MSDH

MISSISSIPPI CHILD DEATH REPORT

Annual Report: Review of
2022-2024 Child Deaths

Publication Date: December 2025

Mississippi Child Death Review Panel Members

Agency/Organization/Association	Members
American Academy of Pediatrics	Dr. Randy Henderson-***Chair***
State Fire Marshal's Office	Reed Abraham-***Co-Chair*** Angela Brown
State Medical Examiner	Kristi Simmons Dr. Ariane Robinson, Deputy
Coroners and Medical Examines Association	David Ruth
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University of Mississippi Medical Center, Pathology	VACANT
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Appointee, Speaker of the House Representative	VACANT
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Ad Hoc Members

Agency/Organization/Association	Members
Children of Mississippi-NICU	Dr. Dipen Vyas, Neonatologist
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Submitted to:

Chairmen of the Mississippi House Public Health and Human Services Committee and Senate Public Health and Welfare Committee

Report prepared by:

Mississippi State Department of Health, Office of Vital Records and Public Health Statistics, Office of Women's Health, and the Office of Health Services.

- Randy Henderson, MD - Chair and Neonatologist, Southern Mississippi Neonatology
- Tami Brooks, MD, FAAP - Pediatrician and MSDH Medical Director

Acknowledgements

This report reflects the hard work of the Mississippi Child Death Review Panel and those who respond directly to infant and child fatalities. Without the work of coroners, medical examiners, law enforcement, emergency medical services, physicians, social service agencies, and countless others, the Child Death Review Panel would not be able to review these deaths.

The Mississippi State Department of Health acknowledges the families touched by child death each year. This report is generated with the goal of preventing these tragic losses. To explore or request data, please check the Mississippi Statistically Automated Health Resource System (MSTAHRS) or use the Public Records Request online form at https://apps.msdh.ms.gov/DataRequestEntry/requestform

Dear Chairman,

It is my honor to submit this report on behalf of the Mississippi State Department of Health. It summarizes child and infant deaths due to external causes from 2014 to 2024 and expounds on the continuing work of the Mississippi Child Death Review Panel and the public servants who champion this effort, including coroners, medical examiners, law enforcement and healthcare providers.

In 2024, there were 568 child deaths in the state, with 43% of those due to external causes. The top causes were Sudden Unexpected Infant Death (SUID), motor vehicle accidents, firearm-related deaths, homicides, and suicide. Mississippi's child death rate is still among the highest in the United States; firearm-related deaths and child homicides far surpass the national average.

The recommendations for reducing these senseless deaths include enhancing efforts to educate caregivers on safe sleep practices, especially as they relate to the dangers of co-sleeping and proper infant sleep positions. In addition, we propose tougher laws on distracted driving and incentives for safe driving. Enhancing access to records from hospitals and law enforcement is critical to improving our review process. Finally, to prevent firearm-related child deaths, we should consider passing laws that hold citizens accountable for not properly securing and storing guns.

I am thankful for the review committee members and Mississippi State Department of Health staff who have supported this important work. Their commitment and expertise have been vital in preparing this report, as well as continuing our efforts to improve child safety in Mississippi.

To reduce preventable child deaths in Mississippi, addressing these issues is non-negotiable. I look forward to working with you to execute these recommendations and protect our children.

Sincerely,

Daniel Edney, MD, FACP, FASAM
Executive Director State Health Officer
Mississippi State Department of Health

EXECUTIVE SUMMARY & KEY FINDINGS

Child Deaths in Mississippi: *2015–2024 Snapshot*

Overall Trends

- **568 child deaths** (<17 years) in 2024, up slightly from 562 in 2023.
- **Death rate: 84.2 per 100,000 in 2024 vs. 82.7 in 2023**
- **43%** of all child deaths in 2024 were due to external causes (accidents, homicide, suicide, etc.).

By Cause (2024)

- **#1 – Sudden Unexpected Infant Death (SUID)**: 73 deaths (29% of all external deaths).
- **#2 – Motor Vehicle/Transport Accidents**: 66 deaths — 3 times the national rate.
- **#3 – Firearm-Related Deaths**: 50 deaths — 2 times the national rate.
- **#4 – Homicide**: 47 deaths — 2.5 times the national rate.
- **#5 – Suicide**: 18 deaths — nearly double the national rate among White children.

By Demographics (2024)

- **Males**: 49.4 deaths per 100,000 (vs. 26.5 nationally).
- **Females**: 26.6 per 100,000 (vs. 17.1 nationally).
- **Black children**: 51.5 per 100,000 (vs. 40.9 nationally).
- **White children**: 31.2 per 100,000 (vs. 18.8 nationally).

Highest-Risk Age Group:

- Teens ***15–17 years*** — 79.5 deaths per 100,000, nearly double the U.S. rate of 41.6.

Executive Summary

This report summarizes child and infant deaths due to all external causes occurring among Mississippi residents from 2015 to 2024. An external cause would be a death due to an accidental cause such as drowning or a car accident or accidental strangulation and suffocation of an infant in bed. An internal cause of death would be a medical cause like congenital heart disease or cancer. This report includes the most up to date data on the death of children less than 18 years of age in Mississippi. This report also includes findings from the Child Death Panel review of 18 SUID deaths in

2022 and 101 child deaths in 2023. The Child Death review Panel looked at cases from 2022 and 2023, and we reviewed data through 2024. Reviewing old cases from previous years takes time to collect charts and police reports and coroner reports. Combining the most recent data with the most recent case reviews is the most efficient means of reaching conclusions about ways to prevent child death less than 18 years of age. The goal of the Child Death Review Panel is to identify which deaths due to external causes of death might have been prevented and to make appropriate recommendations to the Legislature on how to most effectively direct state resources to decrease infant and child deaths in Mississippi.

There were 562 total child deaths less than 18 years of age in 2023 and 568 total deaths in 2024. The rate of 84.2 child deaths per 100,000 population in 2024 was an increase from the rate of 82.7 per 100,000 population in 2023. In 2015, the rate was 81.2 per 100,000 so the overall death rate is up 3.7% over the last 9 years. The Child Death Review Panel only looks at deaths due to external causes. In 2023, there were 257 deaths less than 18 years of age that were categorized as external or 46% of the total deaths of 562. In 2024, there were 245 external deaths or 43% of 568 deaths.

From 2015 to 2024, the Child Death rate for ages 1 through 17 years was 38.2/100,000 in Mississippi versus a national rate of 21.9/100,000. In 2024, the death rate for males aged 1 through 17 years in Mississippi was 49.4 per 100,000 versus a national rate of 26.5/100,000. In 2024, the death rate for girls ages 1 through 17 years was 26.5 per 100,000 in Mississippi versus 17.1/100,000 nationally. By race in 2024, the death rate for Black children ages 1 through 17 in Mississippi was 51.5 per 100,000 versus 40.9 /100,000 nationally. The rate for White children ages 1 through 17 years in Mississippi was 31.2/100,000 versus a national rate of 18.8 per 100,000. Looking at age groups 1 to 4 years, 5 to 9 years, 10 to 14 years, and 15 through 17 years of age, the death rate was significantly higher in each age group than the national rate. The age group with the highest mortality was 15 through 17 years in 2024; the death rate was 79.5 per 100,000 versus the national rate of 41.6/100,000, almost double the national rate. For ages 1 through 17 according to Table Three, the number one cause of death in Mississippi in 2024 was accidents (93), number two homicides (42), number three "all other " (32), and number four was suicide (18).

The leading cause of external death for children 0 through 17 years of age in 2024 was Sudden Unexpected Infant Death (SUID). From 2015 to 2024, there were 759 deaths less than one year of age due to Sudden Unexpected Infant Death; 441 were male and 318 were female. Of the 759 deaths during this period, 429 were Black children and 294 were White children. In 2024, 73 of 249, or 29% of all external deaths

less than 18 years of age were due to Sudden Unexpected Infant Death (SUID). The number of SUID due to Accidental Suffocation and Strangulation in Bed (ASSB) were 32, the number due to SIDS was 23, and the number due to unknown causes was 18. From 2015 to 2024, Public Health District III (the Delta) led the state with a SUID rate of 3 per 100,000 (91 deaths total) and followed by Public Health District VI (East Central) with a SUID rate of 2.6 per 100,000 (80 deaths total). In 2024, Mississippi had the highest infant mortality rate in the US at 9.7 deaths per 1,000 births. Among Mississippi's 323 infant deaths in 2024, SUID deaths made up 22.6% (73 deaths) of total infant deaths

The second leading cause of external deaths for children 0 through 17 years of age was motor vehicle/transport death accidents. From 2015 to 2024, there were 609 deaths less than 18 years of age due to motor vehicle transport accidents. In 2024, there were 66 deaths less than 18 years of age due to motor vehicle/transport accidents. Thirty-nine deaths occurred at 14 through 17 years of age; 21 deaths took place at 5 to 13 years of age. From 0 to 4 years of age, there were 6 deaths. Forty were male and 26 were female. By race, 32 were White children, 27 were Black children, and 5 were Hispanic. Public Health District VI (East Central) had the highest rate of child deaths due to motor vehicle deaths at 7.8/100,000 (69 deaths) followed by Public Health District III (Delta) at 7.2/100,000 (68 deaths) between 2015 and 2024.The rate of motor vehicle deaths in Mississippi was 9.8 per 100,000 versus a national rate of 3 per 100,000. **For 2024, the child death rate from motor vehicle/transport accidents was over triple the national rate.**

The third leading cause of external child deaths from age 0 through 17 years of age in 2024 was fire-arm related deaths. There were 50 fire-arm related deaths in Mississippi in 2024. Of the deaths, 4 were children between 0 and 4 years, and 6 were between 5 and 13 years. Forty (40) of the child deaths were from 14 through 17 years of age. Six (6) were female and 44 were male. By race, 38 were Black children and 11 were White children. From 2015 to 2024, Public Health District III (the Delta) had the highest rate of firearm related child death at 9/100,000 (85 deaths) followed by Public Health District VII (Southwest) at 6.4/100,000 (39 deaths). Compared to the national rate, the child firearm death rate was 7.4/100,000 for Mississippi and 3.1 /100,000 nationally. **For 2024, the child firearm death rate was over twice the national rate in Mississippi.**

The fourth leading external cause of child death 0 through 17 years of age in 2024 in Mississippi was homicide. From 2015 to 2024, there were 368 child deaths due to homicide in Mississippi. In 2024, there were 47 child deaths due to homicide ages 0

through 17 years. Eleven (11) homicides occurred at 0 to 4 years of age which was 23% of the total. Three (3) child deaths due to homicide in 2024 occurred at 5 to 13 years of age. Thirty-three (33) over 70% of child deaths due to homicide took place at 14 through 17 years of age. Compared to the national rate, the child homicide death rate was 7/100,000 in Mississippi and 2.7/100,000 nationally. Homicide deaths differed significantly by race. Forty-four (44) of the 47 deaths were Black children, and 3 of the 47 were White children. From 2015 to 2024, Public Health District III (the Delta) had the highest child death rate due to homicide at 8/100,000 (75 deaths) followed by Public Health District VII (Southwest) at 5.8/100,000 (35 deaths). **Nearly one in four homicides occurred from 0 to 4 years of age. The child death rate in Mississippi due to homicide in 2024 was two- and one-half times the national rate.**

From 2015 to 2024, there were 162 suicide deaths in Mississippi, 18 of which occurred in 2024. In 2024, 3 suicide deaths occurred at 5 to 13 years of age and 15 occurred at 14 through 17 years of age. Eleven (11) were male and 7 were female. By race, 3 were Black children and 15 were White children. Compared to the national rate, the rate of child suicide in Mississippi was 2.7/100,000 and nationally the rate was 2.1/100,000. The suicide rate for White children in Mississippi was 4.6 per 100,000 which was double the national rate. From 2015 to 2024, there were 103 suicides by White children and 41 by Black children. During this 10-year period, 122 deaths were male children, and 40 deaths were female children. In 2024, the suicide rate for Black children was 1.1 which was almost half the national rate. From 2015 to 2024, the highest suicide rate was in Public Health District IX (the Coastal area) at 2.1/100,000 (38 deaths) followed by Public Health District VIII (Southeast) at 1.7/100,000 (19 deaths).

From 2015 to 2024, there were 138 drownings from 0 through 17 years of age, 11 of which occurred in 2024. During that ten-year period, most of the drownings (69) occurred from 0 to 4 years of age. In 2024, 6 drownings occurred from 0 to 4 years of age, and 3 occurred from 5 to 13 years of age. Only 2 drownings took place from 14 through 17 years of age. Six were female and 5 were male; 6 were Black children and 5 were White children. Compared to the national rate, the rate of child death drownings was 1.6/100,000 in Mississippi and 1.3/100,000 nationally. From 2015 to 2024, Public Health District VI (East Central) had the highest rate at 1.9 per 100,000 (17 deaths) followed by Public Health District IX (the Coastal area) at 1.8/100,000 (31 deaths).

Finally, there were 4 fire related child deaths in 2024. All four children were Black. Three (3) were male, and 1 was female. There as one death at 0 to 4 years, 2 deaths 5 to 13 years, and 1 death at 14 through 17 years. From 2015 to 2024, there have been 64 fire related deaths of children. For that time, Public Health District III (the Delta) had

the highest rate at 1.1/100,000 (10 deaths) followed by Public Health District V (West Central) at 0.9/100,00 (21 deaths). Public Health District V has a larger population than Public Health District III. Compared to the national rate in 2024, there were 0.6/100,000 fire related child deaths in Mississippi versus the national rate of 0.3/100,000. **The rate of child related fire deaths in Mississippi was double the national rate in 2024.**

Executive Recommendations

- Promote safe sleep practices to reduce Sudden Unexpected Infant Death (SUID).
- Strengthen motor vehicle safety laws and child restraint enforcement.
- Advance firearm safety and secure storage awareness to prevent accidental and intentional deaths.

1. **The number one cause of external child death is SUID.** In 2024, the largest portion of SUID cases were due to Accidental Suffocation and Strangulation in Bed (ASSB); 32 of 73 or 44% of all SUID cases. Of the 30 SUID cases from 2023 reviewed by the Child Death Review Panel (CDRP), 20 or 67 % were found to have sleep-related risk factors: 19 or 63% were not sleeping on their own space such as a crib, 11 or 37% were not sleeping on their back, 14 or 47% had unsafe bedding or toys in the sleeping area, 9 or 30% were co-sleeping with adult caregivers or siblings, and 3 or 10% had caregivers fall asleep while feeding. The committee recommends the consistent message of **ABC** or **Alone**, on the **Back**, and in a **Crib** must be reinforced with all caregivers continuously. Primary care providers must encourage infant caregivers about the importance of safe sleep despite the many challenges of caring for a newborn in a busy family. **The CDRP emphasizes the importance of baby sleeping in a space free of anything but a fitted sheet and a pacifier. The CDRP emphasizes the increased risk of infant mortality if a caregiver falls asleep holding a baby**. The committee recommends targeted messaging to grandparents who are not only supportive caregivers to a newborn but who also have great influence over decisions made by a new family. **Finally, the CDRP recommends that every family has a safe sleep plan for their newborn which includes what caregivers will do as routine preparation for sleep and how caregivers will plan to soothe a crying baby ensuring that baby returns to their own space to sleep alone.**

2. **The second leading external cause of child death from 0 through 17 years of age was motor vehicle accidents and transport accidents.** The child deaths rate for motor vehicle deaths was more **than triple the national rate** at 9.8/100,000 in 2024. Because 27 of 66 or 41% of child deaths were passengers

in the accident, the CDRP focused on safety for the passenger in motor vehicle accidents. Out of the 25 cases of motor vehicle and transport deaths for 2023 reviewed, 14 cases involved passengers, including two ATV cases. **The committee recommends that all children less than 12 years of age be seated in the back seat of a car or transport with a seatbelt in place. The committee recommends increasing fines for improper child restraint from $25 to $150 and allocating these funds to provide training and access to car seats through local police and fire departments.** The committee recommends more emphasis on safety of off-road vehicles such as ATV's, golf carts, and high-speed scooters. The committee recommends engaging the public about the need for safety with these new products. The committee suggests toxicology screening for all youths and adults in fatal and near fatal accidents to test for all agents known to impair judgment. The committee recommends focusing on safety on county roads where child deaths are almost three times more likely to happen compared to a highway (28% highway versus 72% county road). **Finally, the committee once again recommends emphasis on preventing cell phone usage while driving by implementing insurance incentives for not using a phone while driving. The state should work with the insurance commissioner to provide incentives and make them known to the public.**

3. **The third leading external cause of child death in 2024 was firearm related death. Firearm deaths for teenagers 14 through 17 jumped from 8.4/100,000 in 2015 to 23.7/100,000 in 2024.** Firearm deaths among children may have been caused from the use of pistols, revolvers, rifles, and shotguns. Reducing these firearm related deaths in this age group will require keeping firearms out of the hands of 14 through 17-year-olds. Discussing firearm safety will be difficult in Mississippi; however, knowing where the teenager acquired the firearm used to harm someone could be helpful. **If the firearm came from a parent, the committee feels that parents should be held responsible for how their firearm is used.** Last year the committee reviewed a 2022 case with a firearm laying on a couch in a home that one child used to kill another. This year, the committee reviewed a 2023 case of two children left in a truck with a firearm. One young child found the firearm and used it to shoot and kill another young child in the back seat. The committee reviewed another 2023 case involving a preteen who found a parent's firearm and was playing with the weapon when a sibling was shot and killed. Firearm safety would have prevented these deaths. **Discussing firearm safety in Mississippi is politically difficult; however, the committee feels that firearm safety is part of responsible firearm ownership.** Ten of 50 firearm related child deaths in 2024 involved children less than 13 years of age,

with 4 deaths being among children less than 4 years of age. Securing firearms safely would have prevented many of these deaths. In addition, the committee reviewed cases of suicide that might have been prevented with firearm safety and proper storage. The committee believes firearms should be stored safely and out of reach from children who may see them as toys. Firearms must also be kept from children and teens who may be experiencing mental health challenges to prevent suicide and homicides. Firearms must be safely stored from teenagers who may use them to cause others harm. Finally, the committee feels that discussing firearm safety and storage may not be popular but holding parents responsible for what happens if their firearm is not safely and securely stored may help to deter child death due to firearms.

