Mississippi Child Death Review Panel

2018 Annual Report
A Review of 2016 Infant and Child Mortality

Office of Health Data and Research
Mississippi State Department of Health
March 2019

Submitted to:

Chairmen of the House Public Health and Human Services Committee

Senate Public Health and Welfare Committee

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Acknowledgements

This report reflects the hard work of the Mississippi Child Death Review Panel and those who respond directly to 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.

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Foreword

The premature death of a child is not only a terrible loss to the family but also to society. Our future is dependent on our children reaching maturity and undertaking the tasks to improve our communities.

Natural deaths from diseases are somewhat predictable and do occur, but, perhaps, the next generations of health care professionals will solve that problem. The premature death from a preventable cause, however, is a tragic loss. The purpose of the Mississippi Child Death Review Panel is to identify the causes of accidental and preventable child deaths and to recommend efforts to prevent these deaths.

This report is the end product of that effort for child deaths in Mississippi in 2016. It is the product of numerous dedicated professionals and agencies across the state, involving every county. Members of the Child Death Review Panel volunteer their time and effort to generate this report and recommendations to improve the lives of children of Mississippi.

Owen B. Evans, MD, Co-Chair
Appointee, Speaker of the House of Representatives

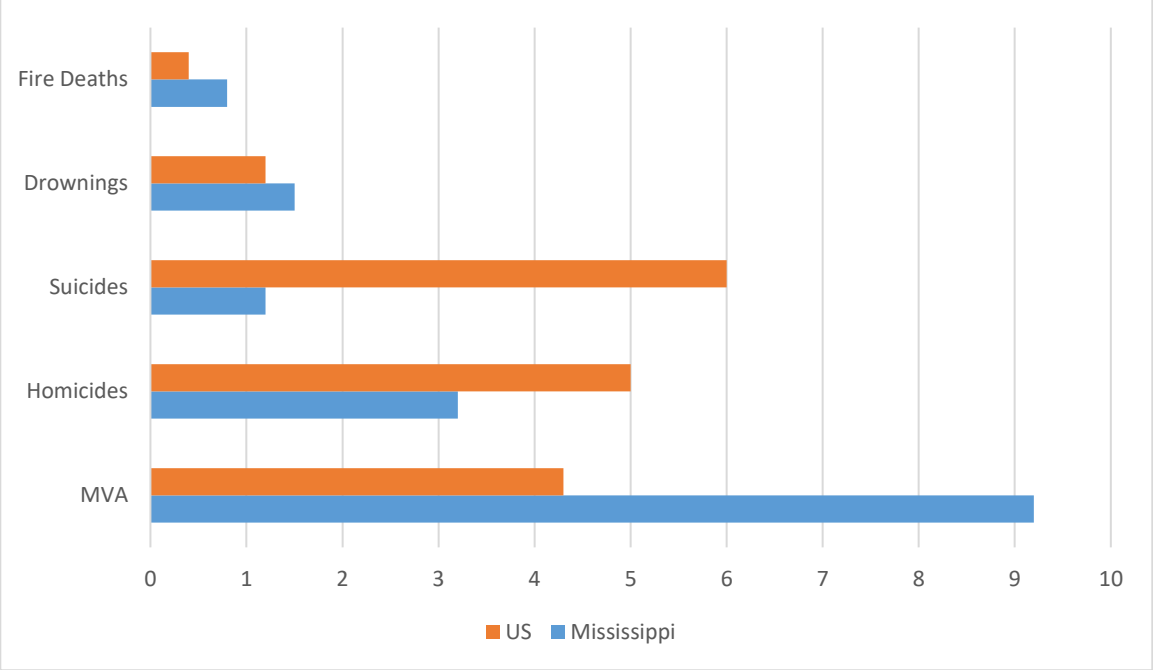
Tammy Peavy, Co-Chair
Mississippi State Fire Marshal's Office

Executive Summary

In Mississippi in 2016, 545 children under the age of 18 died during the months from January through December. The majority of deaths were children under the age of one, including newborn babies. Sixty percent of all children who died were infants, dying either of an underlying medical condition or due to a preventable injury. Two babies died of hypothermia; their homes were not sufficiently heated due to poverty. Children of all ages died most often in motor vehicle accidents. Every child's death diminishes our future potential as a state.

The purpose of the Mississippi Child Death Review Panel is to understand how and why these children died, with the goal of reducing child deaths in the future. We can see a clearer picture of which causes of child deaths are more prevalent for Mississippi children by comparing rates of death in the state to US rates. It is also important to compare death rates over time. For instance, the steep increase in motor vehicle deaths in 2015 (83 MVA deaths) did not continue into 2016 (63 MVA deaths).

The chart below compares rates per 100,000 for 2016 child deaths in Mississippi and nationwide.



