-related infant fatalities:

- Among the infant *accident/sleep-related* deaths, 13 of the 16 deaths (81.3%) were in a co-sleeping environment.
- Among the infant *accident/sleep-related* deaths, 3 of the 13 deaths (18.8%) were in other unsafe sleep environments, such as extra items in the crib or an unsafe sleep location (in a car seat, swing, propped on a sleep surface, etc.).

- Among the *undetermined/sleep-related* deaths, 73 of the 109 deaths (66.97%) were in a co-sleeping environment.
- Among the *undetermined/sleep-related* deaths, 36 of the 109 deaths (33.03%) were in other unsafe sleep environments, such as extra items in the crib or an unsafe sleep location (in a car seat, swing, propped on a sleep surface, etc.).

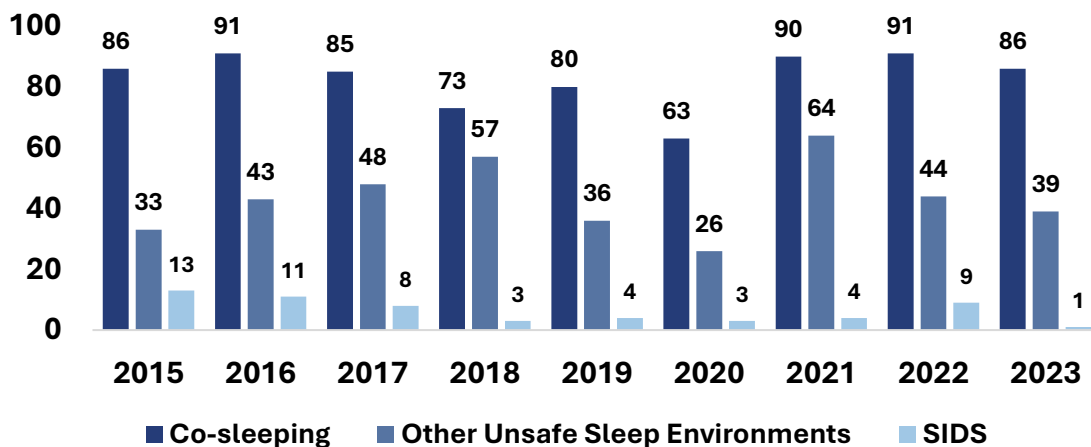
Table 3. Sleep Environments for Infant Fatalities in North Carolina, 2023

	Accident	Undetermined	Total Fatalities
Classification			
Co-sleeping	13	73	86
Unsafe Physical Sleep Environment	3	36	39
Total Fatalities	16	109	125

Sudden Infant Death Syndrome (SIDS)

SIDS deaths are not included in the metrics for unsafe sleep environments. However, **Figure 7** compares co-sleeping, other unsafe physical sleep environments, and SIDS from 2015 to 2023.

Figure 7. Co-sleeping vs other unsafe sleep environments vs SIDS in North Carolina, 2015-2023



Geographic Distribution of Sleep-related Infant Fatalities

Figure 8 illustrates the number of infant fatalities due to unsafe sleep environments per county of residence for 2023. Please note that the map excludes counties with no recorded infant deaths related to unsafe sleep and deaths of out-of-state residents.

Figure 8. Sleep-related infant fatalities by residence county in North Carolina, 2023

Sleep-related Infant Fatalities by Residence County in 2023