DEFINITIONS & TERMS

Definitions & Terms

Accidental Strangulation or Suffocation: An explained sudden and unexpected infant death in a sleep environment (bed, crib, couch, chair, etc.) in which the infant's nose and mouth are unintentionally obstructed (suffocation) and/or pressure on the infant's neck (strangulation) cause asphyxia (lack of oxygen to the body). Accidental suffocation may occur, for example, when the infant's face is covered by soft or loose bedding, blankets, or pillows, or the infant is trapped between two surfaces, such as a mattress and wall or where the seat and back of a sofa meet. Accidental strangulation may occur when pressure is unintentionally applied to the neck and the infant's breathing is obstructed, e.g. an object in a crib gets caught around the infant's neck.

Bed Sharing or Surface Sharing: Parent(s) and infant sleeping together on any surface (bed, couch, chair).

Birth Certificate: The birth certificate is an official government-issued document that records the facts of a person's birth. A birth certificate serves as legal proof of identity, age, and citizenship and is often required for things like enrolling in school, obtaining a passport, applying for benefits, or proving parentage.

Cause of Death: On a death certificate, "cause of death" includes the sequence of medical conditions that had the greatest impact in causing death and the approximate time intervals between the onset of each condition and death. The underlying cause of death is used for tabulating death counts. The cause of death and underlying causes listed on the death certificate are coded by the National Center for Health Statistics (NCHS) according to the appropriate revision of the *International Classification of Diseases* (ICD. Effective with deaths occurring in 1999, the United States began using the 10th revision of ICD (ICD–10); during 1979–1998, causes of death were coded and classified according to the 9th revision (ICD–9).

Co-sleeping: A general term for sleeping near or with an infant. This term can describe both room sharing and bed sharing and is <u>not</u> recommended for use.

Infant Mortality: The deaths of children less than one year of age. It is typically measured as the number of deaths per 1,000 live births.

Death Certificate: The death certificate is a permanent record of the fact of death. State law specifies the required time frame for completing and filing the death certificate. The death certificate provides important personal information about the decedent and about the circumstances and cause of death. This information has many uses related to the settlement of the estate and provides family members with closure, peace of mind, and documentation of the cause of death. The death certificate collects demographic information on the decedent such as age, sex, race, ethnicity and medical certification information which includes date and

time of death, cause and manner of death. The death certificate is a legal record and has legal safeguards protecting the confidentiality of the record.

The registration and storage of deaths is supported by state laws and regulations. Mississippi uses an electronic death registration system (EDRS), which is a secure web-based system for registering deaths electronically. This system is designed to simplify the data collection process and enhance communication between medical certifiers, medical examiners and coroners, funeral directors, as they work together to register deaths. The EDRS follows the 2003 U.S. Standard Death Certificate in content and structure and has built-in edits, prompts, and alerts to improve data quality. The U.S. standard certificate is revised periodically to ensure that the data collected relates to current and anticipated needs and is comparable with data from other states.

The death certificate is the source for local, state, and national mortality statistics. Mississippi has a contract with National Center for Health Statistics that allows the federal government to use information from that state's records to produce national vital statistics.

External Death: An external death or external cause of death refers to a death that results from outside forces rather than from a disease or internal medical condition. In vital statistics and public health, external causes of death include events such as: injuries (accidental or intentional), motor vehicle crashes, falls, drownings, poisonings, fires or burns, homicide, suicide, or environmental events (extreme heat, cold, natural disasters). In short, it is any death caused by violent, accidental, or environmental factors, rather than by natural or medical causes.

Linked Birth-Death Data Set: The research portion of infant birth certificates and infant death certificates are linked for all infants who die before their first birthday, and a linked birth-death data set is created. This data set is a valuable tool for monitoring and exploring the complex inter-relationships between infant death and risk factors present at birth. In the linked birth-death data set the information from the death certificate is linked to the information from the 'research portion' of the birth certificate for each infant under 1 year of age who dies in the United States, Puerto Rico, the Virgin Islands, and Guam. The purpose of the linkage is to use the many additional variables available from the birth certificate to conduct more detailed analyses of infant mortality patterns. The linked file includes information from the birth certificate (such as parental age, race, ethnicity, education, and marital status, maternal conditions in pregnancy (e.g., hypertension, diabetes), maternal behaviors in pregnancy (e.g., smoking, prenatal care use), maternal delivery characteristics (e.g., vaginal or cesarean delivery, previous preterm birth), neonate's sex, birth weight, obstetric estimation of gestational age, plurality, live birth order, congenital disorders or birth defects) which are linked to information from the death certificate (such as age at death and underlying and multiple cause of death).

Manner of Death: On a death certificate, "manner of death" is important: 1) in determining accurate causes of death, 2) in processing insurance claims, and 3) in statistical studies of

injuries and death. Choices are natural, homicide, accident, pending investigation, suicide and could not be determined. "Could not be determined" should only be used when it is impossible to determine the manner of death.

Natural and External Causes of Death: Natural death is due to internal factors of the body such as heart disease or cancer. An external cause of injury may be classified to Accidents (V01-X59), Intentional self-harm (X60-X84), Assault (X85-Y09), Event of undetermined intent (Y10-Y34), Legal intervention and operations of war (Y35-Y36), Complications of medical and surgical care (Y40-Y84), and Sequela of external causes (Y85-Y89). When unspecified, assume all external cause one-term entities to be accidental unless the External Causes of Injury Index provides otherwise.

Overlaying: Overlaying refers to the accidental suffocation of an infant caused by another peron or object pressing against or covering the infant, blocking the airway. An overlap may occur when an adult or older child rolls onto an infant while sharing a bed, leading to mechanical asphyxia due to pressure on the infant's airway or thorax.

Positional asphyxiation: Positional asphyxiation, also known as postural asphyxia, occurs when someone's breathing is restricted due to their body position, which leads to a blockage in the airway structure and an inability of the chest to fully expand. Positional asphyxia may occur in babies, children, and adults.

Room sharing: Parent(s) and infant sleeping in the same room, but infant sleeps on a separate sleep surface made for infants.

Sudden Unexpected Infant Death (SUID): An umbrella category that describes all sudden, unexpected infant deaths—those from known causes, such as sudden infant death syndrome and an injury or accident, and those from unknown causes.

Sudden Infant Death Syndrome (SIDS): The sudden and unexplained death of a baby younger than 1 year of age that doesn't have a known cause, even after a full investigation. Healthcare providers, law enforcement, and others investigate infant deaths to figure out what caused them. This investigation includes a complete autopsy, examining the death scene, and reviewing the clinical history. If they cannot determine a cause of death for the baby or explain why the baby died, the medical examiner or coroner may categorize the death as SIDS.

Suicide: A death caused by self-directed injurious behavior with intent to die as a result of the behavior. Suicide methods include firearms, suffocation, poisoning, and other, less common, methods. Suicide is the second leading cause of death among individuals between the ages of 10-34 years of age, but is extremely rare in children under the age of 10.

Wedging or entrapment: A form of suffocation or mechanical asphyxia in which an infant's head or body becomes trapped between two objects, such a mattress and a wall or bed frame. Wedging or entrapment cause compression or obstruction of the infant's nose, mouth, or thorax (airway) , preventing the infant from breathing.

NCHS 71 Rankable Causes of Infant Death

	Cause of Death	ICD-10 Codes
1	Diarrhea and gastroenteritis of infectious origin	A09
2	Tuberculosis	A16-A19
3	Tetanus	A33, A35
4	Diphtheria	A36
5	Whooping cough	A37
6	Meningococcal infection	A39
7	Septicemia	A40-A41
8	Congenital syphilis	A50
9	Gonococcal infection	A54
10	Acute poliomyelitis	A80
11	Varicella	B01
12	Measles	B05
13	Human immunodeficiency virus (HIV) disease	B20-B24
14	Mumps	B26
15	Candidiasis	B37
16	Malaria	B50-B54
17	Pneumocyctosis	B59
18	Malignant neoplasms	C00-C97
19	In situ neoplasms, benign neoplasms and neoplasms of uncertain or unknown behavior	D00-D48
20	Diseases of the blood and blood-forming organs and certain disorders involving the immune mechanism	D50-D89
21	Short stature, not elsewhere classified	E34.3
22	Nutritional deficiencies	E40-E64
23	Cystic fibrosis	E84
24	Volume depletion, disorders of fluid, electrolyte and acid-base balance	E86-E87
25	Meningitis	G00, G03
26	Infantile spinal muscular atrophy, type I	G12.0
27	Infantile cerebral palsy	G80
28	Anoxic brain damage, not elsewhere classified	G93.1

29	Diseases of the ear and mastoid process	H60-H93
30	Diseases of the circulatory system	I00-I99
31	Acute upper respiratory infections	J00-J06
32	Influenza and pneumonia	J09-J18
33	Acute bronchitis and acute bronchiolitis	J20-J21
34	Bronchitis, chronic and unspecified	J40-J42
35	Asthma	J45-J46
36	Pneumonitis due to solids and liquids	J69
37	Gastritis, duodenitis, and noninfective enteritis and colitis	K29, K50-K55
38	Hernia of abdominal cavity and intestinal obstruction without hernia	K40-K46, K56
39	Renal failure and other disorders of kidney	N17-N19, N25, N27
40	Newborn affected by maternal hypertensive disorders	P00.0
41	Newborn affected by other maternal conditions which may be unrelated to present pregnancy	P00.1-P00.9
42	Newborn affected by maternal complications of pregnancy	P01
43	Newborn affected by complications of placenta, cord and membranes	P02
44	Newborn affected by other complications of labor and delivery	P03
45	Newborn affected by noxious influences transmitted via placenta or breast milk	P04
46	Slow fetal growth and fetal malnutrition	P05
47	Disorders related to short gestation and low birth weight, not elsewhere classified	P07
48	Disorders related to long gestation and high birth weight	P08
49	Birth trauma	P10-P15
50	Intrauterine hypoxia and birth asphyxia	P20-P21
51	Respiratory distress of newborn	P22
52	Congenital pneumonia	P23
53	Neonatal aspiration syndromes	P24
54	Interstitial emphysema and related conditions originating in the perinatal period	P25
55	Pulmonary hemorrhage originating in the perinatal period	P26
56	Chronic respiratory disease originating in the perinatal period	P27
57	Atelectasis	P28.0-P28.1

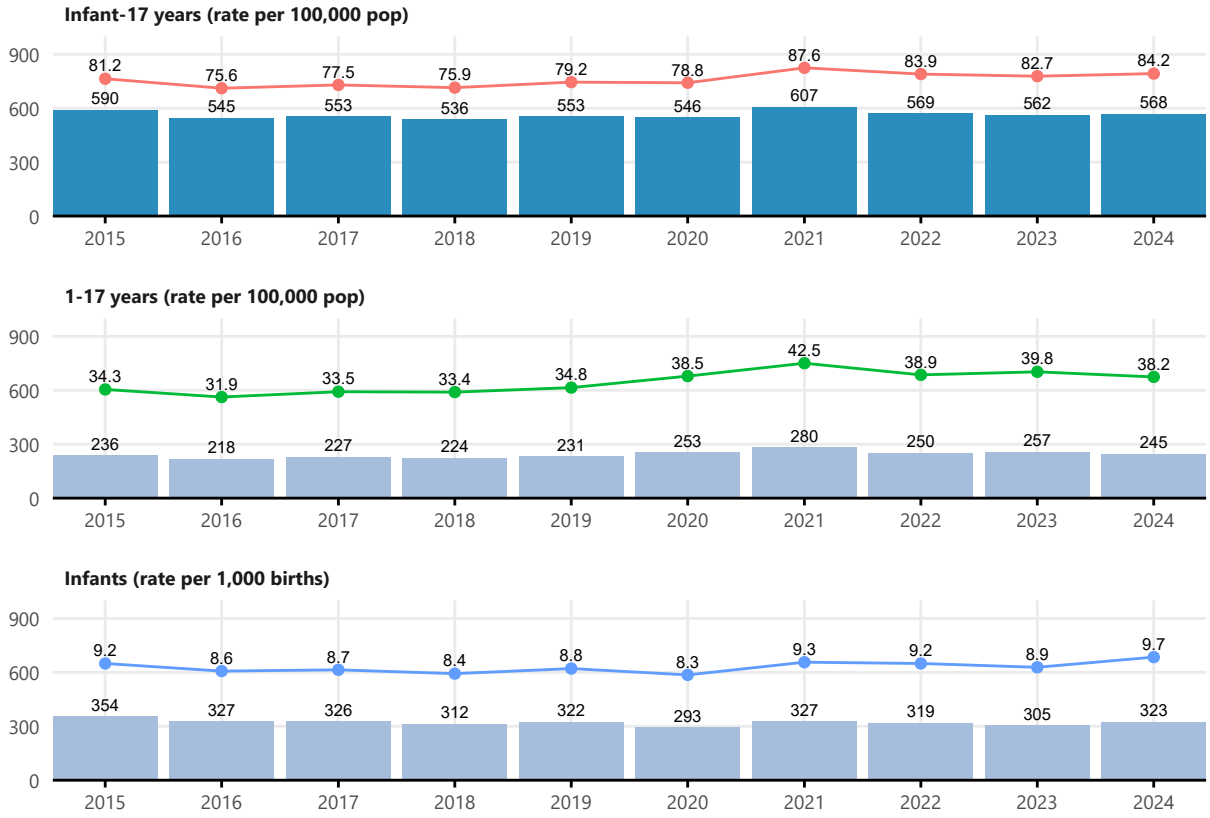
58	Bacterial sepsis of newborn	P36
59	Omphalitis of newborn with or without mild hemorrhage	P38
60	Neonatal hemorrhage	P50-P52, P54
61	Hemorrhagic disease of newborn	P53
62	Hemolytic disease of newborn due to isoimmunization and perinatal jaundice	P55-P59
63	Hematological disorders	P60-P61
64	Syndrome of infant of a diabetic mother and neonatal diabetes mellitus	P70.0-P70.2
65	Necrotizing enterocolitis of newborn	P77
66	Hydrops fetalis not due to hemolytic disease	P83.2
67	Congenital malformations, deformations and chromosomal abnormalities	Q00-Q99
68	Sudden infant death syndrome	R95
69	Unintentional injuries (accidents)	V01-X59
70	Assault (homicide)	U01, X85-Y09
71	Complications of medical and surgical care	Y40-Y84

Child Death Review Selected Causes of Death

Causes of Death	ICD-10 Codes
External causes of death	V01-Y36, Y44-Y48, Y90-Y98, R99, R95
Fire	U01.3, X01-X19, X76-X77, X97-X98, Y26-Y27, Y36.3
Suicide	X60-X79, X80-X84, Y87.0
All motor vehicle, transport	V00-V99, Y85
Drowning	W65-W69, W70-W74
Homicide	X85-X99, Y00-Y09, Y87.1
SUID	R99, R95, W75
Firearms	W32-W34, X72-X74, X93-X95, Y22-Y24, Y35.0, U01.4

DATA

Figure 1: Number of deaths and mortality rates for infants and children ages 1-17, Mississippi residents, 2015-2024



Note: Rates calculated as per 100,000 population; infant deaths calculated as per 1,000 births; Case counts may be incomplete and are subj

Table 1: Number of deaths and mortality rates of children 1-17 years, Mississippi residents, 2015-2024

	2024			2015-2024 Total		
	Count	Rate	%	Count	Rate	%
Total	245	38.2	100.0	2,421	36.5	100.0
Age (years)						
1-4 years	50	35.7	20.4	627	42.9	25.9
5-9 years	37	20.3	15.1	395	20.7	16.3
10-14 years	55	29.1	22.4	540	26.8	22.3
15-17 years	103	79.5	42.0	859	69.1	35.5
Sex						
Female	84	26.6	34.3	909	28.0	37.5
Male	161	49.4	65.7	1,512	44.8	62.5
Race/ethnicity						
Black, non-Hispanic	134	51.5	54.7	1,227	44.5	50.7
White, non-Hispanic	97	31.2	39.6	1,063	32.6	43.9
Other Races, non-Hispanic	5	16.6	2.0	69	24.6	2.9
Hispanic	9	22.4	3.7	62	18.4	2.6