Child Death Review Panel Members

State Medical Examiner	Kristy Simmons *(liaison)*
University of Mississippi Medical Center, Pathologist	Kristen Adams, MD
Appointee, Lieutenant Governor	Glenn Graves, MD
Appointee, Speaker of the House of Representatives	Owen B Evans, MD
State Coroners Association	Jim Slater
Mississippi Chapter of the American Academy of Pediatrics	Lynn Evans
Office of Vital Statistics	Judy Moulder Melanie Parks
Attorney General's Office	Ta'Shia Gordon
State Sheriff's Association	Sheriff K.C. Hamp Shontina Reed
Mississippi Police Chiefs Association	Chief William Thompson
Mississippi Child Protective Services	Tonya Rogillio Bonlitha Windham
Children's Advocacy Center	Hollie Jeffery
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Mississippi Children's Safe Center	Scott Benton, MD Amanda Sanford
Safe Kids Mississippi	Elizabeth Foster
Mississippi State Fire Marshal's Office	Tammy Peavy
Mississippi Supreme Courts	Justice Dawn Beam
Mississippi State Department of Health	Charlene Collier, MD Gerri Cannon-Smith, MD Monica Stinson Hazel Gaines
Child Death Review Coordinators	Victoria Walker Patricia Terry

Introduction

The Mississippi Child Death Review Panel (CDRP) was established by House Bill 560 becoming effective July 1, 2006. The intent of the legislation is to foster the reduction of infant and child mortality and morbidity in Mississippi and to improve the health status of infants and children. The review of these fatalities provide insight on factors that lead to the death, trends of behavior patterns, increases or decreases in the number of cause of death, and gaps in systems and policies that hinder the safety and wellbeing of Mississippi's children. Through the review process, the CDRP develops recommendations to on how to most effectively direct state resources to decrease infant and child deaths in Mississippi.

Child Death Review Process

The CDRP reviews all children deaths from birth to under 18 years old due to unnatural causes. This excludes child deaths due to cancer, congenital anomalies, prematurity, and communicable diseases. Causes of death categorized as "undetermined/unknown" are also reviewed if natural causes cannot be ruled out. Most cases reviewed are residents of Mississippi; however, non-Mississippi residents are reviewed if the incident and/or death occurred in Mississippi.

Child death cases are provided by the Mississippi State Department of Health Office of Vital Statistics by the calendar year. The cases are categorize by manner of death as accident, homicide, suicide, undetermined, pending investigation, or natural causes. Cases with cause of death indicated as injury, actions that lead directly to the death, or circumstances of accident that produced the fatal injury are selected for review. These selected cases largely fall into the following causes of death: Sudden Unexplained Infant Death (SUID), Sudden Infant Death Syndrome (SIDS), motor vehicle accidents, homicides, suicides, fire-related, drowning, and other. The category of "Other" includes incidents by which a small number of cases appeared in that calendar year.

Cases are prepped for panel review by gathering death investigation reports, SUIDI forms, autopsy reports, toxicology reports, police reports, and any other document that can clearly demonstrate the sequence of events that lead to the death. Each case is reviewed individually by a panel member who is responsible for presenting the case summary to the panel at large for further discussion. It is through this process the panel develops recommendations to decrease the number of child fatalities.

Lack of documentation is one of greatest hindrances to the efficiency of the CDRP. The CDRP depends on timely, accurate reports thoroughly completed to assess the circumstances that lead to the child's death. Without this information, the CDRP is not able to fully execute its duties.

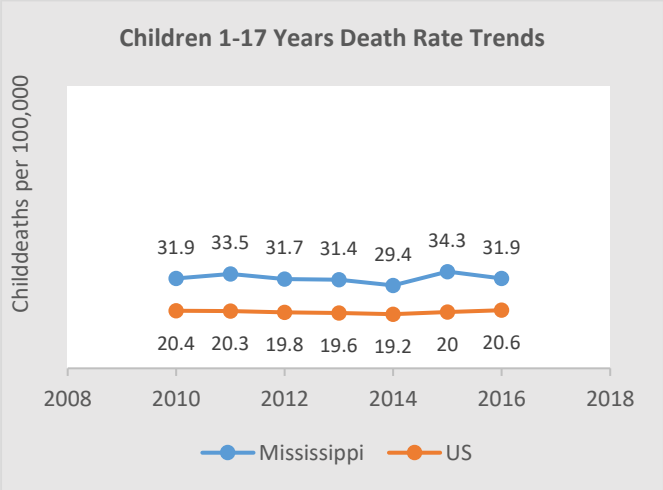
Purpose and Data Sources

This annual report provides an overview of the cases reviewed by the Child Death Review Panel and its recommendations. This report is composed using MS Vital Statistics Data and the National Fatality Review Case Reporting System. The National Fatality Review Case Reporting System assists the CDRP with tracking trends and risk behaviors in the cases reviewed.

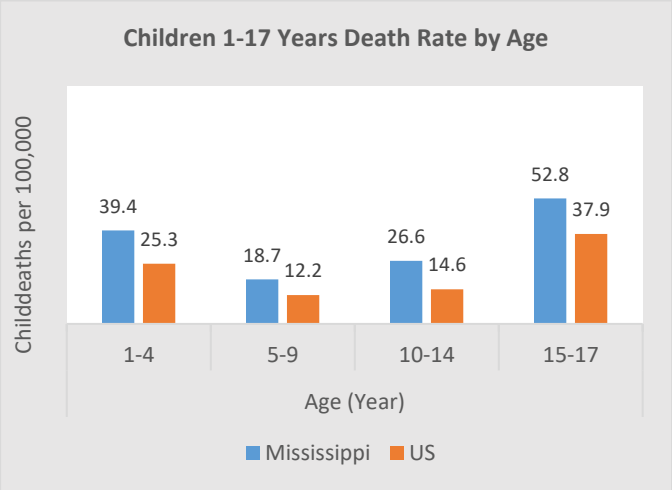
2016 Child and Infant Mortality

Child Mortality

In 2016, there were 545 child deaths that occurred from children under 18 years old, including 327 deaths among infants and 218 deaths among children 1 to under 18 years old. The overall child death rate has declined from 2007 to 2016 in both the US and Mississippi. However, child death rate in Mississippi is still higher than the national average. In both Mississippi and the US, child death rate is highest among children age 15-17 years followed by those age 1-4.