Note:
Source: MSDH Office of Vital Records; Rates calculated as per 100,000 population; counts and rates for fewer than 20 events should be interpreted with caution

Child Mortality, Ages 1-17

Figure 2: Child death rates for ages 1-17 years, Mississippi and the United States (CDC WONDER provisional count), 2015-2024

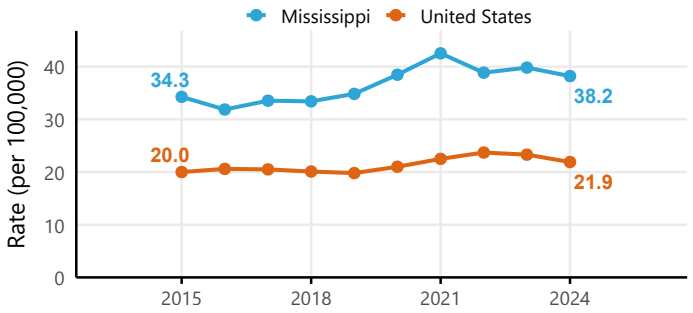
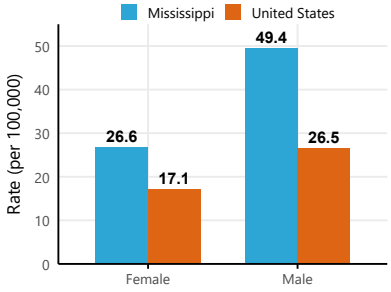


Figure 3: Children ages 1-17, mortality rates by sex

(a) Mississippi and the United States, 2024



Source: MSDH Office of Vital Records; CDC WONDER

(b) Mississippi crude rates, 2015-2024

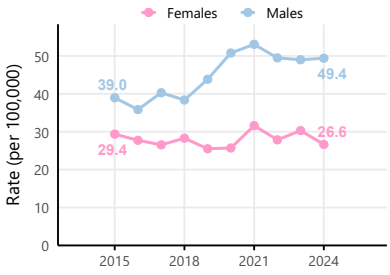
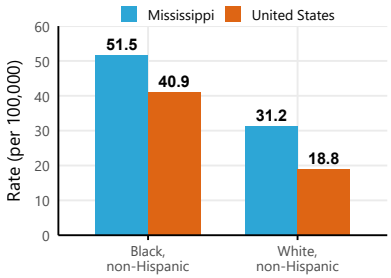


Figure 4: Children ages 1-17, mortality rates by race/ethnicity

(a) Mississippi and the United States, 2024



Source: MSDH Office of Vital Records; CDC WONDER
Other race/ethnicities not shown due to small counts

(b) Mississippi crude rates, 2015-2024

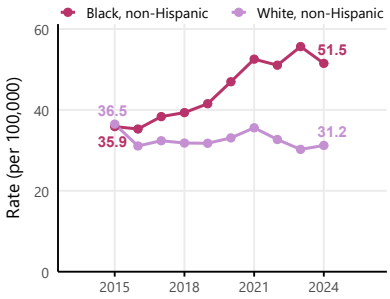
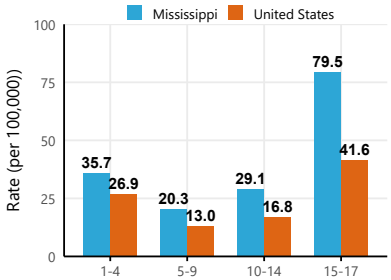


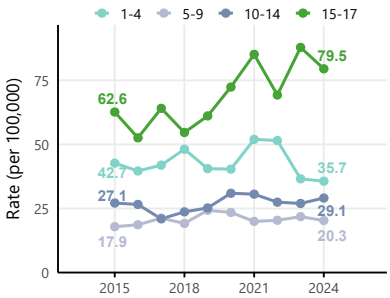
Figure 5: Children ages 1-17, mortality rates by age group (years)

(a) Mississippi and the United States, 2024



Source: MSDH Office of Vital Records; CDC WONDER

(b) Mississippi crude rates, 2015-2024



Causes of Child and Infant Death

In 2024, there were 568 Mississippi infant and child resident deaths (Table 2). Of these deaths, 319 (56.2%) were due to natural causes, and 249 (43.8) were due to injuries or violence related to accidents, homicides, suicides, and other external and undetermined causes. Sudden unexpected infant deaths (SUID) accounted for 73 cases (29.3% of external causes) and motor vehicle/other transport accidents accounted for 66 cases (26.5% of external causes). Firearm-related deaths accounted for 8.8% of cases, and homicide and suicide deaths accounted for 8.3% and 3.2% of deaths, respectively.

Table 2: Number and percent of child deaths by cause of death, birth-17 years, 2024 Mississippi residents

Cause of Death	Count	% of all deaths	% of external deaths
All deaths	**568**	**100.0**	**–**
Natural causes	319	56.2	–
External causes	249	43.8	100.0
SUID			
SUID - All SUID	73	12.9	29.3
— SUID - SIDS	23	4.0	9.2
— SUID - ASSB	32	5.6	12.9
— SUID - unknown	18	3.2	7.2
Motor vehicle/transport	66	11.6	26.5
Firearm	50	8.8	20.1
Homicide	47	8.3	18.9
Suicide	18	3.2	7.2
Drowning	11	1.9	4.4
Fire	4	0.7	1.6

Note:
Percentages may not add to 100% since firearm with homicide/suicide are not mutually exclusive categories and other cause categories with small counts are not shown

Table 3: Number and percent of child deaths by leading causes of death, 1-17 years, 2024 Mississippi residents

Ages 1-17 Cause Group	2024 Deaths	% of all deaths
Total Of All Causes	**245**	**100.0**
Accidents	93	38.0
Homicide	42	17.1
All other	32	13.1
Suicide	18	7.3
Malignant Neoplasms	12	4.9
Congenital Malformations and Chrom. Abnormalities	10	4.1
Emphysema and Other Chronic Lower Resp. Diseases	6	2.4
Symptoms, Signs, Ill-Defined Conditions	5	2.0
Septicemia	4	1.6
Heart Diseases	4	1.6
Cerebrovascular Disease	3	1.2
Influenza and Pneumonia	3	1.2
Nephritis, Nephrotic Syndrome And Nephrosis	3	1.2
Complications Medical/Surgical Care	3	1.2
In Situ, Benign and Unspecified Neoplasms	2	0.8
Meningitis	2	0.8
Diabetes Mellitus	1	0.4
Hypertension/Hypertensive Renal Disease	1	0.4
Legal Intervention	1	0.4

Note:
Causes based on the National Center for Health Statistics (NCHS) rankable mortality cause groupings

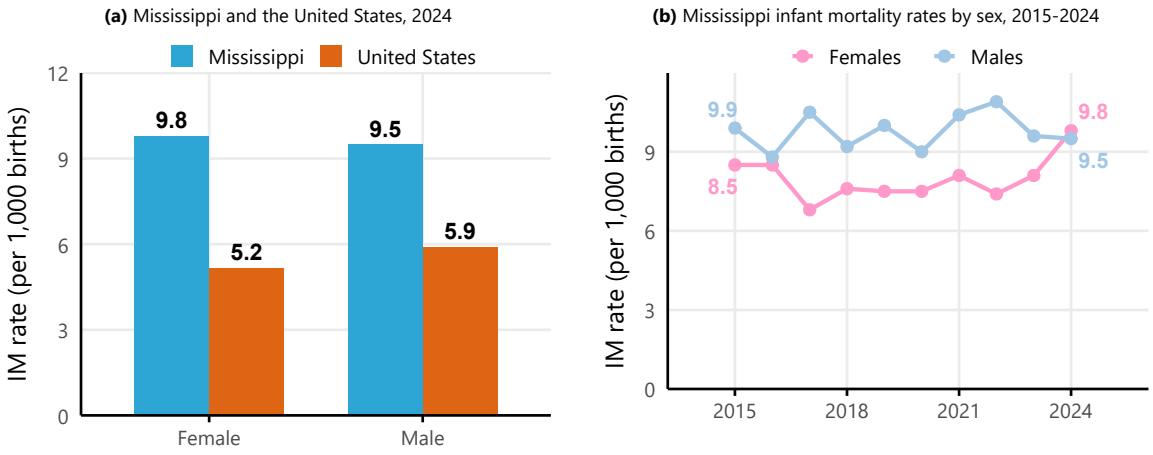
Infant Mortality

Table 4: Infant deaths, 2015-2024 Mississippi resident deaths

	2024			2015-2024 Total		
	Count	**IM rate**	**%**	**Count**	**IM rate**	**%**
Total	323	9.7	100.0	3,208	8.9	100.0
Sex						
Female	161	9.8	49.8	1,408	8.0	43.9
Male	162	9.5	50.2	1,799	9.8	56.1
Race/ethnicity						
Black, non-Hispanic	195	15.2	60.4	1,849	12.3	57.7
White, non-Hispanic	100	5.8	31.0	1,185	6.5	37.0
Other Races, non-Hispanic	13	12.2	4.0	96	9.7	3.0
Hispanic	15	6.3	4.6	77	4.2	2.4

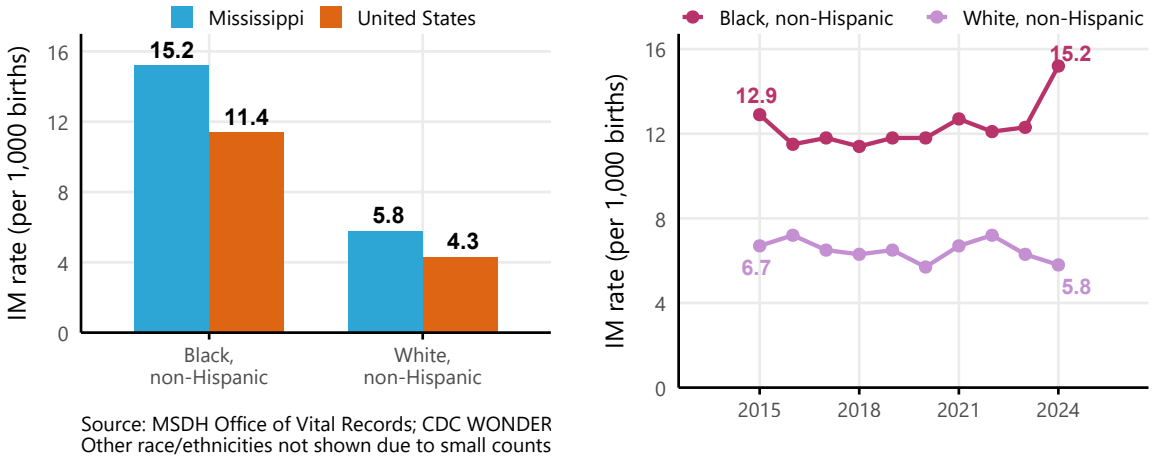
Note:
Infant mortality rates calculated as per 1,000 resident births; counts and rates for fewer than 20 events should be interpreted with caution

Figure 6: Infant mortality, rates by Sex



Source: MSDH Office of Vital Records; CDC WONDER

Figure 7: Infant mortality, rates by race



Source: MSDH Office of Vital Records; CDC WONDER
Other race/ethnicities not shown due to small counts

Sudden Unexpected Infant Deaths (SUID), Mississippi, 2015-2024

Table 5: Number of infant deaths and mortality rates due to SUID, Mississippi, 2015-2024

	2024			2015-2024 Total		
	Count	**IM rate**	**%**	**Count**	**IM rate**	**%**
Total	73	2.2	100.0	759	2.1	100.0
Sex						
Female	30	1.8	41.1	318	1.8	41.9
Male	43	2.5	58.9	441	2.4	58.1
Race/ethnicity						
Black, non-Hispanic	45	3.5	61.6	429	2.9	56.5
White, non-Hispanic	24	1.4	32.9	294	1.6	38.7
Other Races, non-Hispanic	3	2.8	4.1	22	2.2	2.9
Hispanic	1	0.4	1.4	14	0.8	1.8
Cause group						
SIDS	23	0.7	31.5	239	0.7	31.5
ASSB	32	1.0	43.8	181	0.5	23.8
Unknown	18	0.5	24.7	339	0.9	44.7

Note:
Infant mortality (IM) rates calculated as per 1,000 Mississippi resident births

Figure 8: SUID related mortality rate by sex and race/ethnicity, Mississippi, 2015-2024

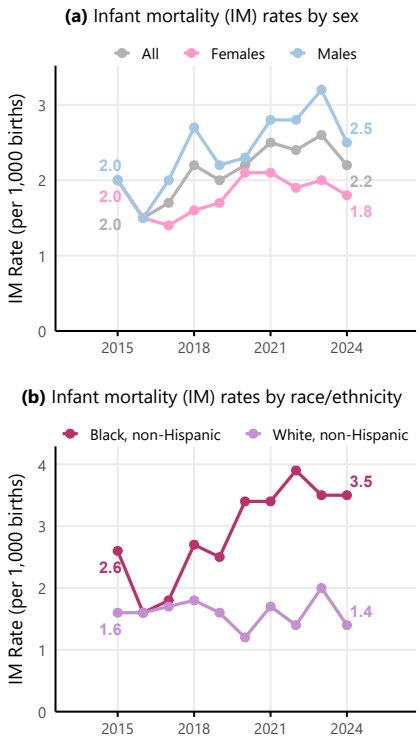
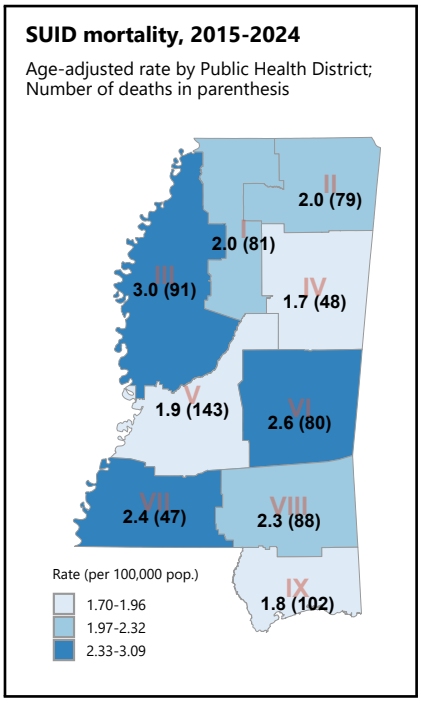


Figure 9: SUID-related mortality rates by Public Health District, Mississippi, 2015-2024



Motor Vehicle and Transport Child Deaths, 2015-2024

Table 6: Child motor vehicle and transport deaths by age, sex, and race/ethnicity, 2015-2024 Mississippi resident deaths

	2024			2015-2024 Total		
	Count	Rate	%	Count	Rate	%
Total	66	9.8	100.0	609	8.7	100.0
Age (years)						
0-4 years	6	3.5	9.1	124	4.4	20.4
5-13 years	21	6.3	31.8	180	3.3	29.6
14-17 years	39	23.1	59.1	305	12.3	50.1
Sex						
Female	26	7.8	39.4	245	7.2	40.2
Male	40	11.7	60.6	364	10.2	59.8
Race/ethnicity						
Black, non-Hispanic	27	9.9	40.9	255	8.8	41.9
White, non-Hispanic	32	9.8	48.5	316	9.2	51.9
Other Races, non-Hispanic	2	6.3	3.0	17	5.7	2.8
Hispanic	5	11.8	7.6	21	5.9	3.4

Note:
Rates calculated as per 100,000 population; counts and rates for fewer than 20 events should be interpreted with caution

Figure 10: Child motor vehicle deaths by US comparison (2024) and sex, 2015-2024

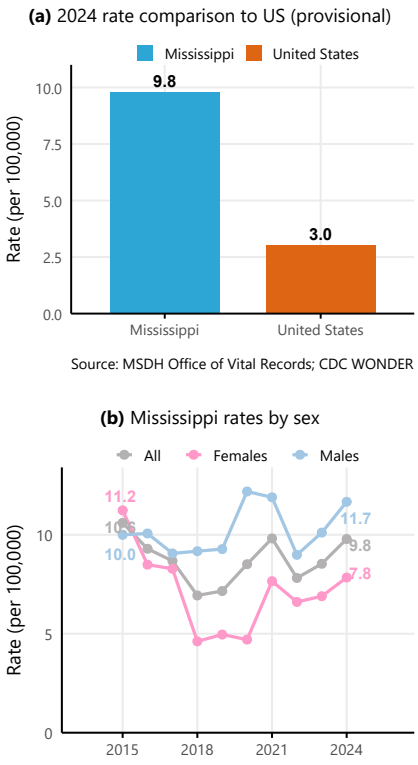


Figure 11: Child motor vehicle deaths by age and race/ethnicity, 2015-2024

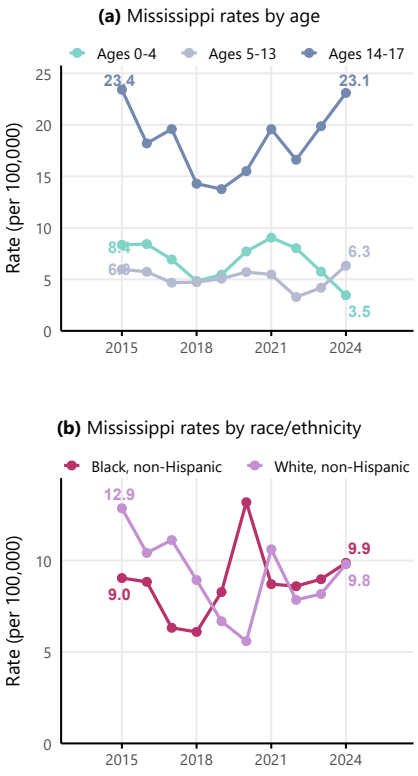
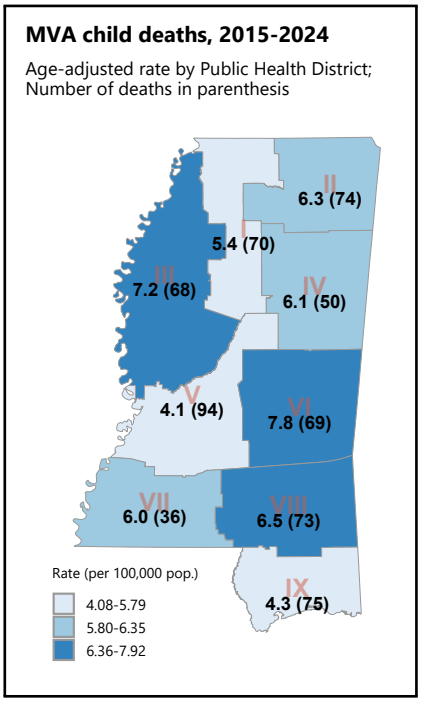


Figure 12: Child motor vehicle deaths by Public Health District, 2015-2024



Firearm-related Child Deaths, 2015-2024

Table 7: Child firearm-related deaths by age, sex, and race/ethnicity, 2015-2024 Mississippi resident deaths

	2024			2015-2024 Total		
	Count	**Rate**	**%**	**Count**	**Rate**	**%**
Total	50	7.4	100.0	449	6.4	100.0
Age (years)						
0-4 years	4	2.3	8.0	30	1.1	6.7
5-13 years	6	1.8	12.0	87	1.6	19.4
14-17 years	40	23.7	80.0	332	13.3	73.9
Sex						
Female	6	1.8	12.0	68	2.0	15.1
Male	44	12.8	88.0	381	10.7	84.9
Race/ethnicity						
Black, non-Hispanic	38	13.9	76.0	316	10.9	70.4
White, non-Hispanic	11	3.4	22.0	119	3.5	26.5
Other Races, non-Hispanic	1	3.1	2.0	9	3.0	2.0
Hispanic	0	0.0	0.0	5	1.4	1.1

Note:
Rates calculated as per 100,000 population; counts and rates for fewer than 20 events should be interpreted with caution

Figure 13: Child firearm deaths by US comparison (2024) and sex, 2015-2024

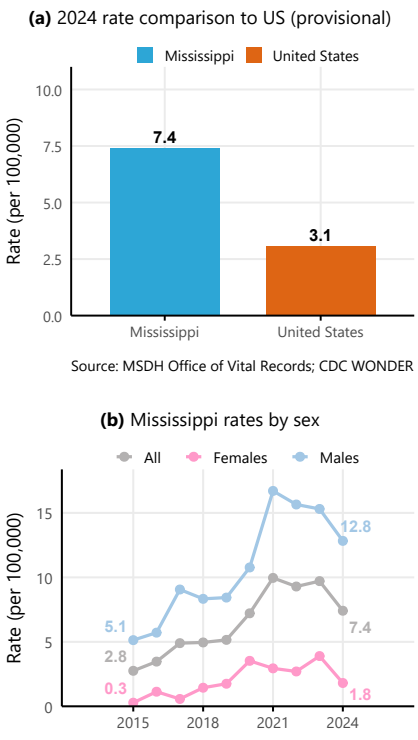


Figure 14: Child firearm deaths by age and race/ethnicity, 2015-2024

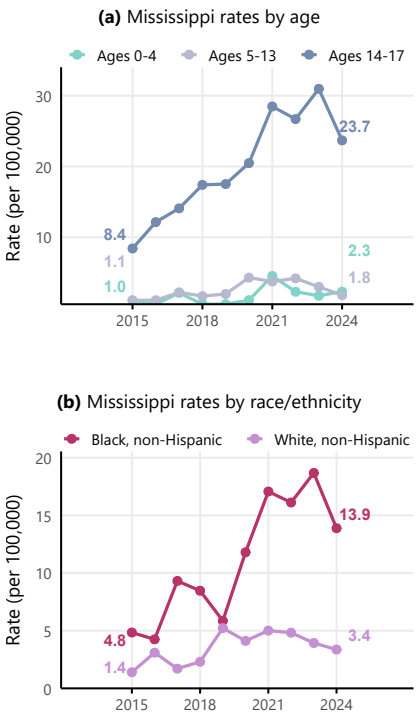
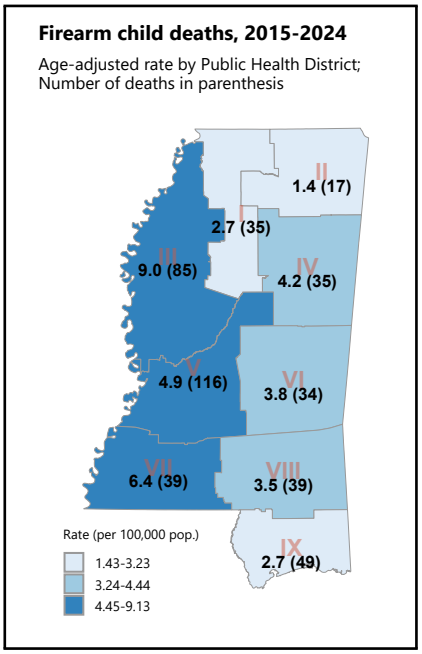


Figure 15: Child firearm deaths by Public Health District, 2015-2024



Suicide Child Deaths, 2015-2024

Table 8: Child suicide deaths by age, sex, and race/ethnicity, 2015-2024 Mississippi resident deaths

	2024			2015-2024 Total		
	Count	**Rate**	**%**	**Count**	**Rate**	**%**
Total	18	2.7	100.0	162	2.3	100.0
Age (years)						
0-4 years	0	0.0	0.0	0	0.0	0.0
5-13 years	3	0.9	16.7	36	0.7	22.2
14-17 years	15	8.9	83.3	126	5.1	77.8
Sex						
Female	7	2.1	38.9	40	1.2	24.7
Male	11	3.2	61.1	122	3.4	75.3
Race/ethnicity						
Black, non-Hispanic	3	1.1	16.7	41	1.4	25.3
White, non-Hispanic	15	4.6	83.3	103	3.0	63.6
Other Races, non-Hispanic	0	0.0	0.0	12	4.0	7.4
Hispanic	0	0.0	0.0	6	1.7	3.7

Note:
Rates calculated as per 100,000 population

Figure 16: Child suicide deaths by US comparison (2024) and sex, 2015-2024

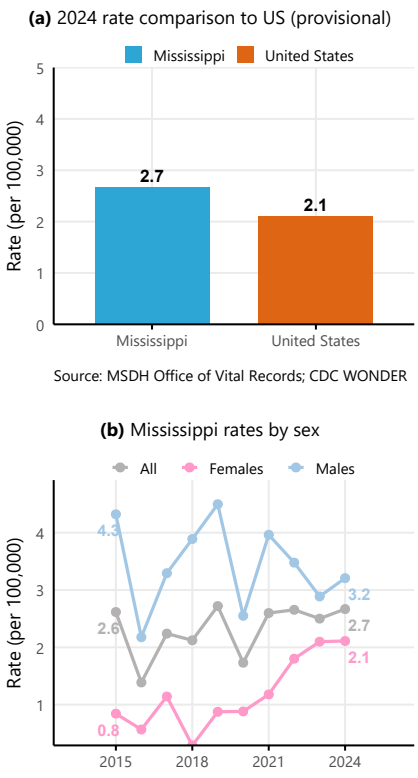


Figure 17: Child suicide deaths by age and race/ethnicity, 2015-2024

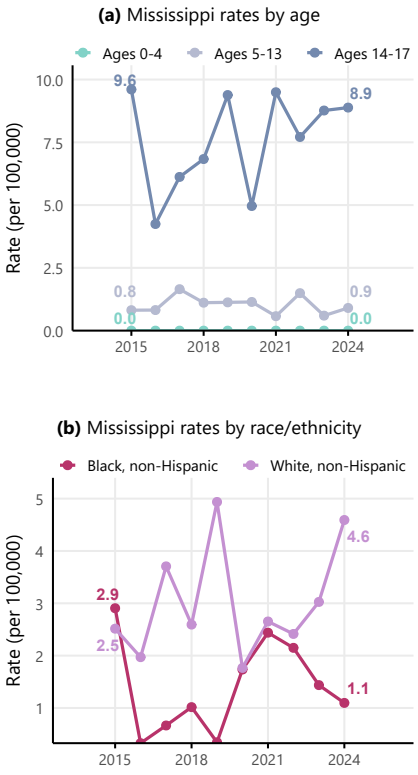
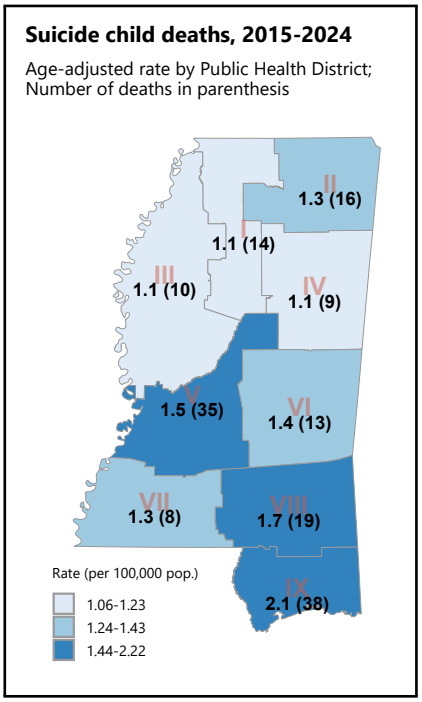


Figure 18: Child suicide deaths by Public Health District, 2015-2024



Homicide Child Deaths, 2015-2024

Table 9: Child homicide deaths by age, sex, and race/ethnicity, 2015-2024 Mississippi resident deaths

	2024			2015-2024 Total		
	Count	Rate	%	Count	Rate	%
Total	47	7.0	100.0	368	5.3	100.0
Age (years)						
0-4 years	11	6.3	23.4	76	2.7	20.7
5-13 years	3	0.9	6.4	59	1.1	16.0
14-17 years	33	19.5	70.2	233	9.4	63.3
Sex						
Female	12	3.6	25.5	83	2.4	22.6
Male	35	10.2	74.5	285	8.0	77.4
Race/ethnicity						
Black, non-Hispanic	44	16.1	93.6	305	10.5	82.9
White, non-Hispanic	3	0.9	6.4	56	1.6	15.2
Other Races, non-Hispanic	0	0.0	0.0	4	1.3	1.1
Hispanic	0	0.0	0.0	3	0.8	0.8

Note:
Rates calculated as per 100,000 population; counts and rates for fewer than 20 events should be interpreted with caution

Figure 19: Child homicide deaths by US comparison (2023) and sex, 2015-2024

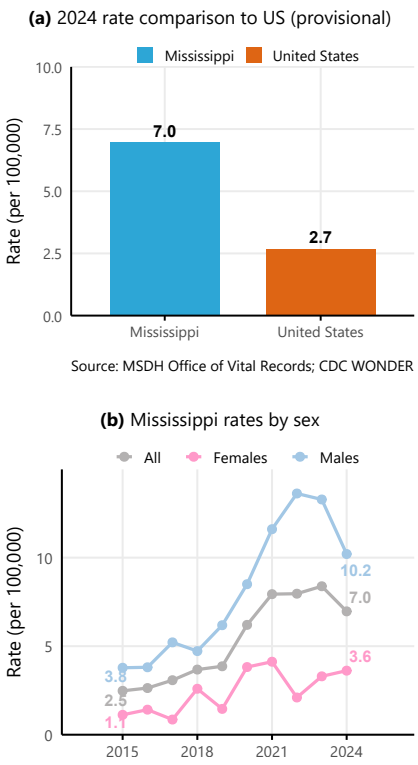


Figure 20: Child homicide deaths by age and race/ethnicity, 2015-2024

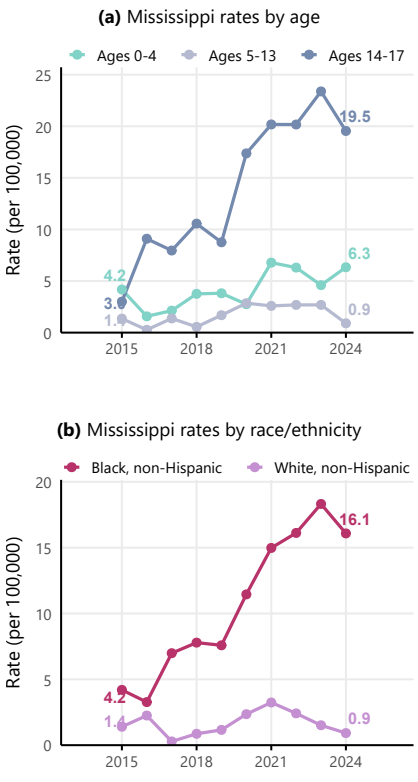
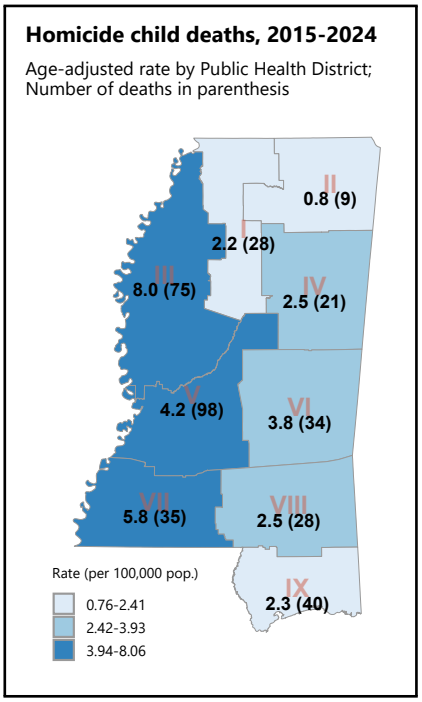


Figure 21: Child homicide deaths by Public Health District, 2015-2024



Fire-related Child Deaths, 2015-2024

Table 10: Child fire-related deaths by age, sex, and race/ethnicity, 2015-2024 Mississippi resident deaths

	2024			2015-2024 Total		
	Count	Rate	%	Count	Rate	%
Total	4	0.6	100.0	64	0.9	100.0
Age (years)						
0-4 years	1	0.6	25.0	31	1.1	48.4
5-13 years	2	0.6	50.0	29	0.5	45.3
14-17 years	1	0.6	25.0	4	0.2	6.2
Sex						
Female	1	0.3	25.0	19	0.6	29.7
Male	3	0.9	75.0	45	1.3	70.3
Race/ethnicity						
Black, non-Hispanic	4	1.5	100.0	35	1.2	54.7
White, non-Hispanic	0	0.0	0.0	24	0.7	37.5
Other Races, non-Hispanic	0	0.0	0.0	4	1.3	6.2
Hispanic	0	0.0	0.0	1	0.3	1.6

Note:
Rates calculated as per 100,000 population; counts and rates for fewer than 20 events should be interpreted with caution

Figure 22: Child fire deaths by US comparison (2024) and sex, 2015-2024

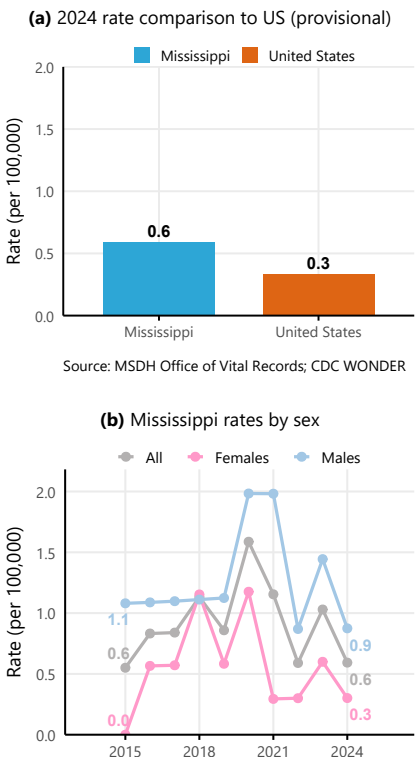


Figure 23: Child fire deaths by age and race/ethnicity, 2015-2024

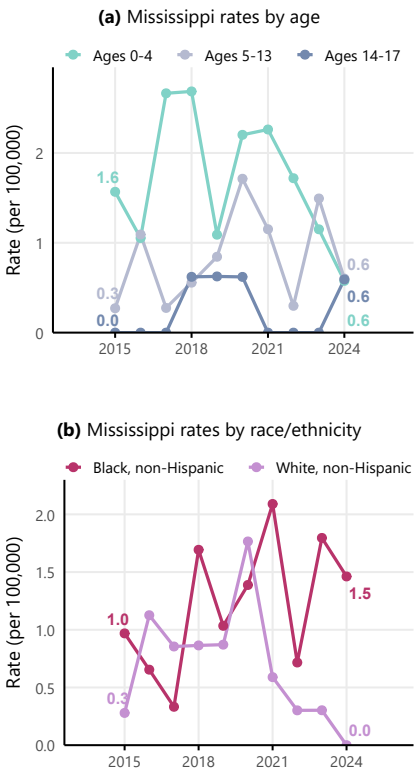
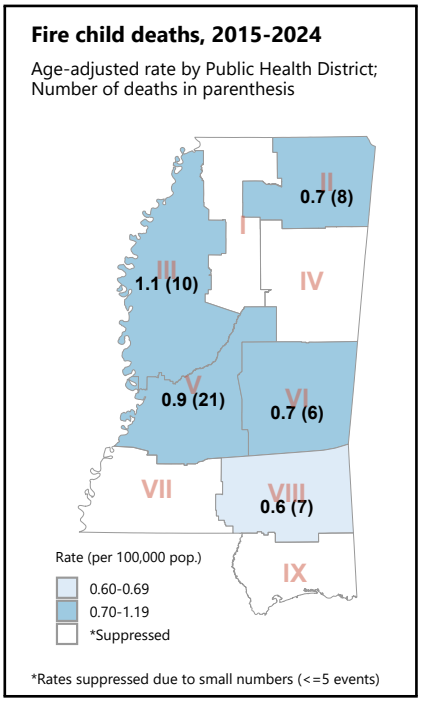