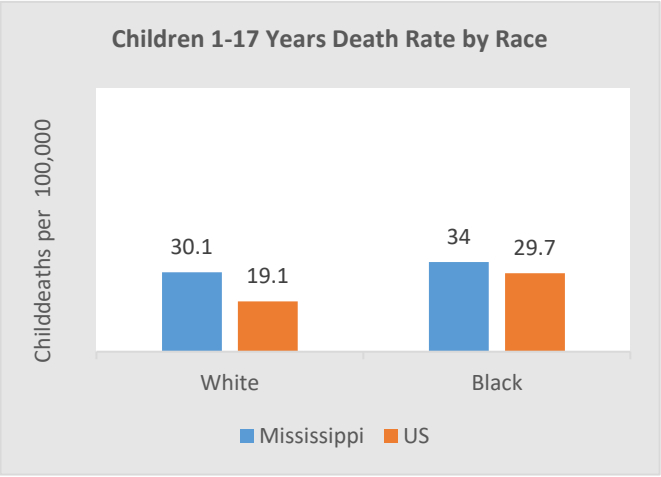


Data Sources: Mississippi Vital Statistics Data and CDC Wonder

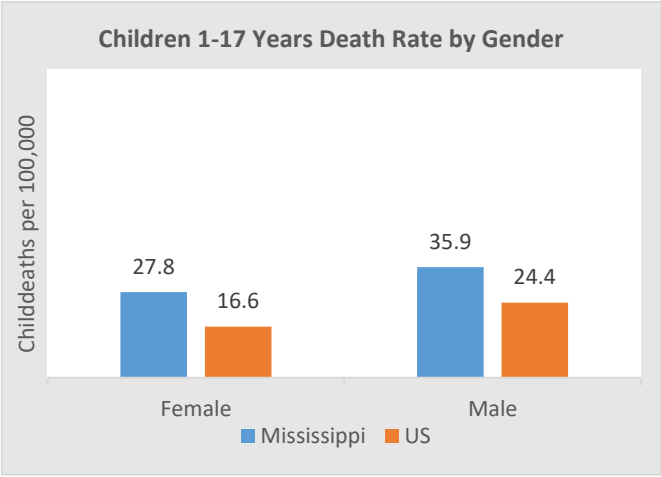


Data Sources: Mississippi Vital Statistics Data and CDC Wonder

The child death rate is higher among Blacks compared to Whites in both the US and Mississippi. The child mortality rate among males is higher than females in both the US and Mississippi.



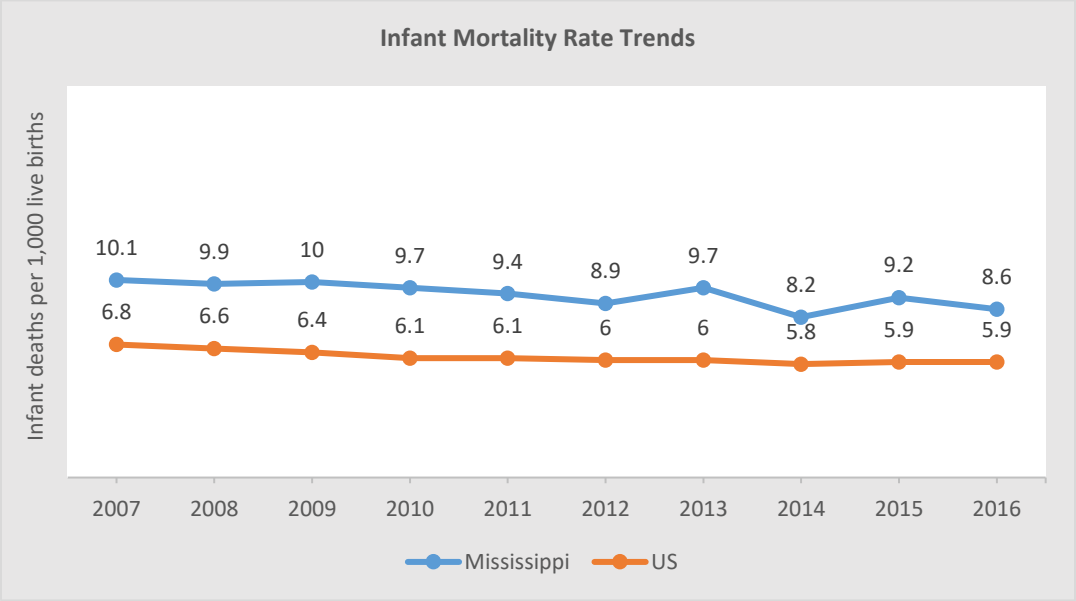
Data Sources: Mississippi Vital Statistics Data and CDC Wonder



Data Sources: Mississippi Vital Statistics Data and CDC Wonder

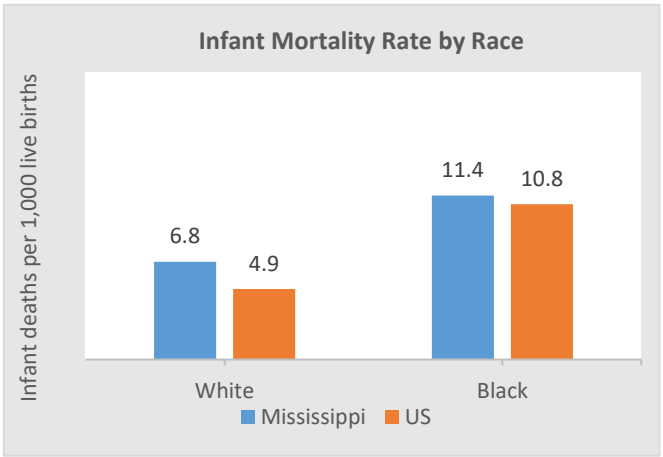
Infant Mortality

In 2016, there were 327 infant deaths that occurred from birth to 365 days of age. The overall infant mortality rate declined from 2007 to 2016 in both the US and Mississippi. However, the infant mortality rate in Mississippi is still higher than the national average.

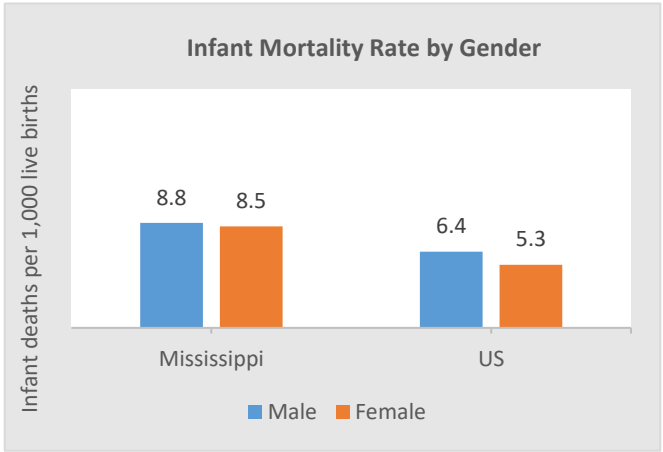


Data Sources: Mississippi Vital Statistics Data and CDC Wonder

The infant mortality rate among Blacks is almost twice compared to the Whites in both US and Mississippi. The infant mortality rate among males is slightly higher than females in both US and Mississippi.



Data Sources: Mississippi Vital Statistics Data and CDC Wonder

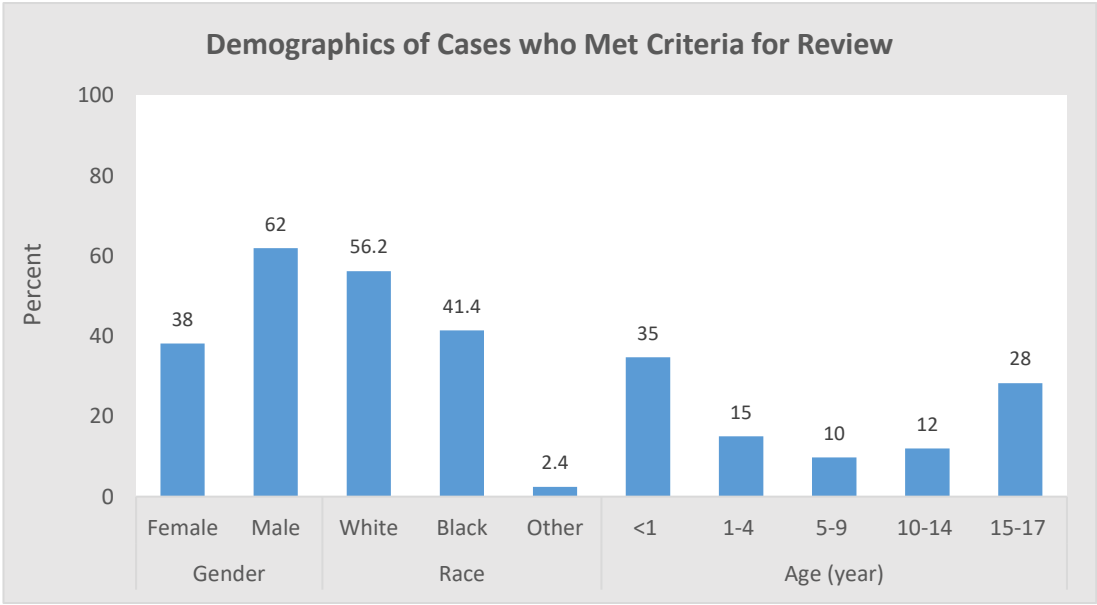


Data Sources: Mississippi Vital Statistics Data and CDC Wonder

Reviewed Case Findings

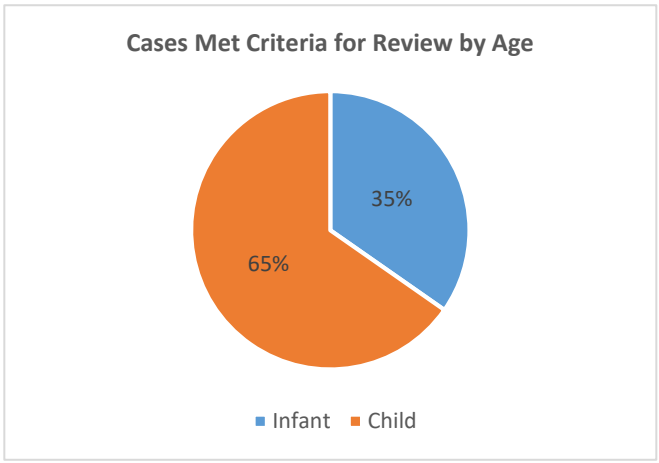
Demographics

Overall 173 death cases met the criteria for review by the Child Death Review Panel. Of those, 66 (38%) were female and 107 (62%) were male. By race and ethnicity, 95 (56.2%) were White, 70 (41.4%) Black, 4 (2.4%) were other races.