Figure 24: Child fire deaths by Public Health District, 2015-2024



Drowning-related Child Deaths, 2015-2024

Table 11: Child drowning deaths by age, sex, and race/ethnicity, 2015-2024 Mississippi resident deaths

	2024			2015-2024 Total		
	Count	Rate	%	Count	Rate	%
Total	11	1.6	100.0	138	2.0	100.0
Age (years)						
0-4 years	6	3.5	54.5	69	2.4	50.0
5-13 years	3	0.9	27.3	41	0.8	29.7
14-17 years	2	1.2	18.2	28	1.1	20.3
Sex						
Female	6	1.8	54.5	43	1.3	31.2
Male	5	1.5	45.5	95	2.7	68.8
Race/ethnicity						
Black, non-Hispanic	6	2.2	54.5	54	1.9	39.1
White, non-Hispanic	5	1.5	45.5	77	2.2	55.8
Other Races, non-Hispanic	0	0.0	0.0	3	1.0	2.2
Hispanic	0	0.0	0.0	4	1.1	2.9

Note:
Rates calculated as per 100,000 population; counts and rates for fewer than 20 events should be interpreted with caution

Figure 25: Child drowning deaths by US comparison (2024) and sex, 2015-2024

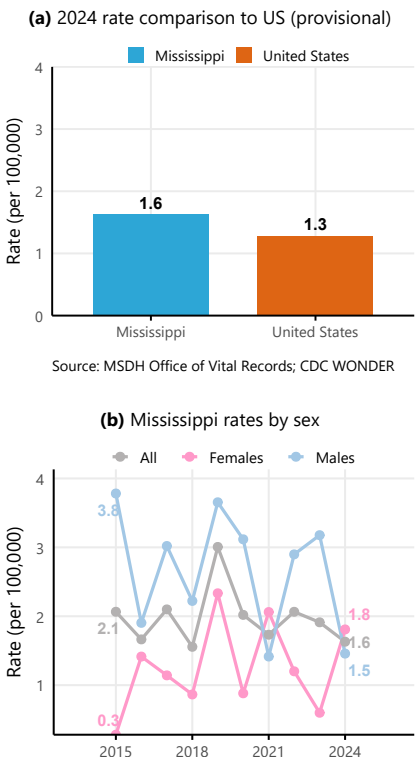


Figure 26: Child drowning deaths by age and race/ethnicity, 2015-2024

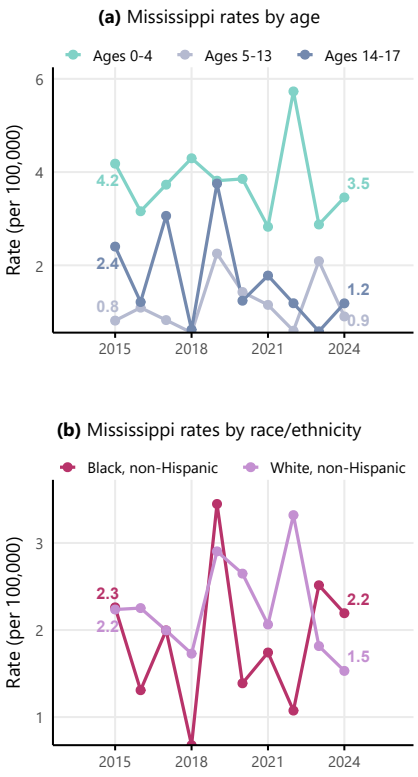
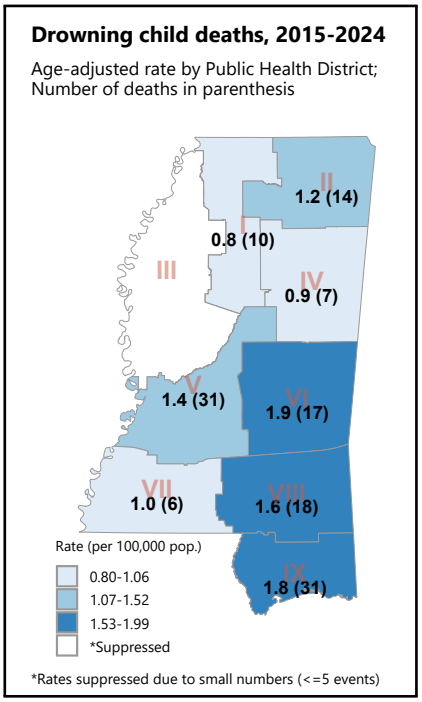


Figure 27: Child drowning deaths by Public Health District, 2015-2024



COMMITTEE FINDINGS

Introduction:

The Mississippi Child Death Review Panel (CDRP) was established by House Bill 560, which became effective on July 1, 2006. The purpose of this legislation is to reduce infant and child mortality and morbidity in Mississippi and to improve the overall health status of infants and children. By reviewing child fatalities, the CDRP gains insights into the factors leading to these deaths, identifies trends in behavior patterns, and assesses fluctuations in the causes of death. The panel also identifies gaps in systems and policies that may compromise the safety and well-being of children in the state of Mississippi. Through this review process, the CDRP formulates recommendations for effectively directing state and other resources toward decreasing infant and child deaths in the state.

Child Death Review Process:

The Child Death Review Panel (CDRP) conducts thorough, multidisciplinary reviews of child deaths from birth through 17 years of age that result from external (non-natural) causes, informing prevention strategies and improving policies and practices to safeguard children's health and safety. This review excludes child deaths due to cancer, congenital anomalies, prematurity, and communicable diseases. Cases classified as "undetermined/unknown" are also reviewed if external causes cannot be ruled out.

Most of the cases reviewed involve residents of Mississippi; however, non-residents are also considered if the incident or death occurred in Mississippi and if the necessary records can be obtained. The Mississippi State Department of Health's Office of Vital Records and Public Health Statistics provides the child death cases organized by the calendar year of death. These cases are categorized by the external cause of death, such as accidents, homicide, suicide, undetermined causes, and pending investigations. The reviewed cases primarily include deaths resulting from injury or actions that directly led to the death, as well as circumstances related to fatal accidents. Common causes of death in this review include Sudden Unexpected Infant Death (SUID), Sudden Infant Death Syndrome (SIDS), motor vehicle accidents, homicides, suicides, fire-related incidents, drownings, and other categories. The "other" category encompasses incidents with fewer cases in that calendar year. To prepare for panel reviews, death investigation reports, SUID investigation forms, autopsy reports, toxicology reports, police reports, and any other relevant documents are gathered to provide a clear sequence of events leading to each death. Each case is examined individually by a panel member who presents a summary to the entire panel for further discussion. Through this collaborative process, the panel formulates recommendations aimed at reducing the number of infant and child fatalities.

A significant challenge for the CDRP is the lack of documentation, which hinders its efficiency. The review process relies on thorough, timely, and accurate reports to assess the circumstances surrounding a child's death. Without this information, the CDRP cannot fully carry out its responsibilities.

Purpose and Data Sources:

This annual report offers an overview of statistics and data concerning child and infant deaths, along with the cases reviewed by the Child Death Review Panel (CDRP) and its recommendations for prevention. The report is compiled using information from Mississippi Vital Statistics and the National Fatality Review Case Reporting System. The National Fatality Review Reporting System helps the CDRP track trends and risk behaviors in the reviewed cases.

CHILD DEATH REVIEW PANEL
FINDINGS AMONG 2023 DEATHS REVIEWED

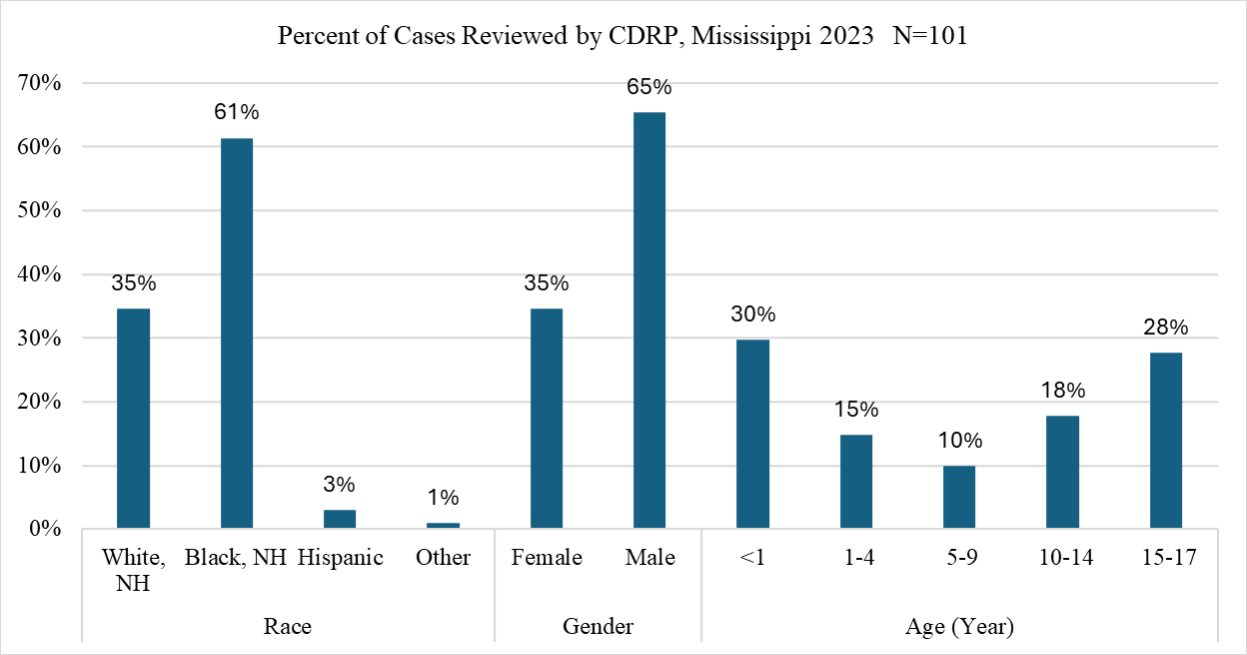
The Child Death Review Panel (CDRP) reviewed a subset of 119 cases among infants and children who died in 2022 and 2023 across five meetings in CY2025. The selection of cases reviewed was largely influenced by the overall number of deaths in a category and the availability of information related to the death (i.e., autopsy, toxicology, law enforcement reports, witness reports, etc.).

In 2025, the CDRP reviewed 18 cases from 2022 and 101 cases from 2023. As shown in Figure 28, of those 101 cases reviewed from 2023, 35 cases (35%) were White, non-Hispanic, (White, NH), 62 cases (61%) were Black, non-Hispanic, (Black, NH), 3 cases (3%) were Hispanic, and 1 case (1%) was Other races; 35 cases (35%) were female and 66 cases (65%) were male; 30 cases (30%) were infant (less than 1 year old), 15 cases (15%) aged 1-4 years old, 10 cases (10%) aged 5-9 years, 18 cases (18%) aged 10-14 years, and 28 cases (28%) aged 15-17 years.

Of those 18 cases from 2022, all were SUID cases that had not been reviewed at the time of the previous report. For demographics on the 18 cases from 2022, refer to Figure 31 labeled *"Percent of SUIDS_SIDS Reviewed by CDRP Mississippi 2022."*

Infants represented 30% (n = 30 cases) of all cases reviewed by the CDRP, while children aged 1-17 years comprised 70% (n = 71 cases).

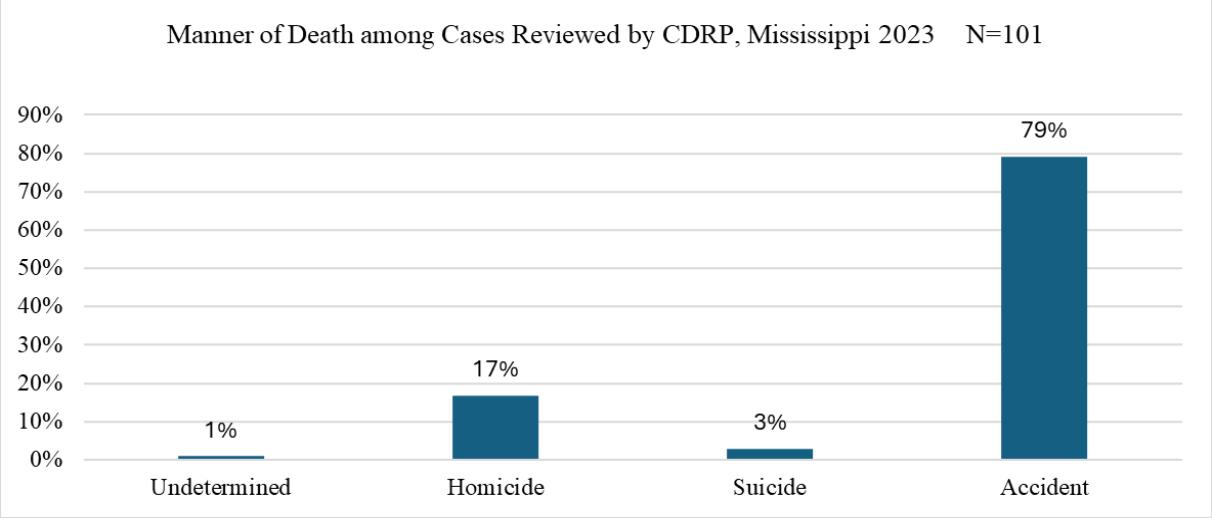
Figure 28: Percent of Cases Reviewed by CDRP, Mississippi 2023 (N=101)



Manner and Cause of Death

By manner of death, of the 101 cases reviewed by CDPR from 2023, Figure 29 shows the manner of death was undetermined for 1 case (1%), 17 cases (17%) were homicide, and 3 cases (3%) were suicide. The majority of 80 cases (79%) were identified as an accident-related death.

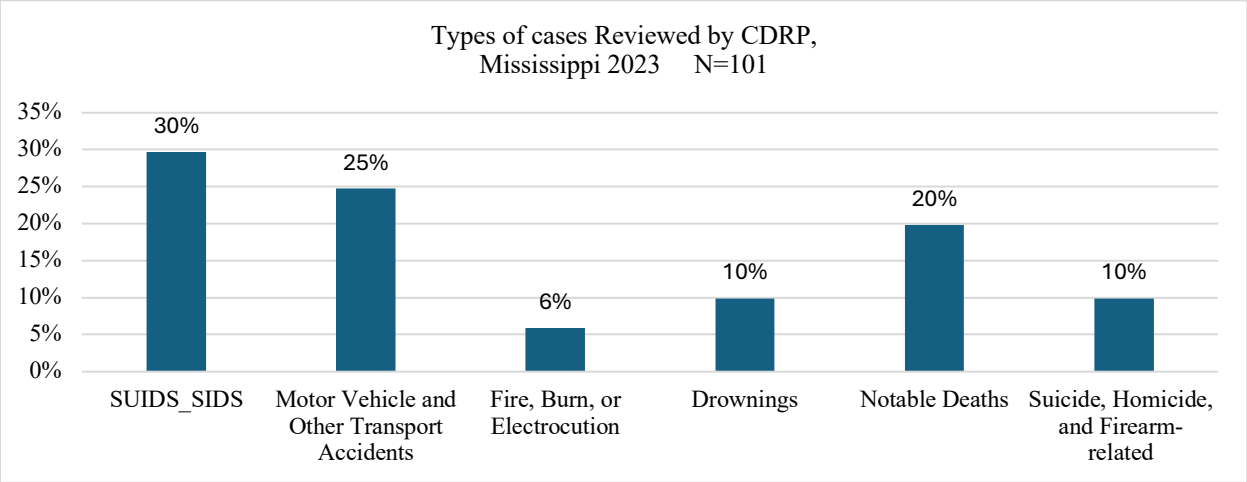
Figure 29: Manner of Death among Cases Reviewed by CDRP, Mississippi 2023 (N=101)



By cause of death, Figure 30 shows that among the 101 cases reviewed, 30 cases (30%) were Sudden Unexpected Infant Death (SUID), 25 cases (25%) were Motor Vehicle and Other

Transport-related death, 6 cases (6%) were Fire, Burn, or Electrocution, 10 cases (10%) were Drowning, 10 cases (10%) Notable Deaths and 20 cases (20%) Suicide, Homicide, and Firearm-related.