Data Sources: National Center for Fatality Review Case Reporting System and the Office of Vital Records, Mississippi State Department of Health

Infants accounted for 35% (60 cases) of all cases that met the criteria for review and 32% (30 cases) of all cases reviewed by the CDRP. Children aged 1-17 years accounted for 65% (113 cases) of all cases that met criteria for review and 68% (65 cases) of all cases reviewed by the CDRP.

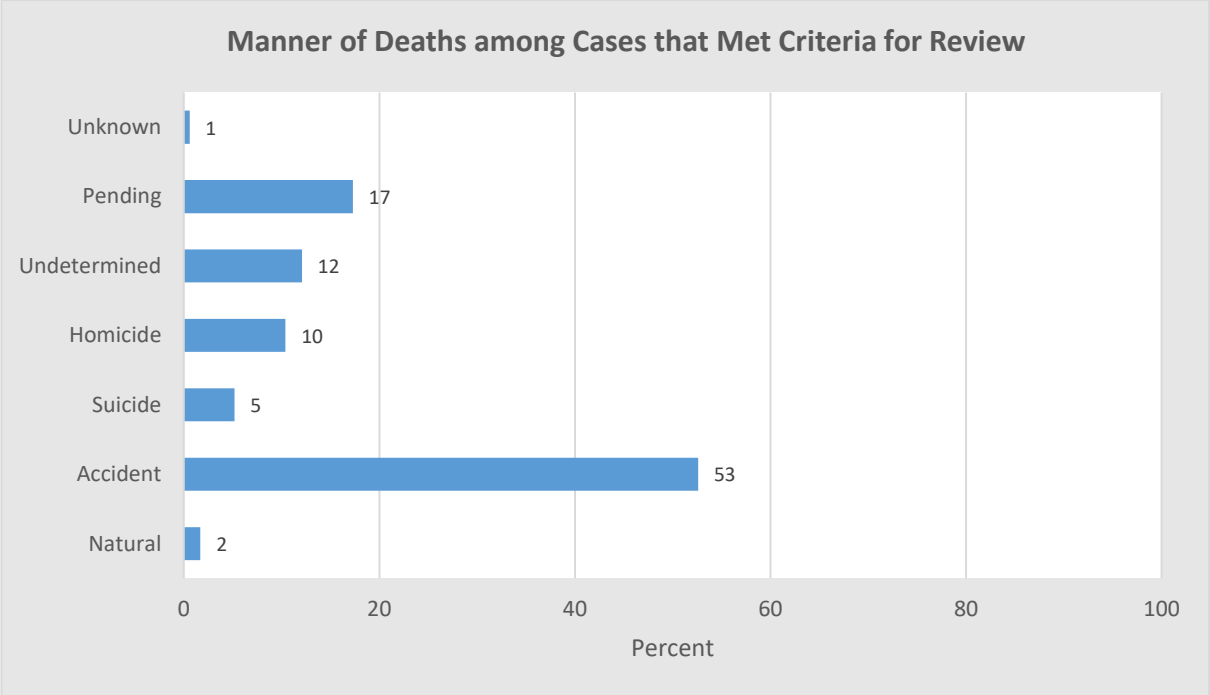


Data Sources: National Center for Fatality Review Case Reporting System and the Office of Vital Records, Mississippi State Department of Health

Manner and Cause of Death

By manner of death, of the 173 cases that met the criteria for review, 3 cases had natural death (2%), the majority or 91 cases (53%) had accident related death, 9 cases (5%) suicide, and 18 cases homicide (10%). The manner of death was undetermined for 21 cases (12%), 30 cases had pending manner of death (17%), and 1 case had unknown manner of death (1%).

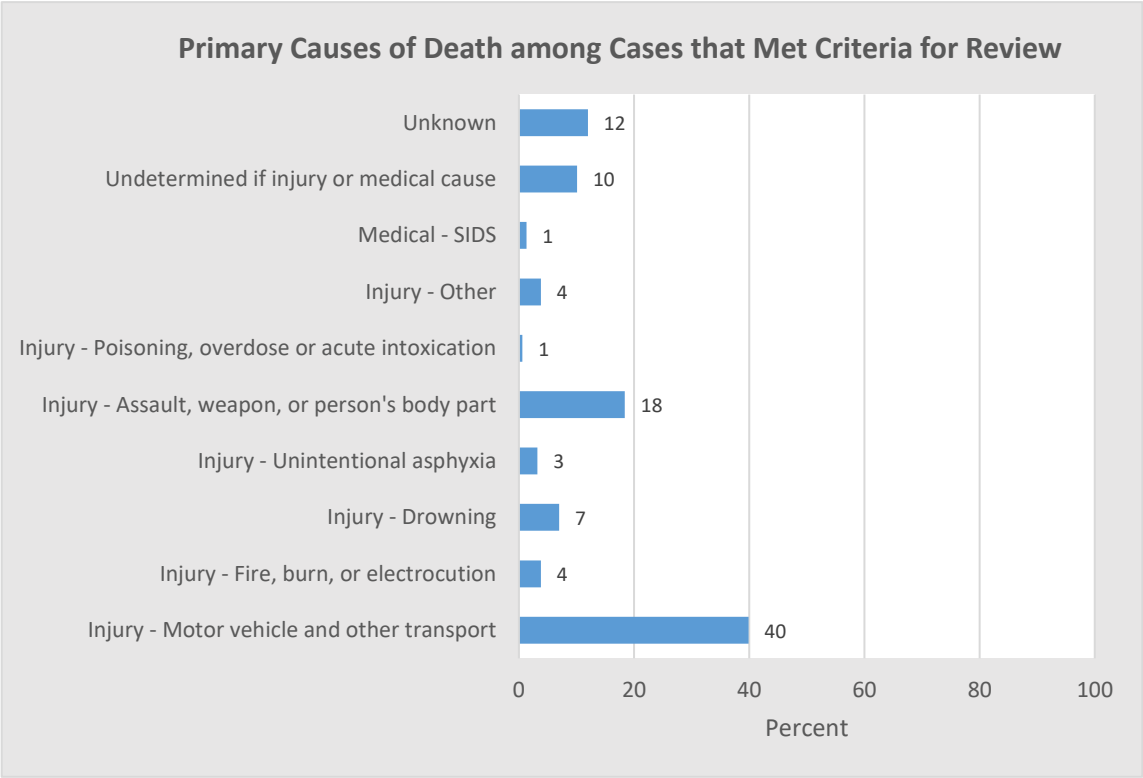
The CDRP reviewed 95 of the 173 cases. Of those 95 cases, 1 case had natural death (1%), the majority or 59 cases (62%) had accident related death, 4 cases (4%) suicide, and 8 cases homicide (8%). The manner of death was undetermined for 13 cases (14%), and 10 cases had pending manner of death (11%).



Data Sources: National Center for Fatality Review Case Reporting System and the Office of Vital Records, Mississippi State Department of Health

By the cause of death, 63 cases (40%) were MVA and other transport-related death, 6 fire-related cases (4%), 11 drowning cases (7%), 5 unintentional asphyxia (3%), 29 assault-related cases (18%), 1 case (1%) poisoning-related death, and 2 SIDS cases (1%). There were 6 cases (4%) had other injuries causes, and 19 cases had unknown cause of death (12%). There were 16 cases (10%) undetermined if injury or medical cause and 15 cases had missing data on causes of death.

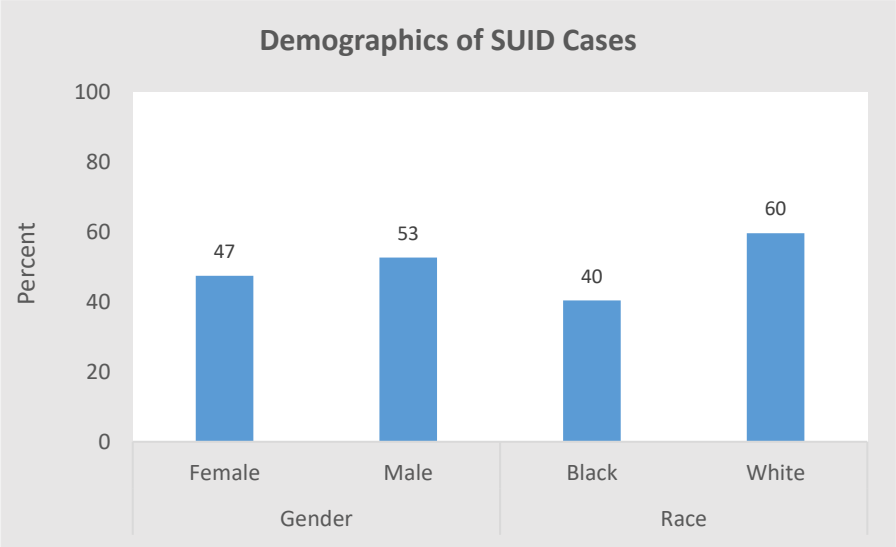
Of the 95 cases the CDRP reviewed, 37 cases (41%) were MVA and other transport-related death, 6 fire-related cases (7%), 8 drowning cases (9%), 3 unintentional asphyxia (3%), 11 assault-related cases (12%), 1 case (1%) poisoning-related death, and no SIDS cases. There were 5 cases (6%) had other injuries causes, and 7 cases (8%) had unknown cause of death. There were 13 cases (14%) undetermined if injury or medical cause and 4 cases had missing data on causes of death.



Data Sources: National Center for Fatality Review Case Reporting System and the Office of Vital Records, Mississippi State Department of Health

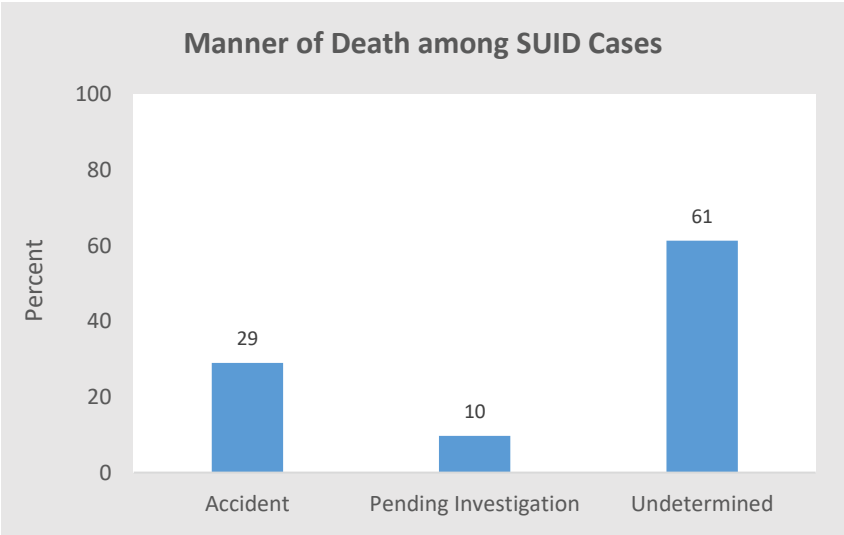
Infant Deaths: Sudden Unexpected Infant Death and Sudden Infant Death Syndrome