Figure 30: Types of Cases Reviewed by CDRP, Mississippi 2023 (N=101)

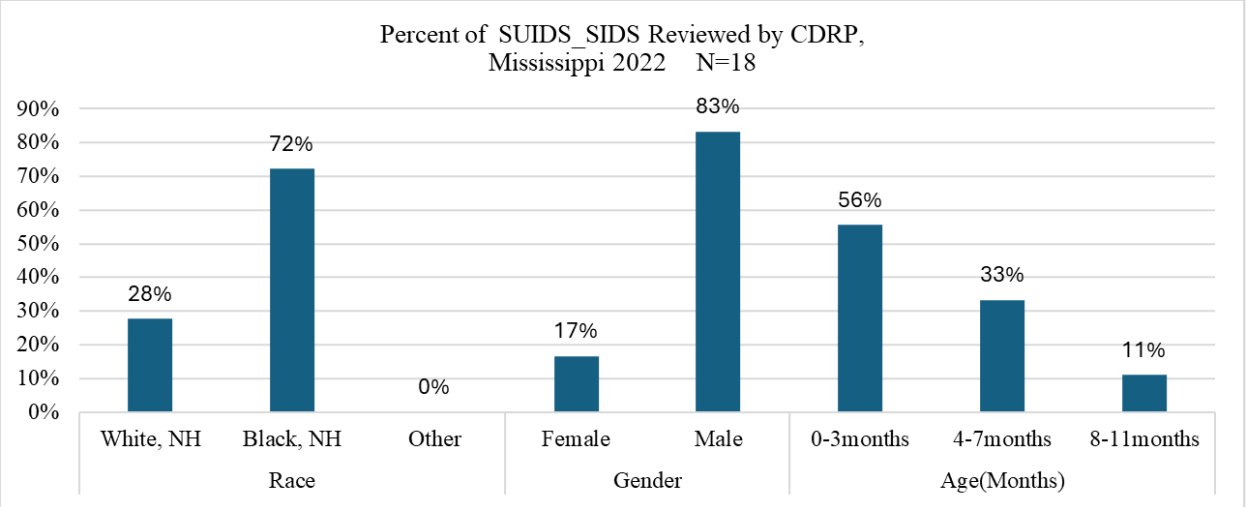


Infant Deaths: Sudden Unexpected Infant Death and Sudden Infant Death Syndrome (2022, 2023 cases)

Sudden Unexpected Infant Death (SUID) is a term used to describe the sudden and unexpected death of an infant less than 1 year old, in which the cause is not known before investigation. SUID deaths often occur in the sleep environment or during sleep. SUID deaths fall into three major causes of death: undetermined, Sudden Infant Death Syndrome (SIDS), or accidental suffocation or asphyxiation.

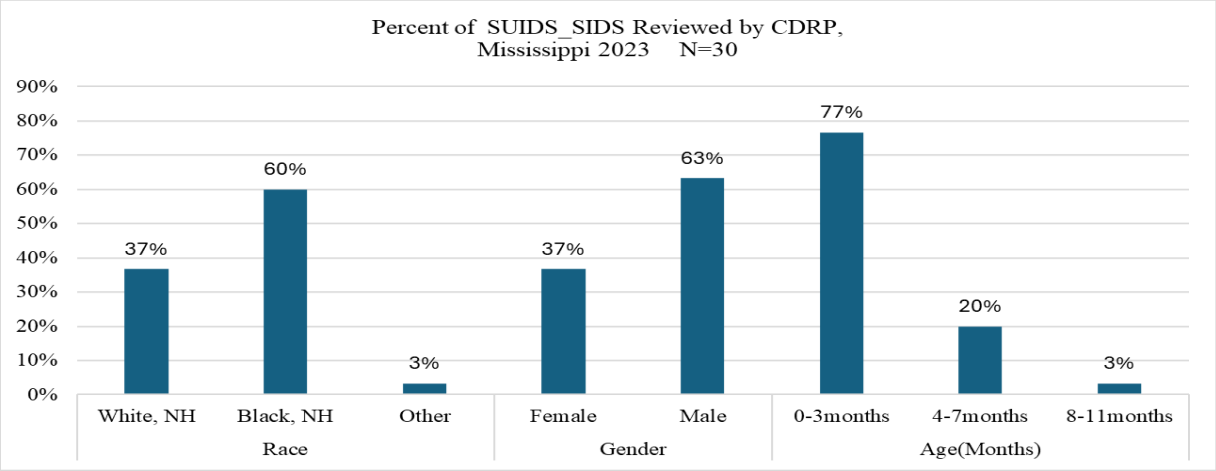
In 2022, there were 82 infant deaths related to SUID in Mississippi. The CDRP reviewed 18 SUID cases, as illustrated in Figure 31. Of these 18 cases, 5 (28%) were White, NH, and 13 (72%) were Black, NH. 3 cases (17%) were female, and 15 cases (83%) were male. By age in months, 10 (56%) cases were 0-3 months, 6 (33%) cases were 4-7 months, and 2 (11%) cases were 8-11 months.

Figure 31: Percent of SUIDS_SIDS Reviewed by CDRP, Mississippi 2022 (N=18)



In 2023, there were 89 infant deaths related to SUID in Mississippi, and the CDRP reviewed 30 SUID cases. Figure 32 shows that, of the 30 SUID cases reviewed by the CDRP, 11 (37%) were White, NH, and 18 (60%) were Black, NH. 11 cases (37%) were female, and 19 cases (63%) were male. By age in months, 23 (77%) cases were 0-3 months, 6 (20%) cases were 4-7 months, and 1 (3%) case was 8-11 months.

Figure 32: Percent of SUIDS_SIDS Reviewed by CDRP, Mississippi 2023 (N=30)



Out of the 18 SUID cases from 2022 reviewed, as shown in Figure 33, 13 (72%) were found to have sleep environment-related factors. Among sleep-related factors, 7 (39%) were not sleeping in a crib, bassinette, side sleeper, or baby box, 7 (39%) were not sleeping on their back, 9 (50%) had unsafe bedding or toys in the sleeping area, 6 (33%) were co-sleeping with other people (including adult caregivers or siblings) in an adult bed, couch, or recliner, 1 (6%) of the case had an adult who was alcohol/drug impaired, and 1 (6%) cases had the caregiver/supervisor to fall asleep due to tiredness or while feeding (including bottle and breast feeding) while co-sleeping.

Figure 33: Factors Involved in Sleep-Related Deaths Reviewed by CDRP, Mississippi 2022 (N=13)

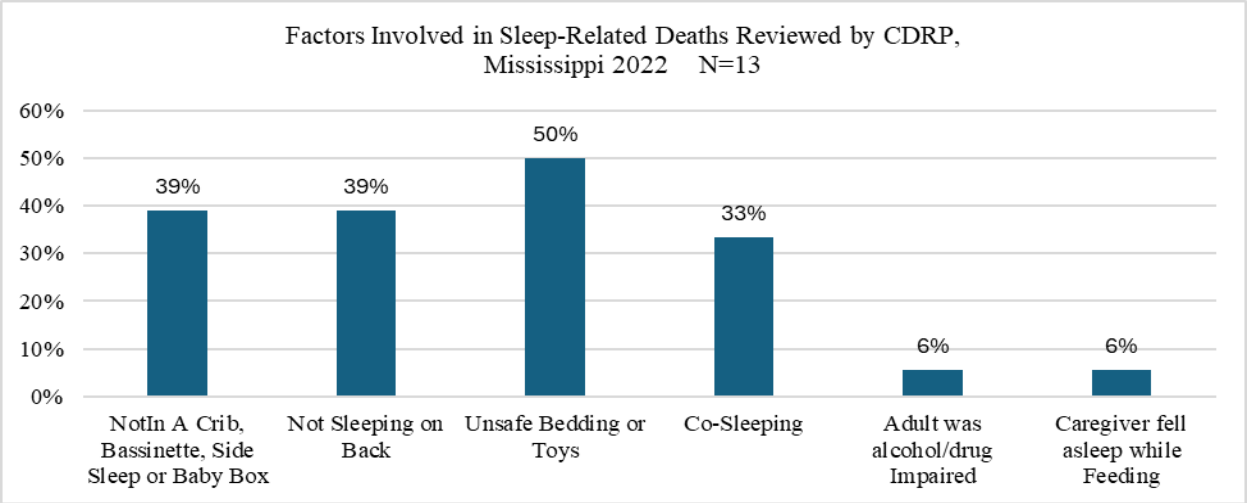
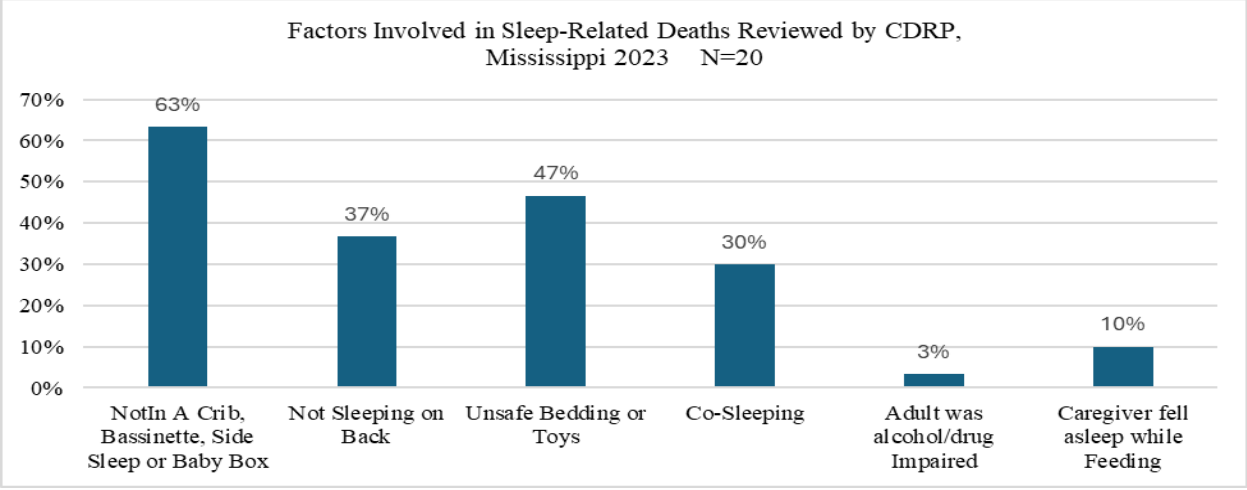


Figure 34 shows that, out of the 30 SUID cases from 2023 reviewed, 20 (67%) were found to have sleep environment-related factors. Among sleep-related factors, 19 (63%) were not sleeping in a crib, bassinette, side sleeper, or baby box, 11 (37%) were not sleeping on their back, 14 (47%) had unsafe bedding or toys in the sleeping area, 9 (30%) were co-sleeping with other people (including adult caregivers or siblings) in an adult bed, couch, or recliner, 1 (3%) of the case had an adult who was alcohol/drug impaired, and 3 (10%) cases had the caregiver/supervisor to fall asleep due to tiredness or while feeding (including bottle and breast feeding) while co-sleeping. Unsafe sleep practices (infants not sleeping alone on their back, or in a crib, bassinet, or pack n' play) continue to be a contributing factor to sudden unexpected infant deaths.

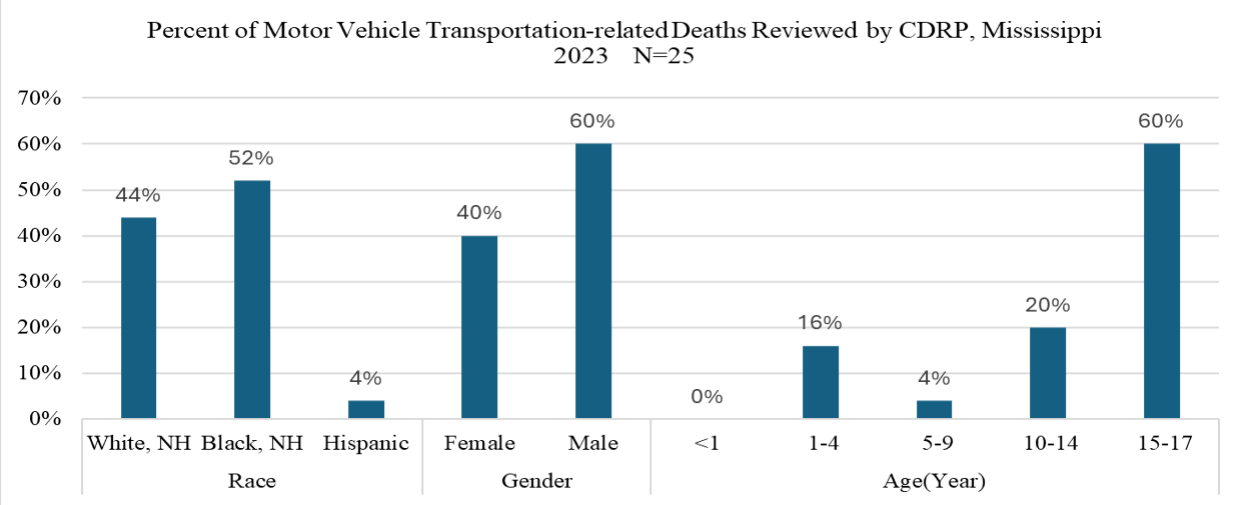
Figure 34: Factors Involved in Sleep-Related Deaths Reviewed by CDRP, Mississippi 2023 (N=20)



Motor Vehicle and Other Transport Accidents

In 2023, there were 58 deaths related to Motor Vehicle and Other Transport Accidents in Mississippi. As shown in Figure 35, the CDRP reviewed 25 Motor Vehicle and Other Transport Accidents (MVA) death cases. Eleven cases (44%) were White, NH, 13 cases (52%) were Black, NH, and one case (4%) was Hispanic; 15 (60%) were male and 10 (40%) were female. Four cases (16%) were aged 1-4 years, one case (4%) was aged 5-9 years, 5 cases (20%) were aged 10-14 years, and 15 cases (60%) were aged 15-17 years.

Figure 35: Percent of Motor Vehicle Transportation-related Deaths Reviewed by CDRP, Mississippi 2023 (N=25)

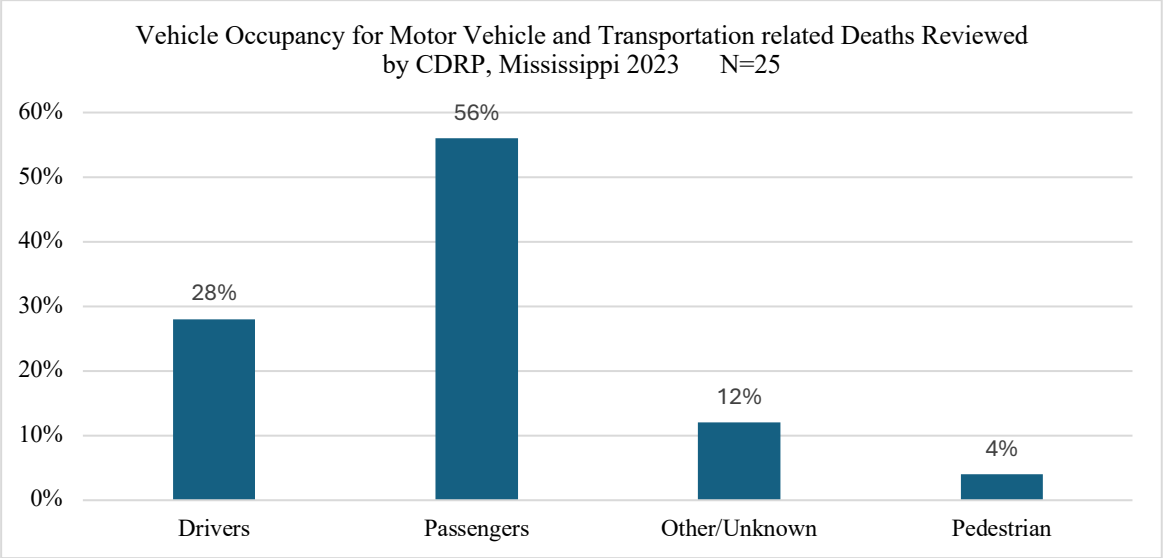


Vehicle Occupancy

Figure 36 illustrates the review conducted by the CDRP of deaths in 2023 related to motor vehicle accidents (MVAs). Out of the 25 cases analyzed, 7 cases (28%) involved drivers of motor vehicles, 14 cases (56%) involved passengers (including the two all-terrain vehicle (ATV) cases), 3 cases (12%) had unclear status, and 1 case (4%) involved a pedestrian.