In 2016, there were 57 infant deaths that were categorized as sudden unexpected infant death (SUID). SUID is a term used to describe the sudden and unexpected death of an infant less than 1 year old in which the cause was not obvious before investigation. Many of these deaths occur during sleep or in an infant's sleep environment. Of the 57 cases, 47% (27) were female, 53% (30) male, 40% (23) were Black and 60% (34) were White.



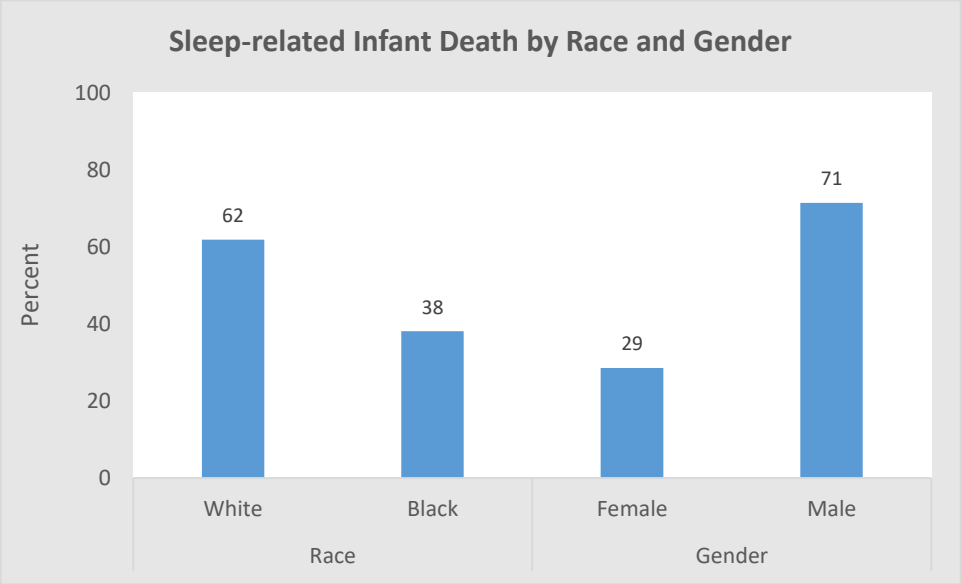
Data Source: Office of Vital Records, Mississippi State Department of Health

By the manner of death, 29% (9 cases) were accident related, 10% (3 cases) had pending investigation, and 61% (19 cases) were undetermined. Of the 57 SUID cases, 26 cases had missing information on manner of death. The CDRP reviewed 27 of the SUID cases with the majority of them being sleep related deaths (16 cases or 59%).

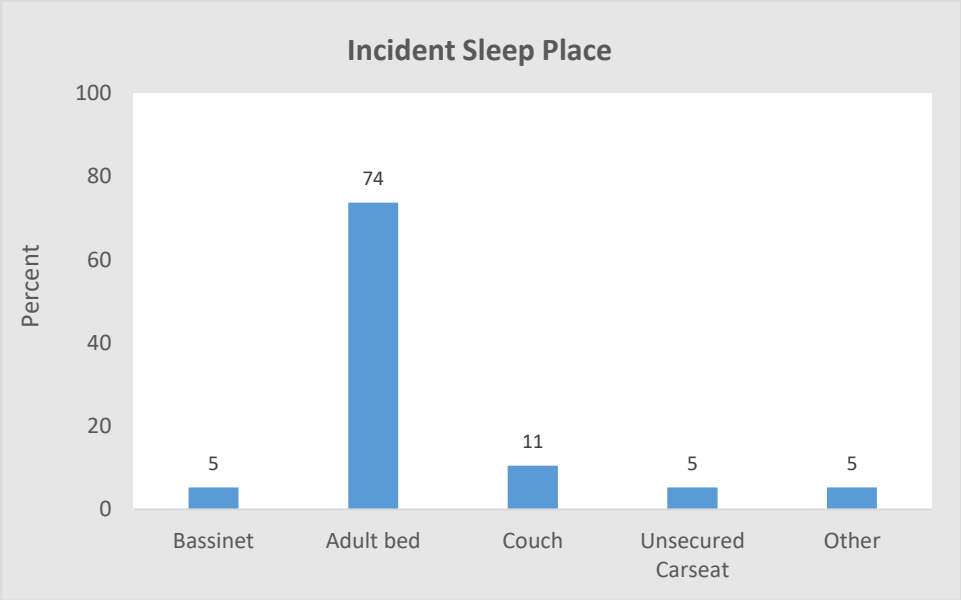


Data Source: Office of Vital Records, Mississippi State Department of Health

Of the 57 SUID cases, there were 21 sleep-related deaths. Of those, 13 (62%) were White, and 8 cases (38%) were Black, 6 (29%) female and 15 (71%) were males. The majority of deaths occurred in an adult bed (14 cases or 74%). About 87% were co-sleeping with another person when the death occurred.