It shows that many of the cases involved individuals who were passengers. This group includes two cases involving ATVs: one case was a rollover caused by high speed, while the other was a collision between a motor vehicle and an ATV. Drivers made up the next largest group.

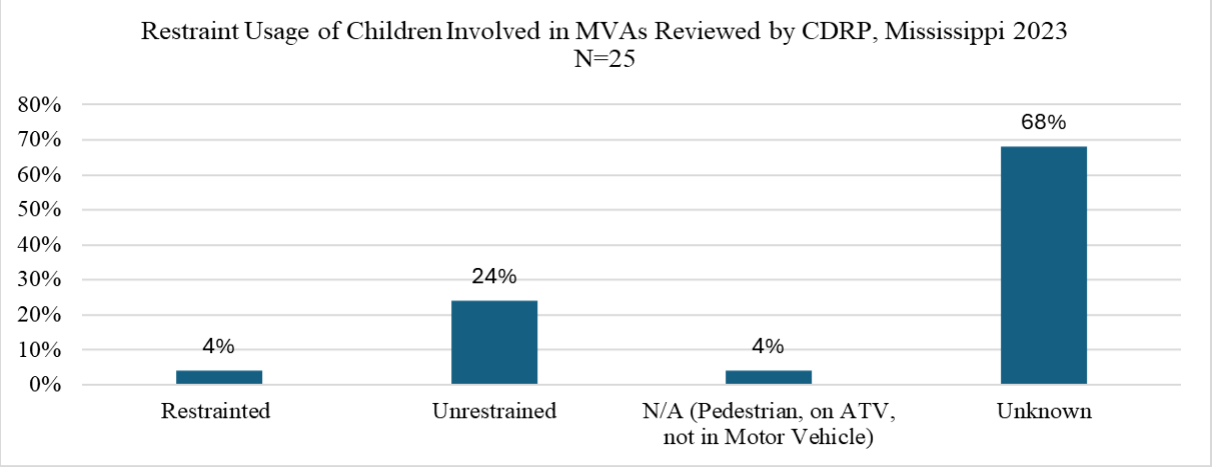
Figure 36: Vehicle Occupancy for Motor Vehicle and Transportation-related Deaths Reviewed by CDRP, Mississippi 2023 (N=25)



Seatbelt or Restraint Usage and Location

As shown in Figure 37, among the 2023 MVA deaths reviewed, 1 case was restrained (4%), 6 cases (24%) were unrestrained, one case (4%) was either pedestrian, on an ATV, or not in a Motor Vehicle, and 17 cases (68%) were unknown and had this information missing from their case. Of the motor vehicle and other transportation-related cases reviewed, 7 cases (28%) occurred on highways, while 18 cases (72%) happened on county roads.

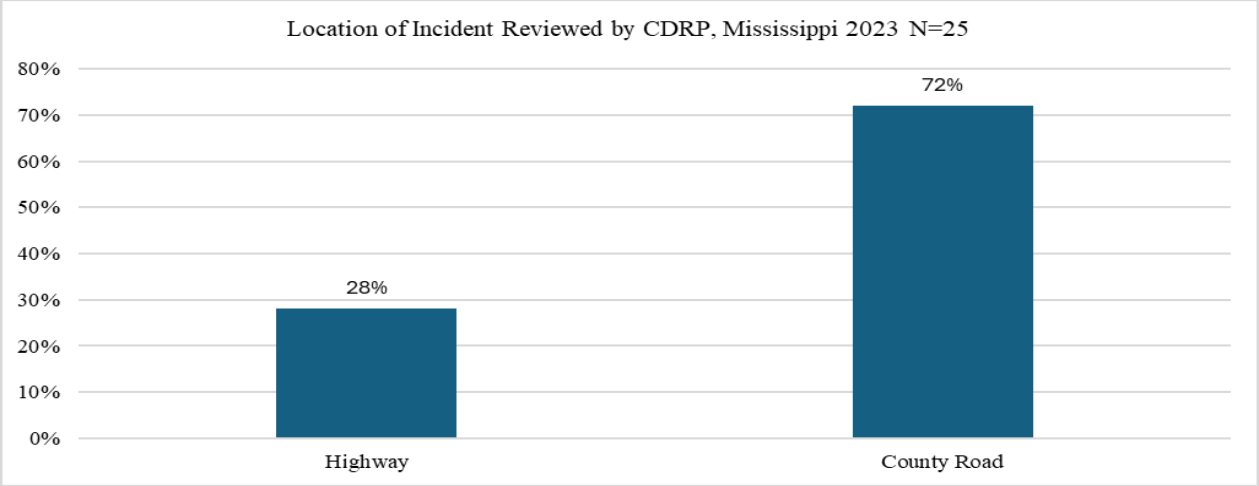
Figure 37: Restraint Usage of Children Involved in MVAs Reviewed by CDRP, Mississippi 2023 (N=25)



A county road is a road that is constructed and maintained by the county road department in Mississippi. According to the Mississippi Code Annotated, Title 65, Chapter 7, county boards of supervisors are responsible for managing these roads within their jurisdiction.

A highway, as defined in Mississippi Code Annotated Section 65-3-3, is a road that is part of the state highway system. Highways are maintained by the Mississippi Department of Transportation (MDOT) under the authority of the Mississippi Transportation Commission.

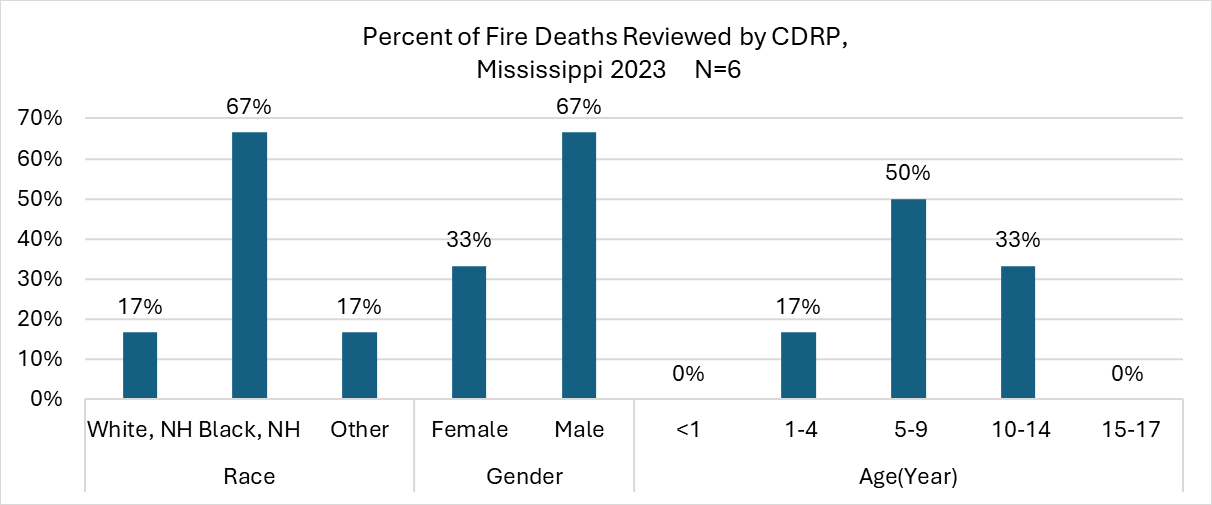
Figure 38: Location of Incident Reviewed by CDRP, Mississippi 2023 (N=25)



Fire, Burn, or Electrocution

In 2023, there were 7 fire-related child deaths in Mississippi. The CDRP reviewed six of these cases. As shown in Figure 39, four cases (67%) were Black, NH, one (17%) was White, NH, and one (17%) was categorized as others, NH. By gender, four cases (67%) were male and two (33%) were female. In terms of age, there was one child (17%) aged 1-4 years, three children (50%) aged 5-9 years, and two (33%) aged 10-14 years. The incidents occurred in three single-family homes (50%), two multiple-home dwellings (33%), and one trailer/mobile home (17%). Smoke detectors were unknown in five cases (83%), with only one case (17%) having a smoke detector. Two cases (33%) involved children who were not supervised.

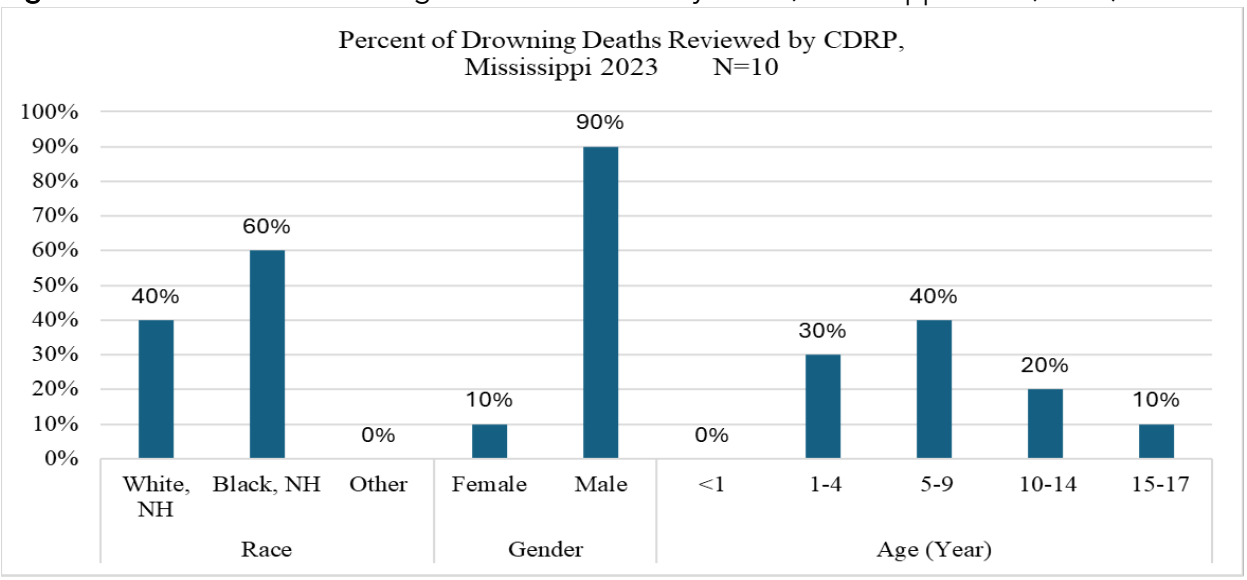
Figure 39: Percent of Fire Deaths Reviewed by CDRP, Mississippi 2023 (N=6)



Drowning

In 2023, there were 13 drowning-related child deaths in Mississippi. The CDRP reviewed 10 of these cases. As shown in Figure 40, four cases (40%) were White, NH, and 6 cases (60%) were Black, NH. Nine cases (90%) were male, and one case (10%) was female. Three cases (30%) were aged 1-4 years, 4 cases (40%) were aged 5-9 years, 2 cases (20%) were aged 10-14 years, and 1 case (10%) was aged 15-17 years. The locations of the drowning cases reviewed show that 6 cases (60%) were in a lake, river, pond, or creek, and 4 cases (40%) were in a pool, hot tub, or spa. During the review, it was unclear if the victims could swim; however, it was determined that 7 (70%) of the cases were associated with a lack of supervision.

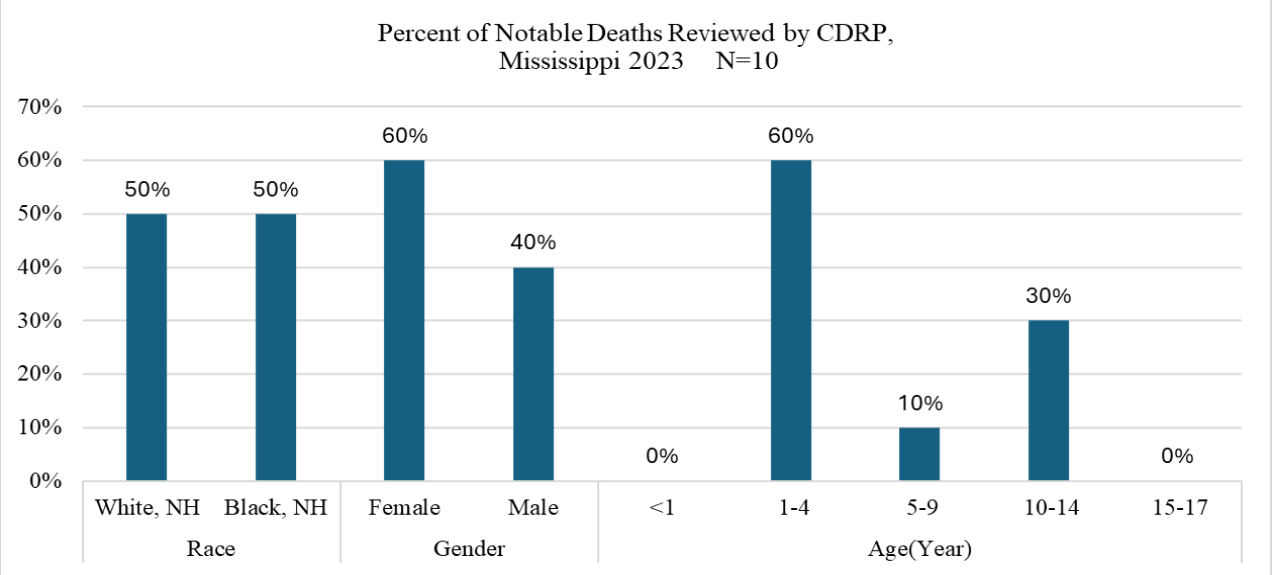
Figure 40: Percent of Drowning Deaths Reviewed by CDRP, Mississippi 2023 (N=10)



Notable Deaths

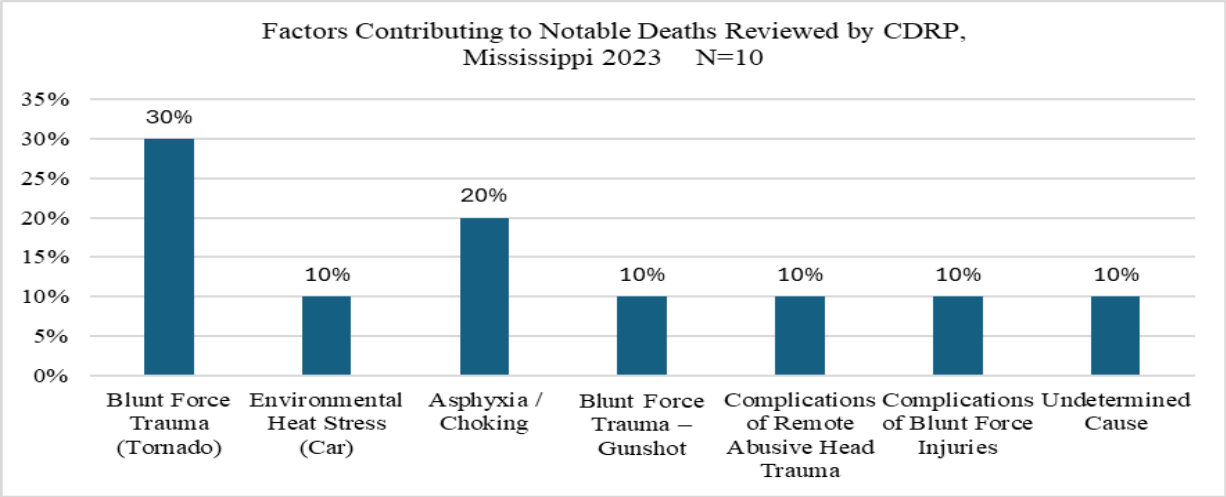
In 2023, notable deaths included cases of accidental blunt force injuries, choking, blunt force trauma from a tornado, child abuse complications, and heat stress from being left in cars. The CDRP analyzed 10 cases: as shown in Figure 41, five (50%) were Black non-Hispanic children, and five (50%) were White non-Hispanic children. Gender distribution included four males (40%) and six females (60%). Age breakdown showed six cases (60%) were aged 1-4 years, one case (10%) was 5-9 years old, and three cases (30%) were 10-14 years old.

Figure 41: Percent of Notable Deaths Reviewed by CDRP, Mississippi 2023 (N=10)



Out of the 10 notable death related cases from 2023 reviewed, as shown in Figure 42, 3 (30%) were due to blunt force trauma (Tornado), 1 case (10%) was as a result of environmental heat stress(car), 2 cases (20%) resulted from asphyxia/chocking, 1 case (10%) blunt force trauma (Gunshot), 1 case (10%) complications of remote abusive head trauma, 1 case (10%) complications of blunt force injuries, 1 case (10%) undetermined cause.

Figure 42: Factors Contributing to Notable Deaths Reviewed by CDRP, Mississippi 2023 (N=10)



Suicide, Homicide, and Firearm-Related Deaths

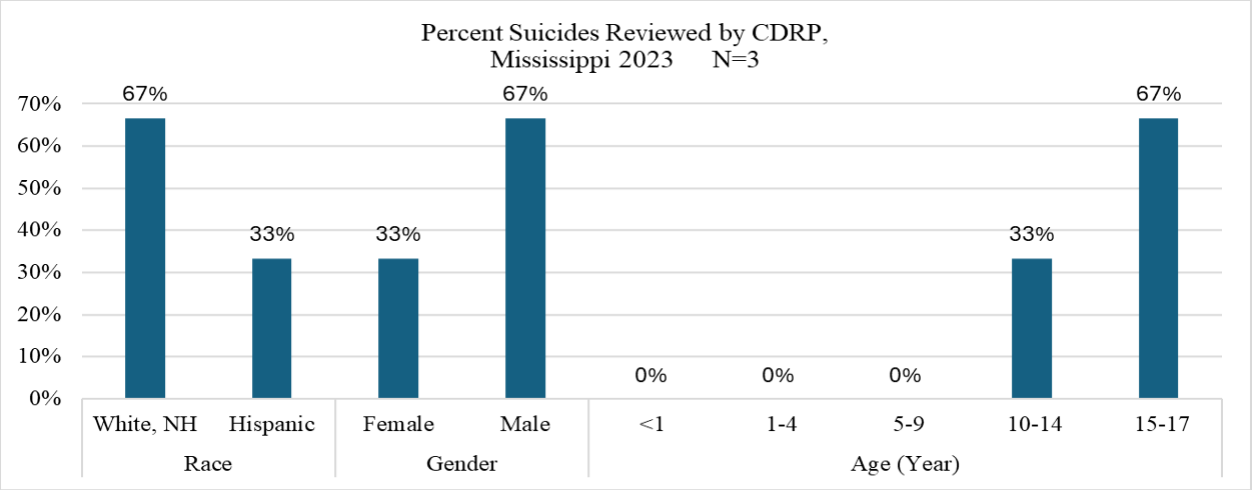
In 2023, Mississippi recorded deaths related to suicide, homicide, and firearms. Specifically, there were 17 deaths by suicide, 57 by homicide, and 66 caused by firearms. Of these, the CDRP examined 3 cases that were ruled as suicides, 17 cases that were classified as homicides, and 18 cases that were identified as firearm-related deaths.

Suicide Deaths

Figure 43 presents the data among 2023 deaths ruled as suicide; the CDRP reviewed 3 cases. 2 cases (67%) were White, NH, and 1 case (33%) was Hispanic. In terms of gender, two cases (67%) were males, and one case (33%) was a female. Regarding age, one case (33%) involved a child aged 10-14 years, while two cases (67%) involved children aged 15-17 years.

Of the suicide cases reviewed, three cases (100%) involved the children talking about suicide before the act. Additionally, in 2 cases (67%), an argument or incident occurred before the suicide. One case (33%) indicated serious school-related problems faced by the child before the event. In terms of methods used, 2 cases (67%) involved a firearm, while 1 case (33%) used a rope, cord, or belt.

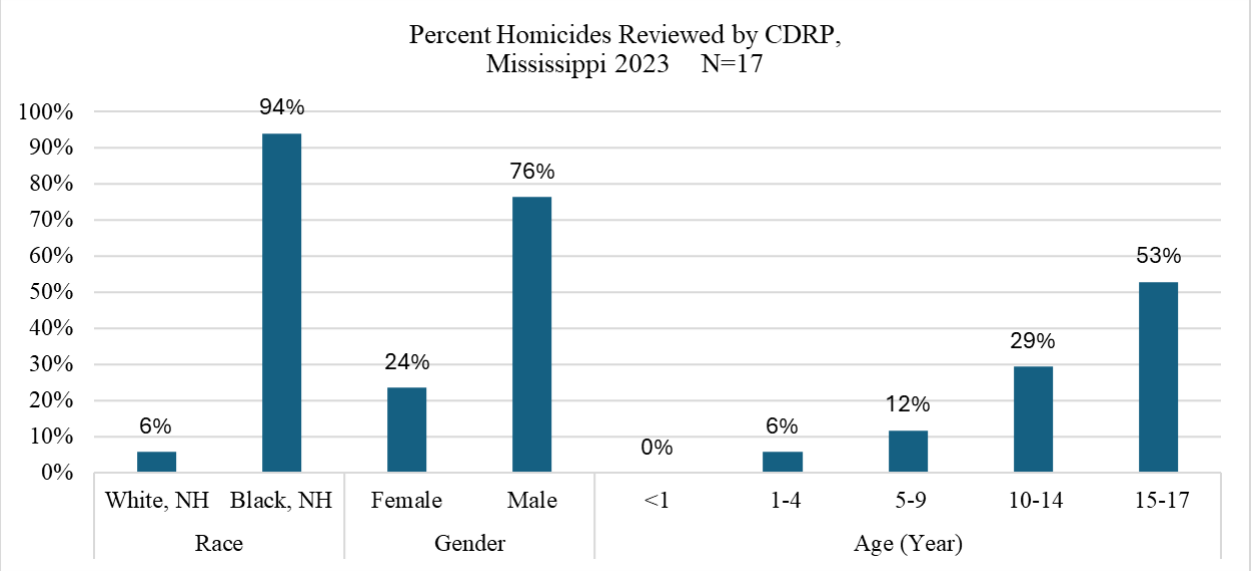
Figure 43: Percent of Suicides Reviewed by CDRP, Mississippi 2023 (N=3)



Homicide

Among 2023 deaths ruled as homicides, the CDRP reviewed 17 cases. As shown in Figure 44, of these cases, one (6%) was White, NH, while 16 cases (94%) were Black, NH. Gender distribution showed that four cases (24%) were female, and 13 cases (76%) were male. The age breakdown revealed that 1 case (6%) was aged 1-4 years, 2 cases (12%) involved children aged 5-9 years, 5 cases (29%) involved individuals aged 10-14 years, and 9 cases (53%) involved victims aged 15-17 years. Additionally, one case (6%) was attributed to blunt force injuries, and 16 cases (94%) were caused by firearms.

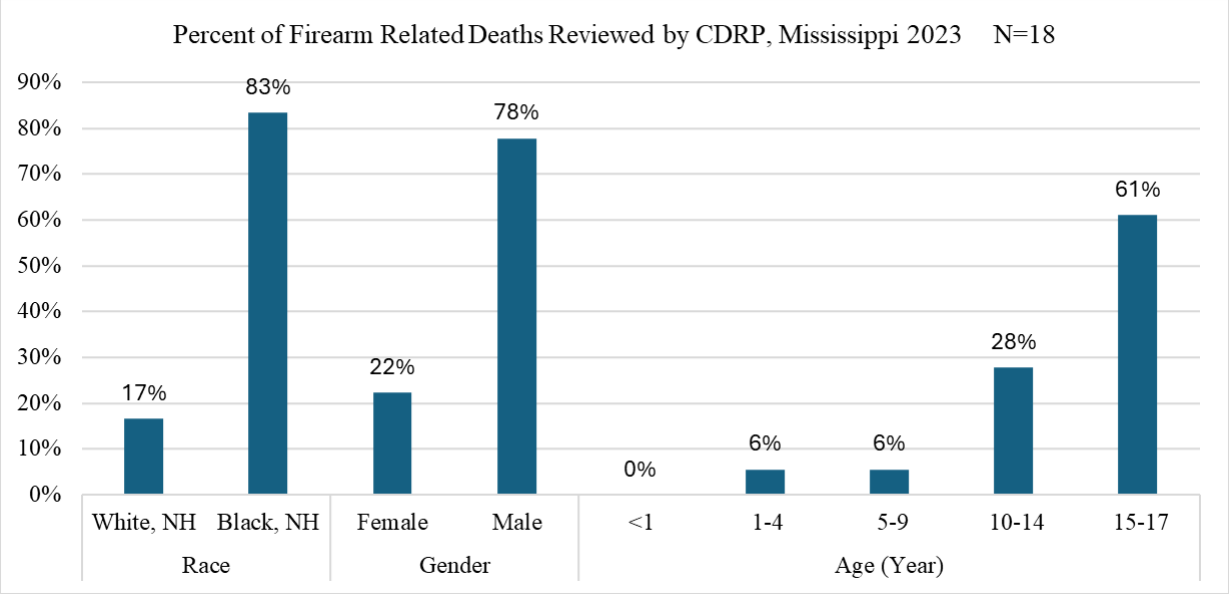
Figure 44: Percent Homicides Reviewed by CDRP, Mississippi 2023 (N=17)



Firearm-Related Deaths

As shown in Figure 45, in 2023, the CDRP reviewed 18 firearm-related deaths, including suicides and homicides. Of these, 15 cases (83%) were Black non-Hispanic, and 3 cases (17%) were White non-Hispanic. 4 cases (22%) involved females, whereas the majority were male (14 cases, 78%). Age distribution included 1 case (6%) aged 1-4 years, 1 case (6%) aged 5-9 years, 5 cases (28%) aged 10-14 years, and 11 cases (61%) aged 15-17 years.

Figure 45: Percent of Firearm-Related Deaths Reviewed by CDRP, Mississippi 2023 (N=18)



RECOMMENDATIONS

Recommendations from the CDRP

State Leaders

- Create a standing Infant Mortality Committee given authority and necessary administrative support to investigate deaths less than a year of age and report back to the Chairmen of the House Public Health and Human Services Committee and the Senate Public Health and Welfare Committee with recommendations to reduce infant mortality. The committee needs authority and funds to pay for chart reviews and investigations. The committee members should be appointed by the Mississippi State Department of Health State Health Officer/Executive Director as needed.
- Increase statewide fines for improper restraint of children in car seats from $25 to $150 dollars and use the funds to supply car seats by local police and fire departments.
- Require toxicology screening for all youths and adults in fatal and near fatal accidents to test for all agents known to impair judgment. Finally, the committee once again recommends emphasis on preventing cell phone usage while driving by implementing insurance incentives for not using a phone while driving. The state should work with the insurance commissioner to provide incentives and make them known to the public.
- Allow local police more ways to reduce speeding and reckless driving on county roads by allowing local law enforcement to use radar guns, remote sensing systems (i.e., LIDAR), automated speed enforcement or whatever extra means is needed to reduce child deaths in accidents on county roads. The committee recommends focusing on safety on county roads where child deaths are almost three times more likely to happen compared to a highway (28% highway versus 72% county road).
- Emphasize the importance of firearm safety and secure firearm storage to reduce the accidental death of children by firearms, the use of firearms in suicide by emotionally distressed teenagers, and the use of parental firearms for illegal purposes. Parents should bear the responsibility of a death of a child by their firearm.
- Require firearms to be traced through the Bureau of Alcohol, Tobacco, and Firearms and Explosives when a child has been injured or fatally injured by a firearm.
- Require that a Representative from the Department of Mental Health be assigned to the Child Death Review Panel.
- Recognize the need for a medical facility in Mississippi that provides drug treatment especially for adolescents -many are being screened and sent for outpatient treatment due to bed limitations.
- Hospitals, law enforcement agencies, and others involved in the pre-mortem or postmortem response to a child or infant death should be required to release all relevant information to the Child Death Review Panel and its administrative agents to assure comprehensive reviews can be conducted.

- Coroners should be required to fill out SUIDI forms which would require an appropriate death scene investigation. Training and the availability of resource materials should be coordinated with the Mississippi State Department of Health and State Medical Examiner's Office with funding appropriated by the Legislature.
- Continued partnership opportunities for CDRP members to present data and findings from the annual report with examples including legislature day for different organizations, trauma conferences, injury prevention conferences, and child health conferences.

Local and Community Leaders

- Local primary care providers should emphasize the importance of safe sleep to families with a newborn. Local clinics and hospitals should use social media and all other means to spread the word about safe sleep and the importance of a safe sleep plan for a newborn.
- Public service announcements about the dangers of co-sleeping and the importance of an infant having a separate place to sleep.
- Collaboration/partnership with Department of Mental Health's "Shatter the Silence Suicide Prevention Campaign".
- More calls to the Child Protection Services hotline for infant and child fatalities from accidents, homicides, suicides, or any injury-related deaths.
- Raise awareness on the availability of programs and resources offering firearm safes, trigger locks, smoke alarms, CO2 alarms, child passenger safety seats/installation.
- Local authorities should:
    - Emphasize the importance of proper restraint of children and fine noncompliant parents to reduce child deaths in motor vehicle accidents and also discourage the use of cell phones while driving, especially with teenage drivers.
    - Emphasize the importance of safety of off-road vehicles such as ATV's, golf carts, and high-speed scooters. The committee recommends engaging the public about the need for safety with these new products.
    - Offer firearm trigger or means to secure firearms and instruction on firearm safety with the purchase of each new firearm and the start of each hunting season.
    - Emphasize the importance of supervision of small children to reduce the risk of drowning as summer approaches and school vacations start. This can be done through public service announcements on water safety, swimming safety, and other safety precautions for residential lakes, ponds, pools, and bathtubs.
    - Continue to make smoke alarms available and educate families about the dangers of space heaters during the winter months. Public Service announcements on fire safety and the importance of smoke alarms in homes.

Parents and Caregivers

- The committee recommends the consistent message of **ABC or Alone, on the Back, and in a Crib** must be reinforced with all caregivers continuously. The CDRP emphasizes the importance of baby sleeping in a space free of anything but a fitted sheet and a pacifier. There is an increased risk of infant mortality if a caregiver falls asleep holding a baby.
- Every family should have a safe sleep plan for their newborn which includes what caregivers will do as routine preparation for sleep and how caregivers will plan to soothe a crying baby ensuring that baby returns to their own space to sleep alone.
- Talk to your pediatrician or family practice doctor about difficulties you are having at home with a fussy baby.
- Take time to restrain your child properly in car. Keep children less than 12 years of age in the back seat in a car seat (as appropriate) with a seat belt in place. Stay off your cell phone when you drive.
- Store your firearms safely. Do not allow your firearm to be used as a toy, a means for suicide, or a weapon in the hands of an adolescent. Use trigger locks, lock ammunition away separately from the firearm, and restrict children and adolescents' access to firearms.
- Get a smoke alarm; they are available at your local fire department. Do not use a space heater unless it has an automatic shut-off feature when tipped over. Never plug a space heater into an extension cord.
- Give your children swimming lessons and never leave a child unsupervised in a bathtub or a pool.
- Monitor children and adolescents' use of social media, gaming, and other communication platforms and applications for content including cyberbullying, extortion, and interactions that encourage self-harm. Utilize parental controls and restrictions as appropriate.

Mississippi State Department of Health

- The MSDH should operationalize Fetal and Infant Mortality Review Programs throughout the state, notably in public health districts with the highest infant mortality rates. Other agencies or organizations charged with carrying out FIMR programs should assure they prioritize this work, partnering with MSDH to support them in doing so. This program will need funding and one paid organizer in each health district.
- Create a standing Infant Mortality Committee given authority and necessary administrative support to investigate deaths less than a year of age and report back to the Chairmen of the House Public Health and Human Services Committee and the Senate Public Health and Welfare Committee with recommendations to reduce infant mortality. The committee needs authority and funds to pay for chart reviews and investigations. The committee members should be appointed by the Mississippi State Department of Health State Health Officer/Executive Director as needed. The

committee should review circumstances of neonatal deaths that took place in hospitals with no Level 3 NICU or above and review neonatal deaths after transport to a Level 4 NICU to identify ways to improve care at the hospitals of origin.
- Provide access to cribs for families in need. Provide safe sleep education to individuals provided cribs.

Healthcare, Mental Health, and Child Welfare System and Providers

- Primary care providers must encourage infant caregivers about the importance of safe sleep despite the many challenges of caring for a newborn in a busy family.
  A mass media campaign discouraging bed sharing and a realistic approach to helping put babies to sleep should be implemented. The committee recommends targeted messaging to grandparents who are not only supportive caregivers to a newborn but who also have great influence over decisions made by a new family.
- Provide drowning education at well child visits. Advocate that supervision is the main protective factor against drowning deaths.
- Provide education/partnership with Department of Mental Health's "Shatter the Silence: Suicide Prevention Campaign."
- Explore a child and adolescent's immediate/local environment and interactions, as well as their social media, gaming, and other communication application presence, notably who they are interacting with (often they are not local), what are they searching for, and what content they are consistently accessing or exposed to as part of initial and follow-up assessments.
- Include safe sleep education to include swaddling techniques and positioning as part of prenatal/childbirth classes and discharge planning for new parents, as well as inclusion in foster parent training.
- Increase awareness about the need for prenatal visits and support groups. Highlight areas where prenatal support group exists, their success and where these support groups are not available.

School Administrators, Teachers, and Counselors

- Incorporating a curriculum on risky behaviors for new drivers in high school health courses (i.e., wearing a seatbelt, not riding with someone who has been drinking).
- Promote the use of crisis hotlines (988) to facilitate just-in-time support.
- Implement safety support planning for children and youth at-risk for suicide to include guidance on means restriction for parents and adult caregivers.
- Initiate and support a Lethal Means Campaign to increase the number of Mississippians that complete restriction to lethal means training or counseling. The goal is to support firearm owners in protecting youth and promote partnerships across systems. This recommendation is rooted on the identification of warning signs and safer storage during the suicidal crisis until stability is achieved may be helpful. The Mississippi

Suicide Prevention Plan (https://www.dmh.ms.gov/wp-content/uploads/2023/11/ms-suicide-plan-ms-suicide-plan_24-27.pdf) can serve as a resource for learning more.

- Assess the children and adolescent's immediate/local environment and interactions, as well as their social media, gaming, and other communication application presence, notably who they are interacting with (often they are not local), what are they searching for, and what content they are consistently accessing or exposed to.