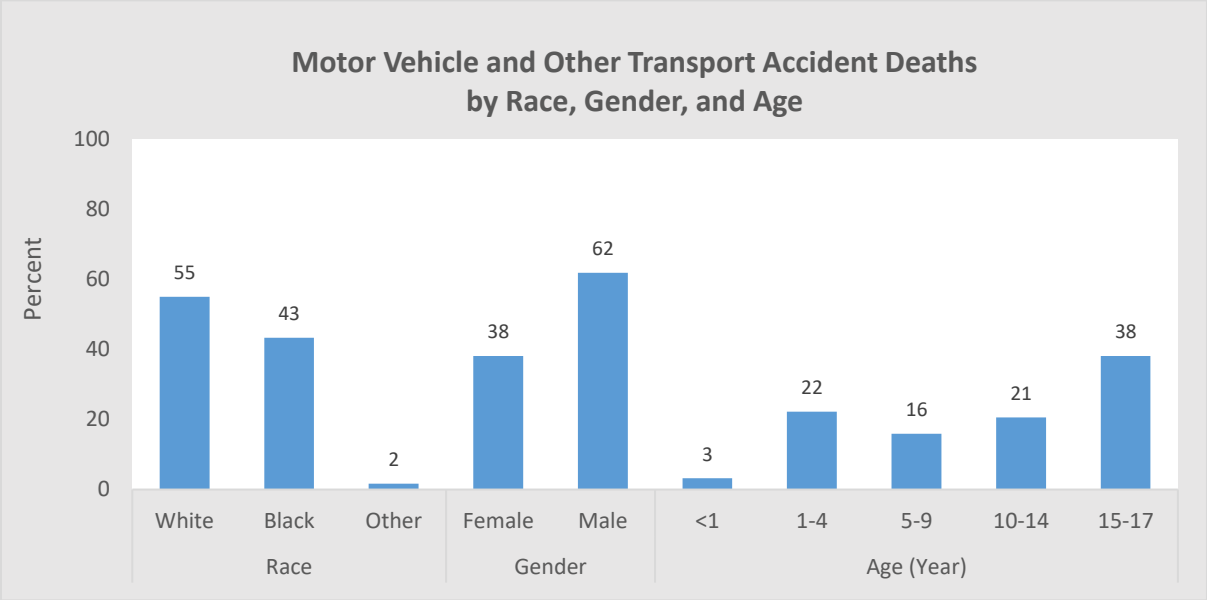
Data Source: National Center for Fatality Review Case Reporting System



Data Source: National Center for Fatality Review Case Reporting System

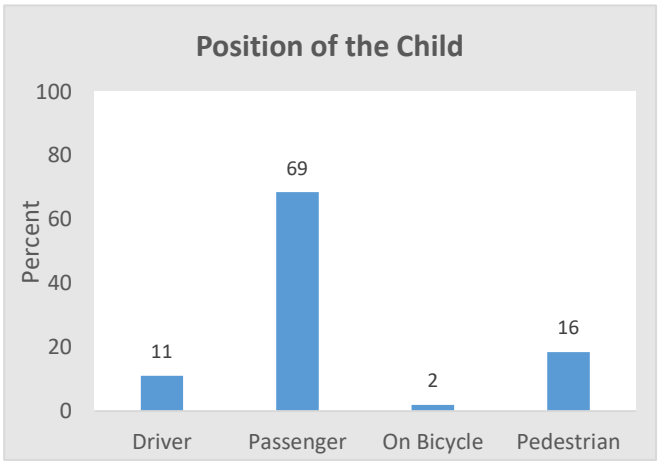
Motor Vehicle and Other Transport Accidents

There were 63 motor vehicle and transport-related deaths in 2016. Of those, 33 (55%) were White, and 26 (43%) were Black, 1 has been identified as other race (2%). By gender, 24 (38%) were female and 39 (62%) were males. By age, 2 cases (3%) were infant, 14 cases (22%) were aged 1-4 years, 10 cases (16%) were aged 5-9 years, and 13 cases (21%) were aged 10-14 years, and 24 cases (38%) were aged 15-17 years.



Data Source: National Center for Fatality Review Case Reporting System

The majority of deaths were passenger, followed by pedestrians. The majority of deaths occurred on the highway and involved a child in a vehicle that struck another vehicle (15 cases or 28%) or struck a person or object (13 cases or 32%). Of the motor vehicle and transport-related accidents, 6 cases (18 %) did not have airbags deploy, 12 cases (33%) did not use lap belt, and 12 cases (32%) did not use shoulder belt.



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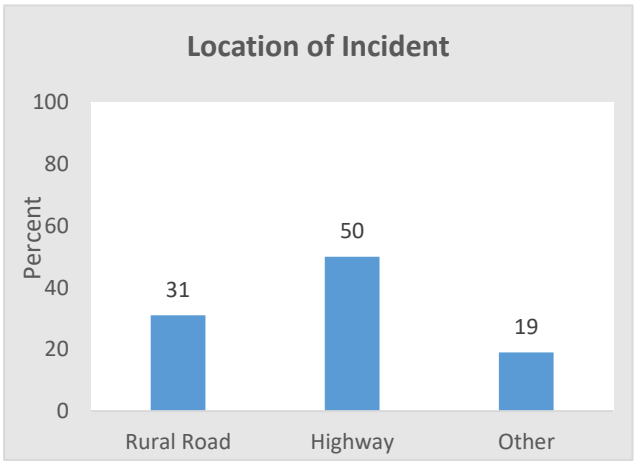
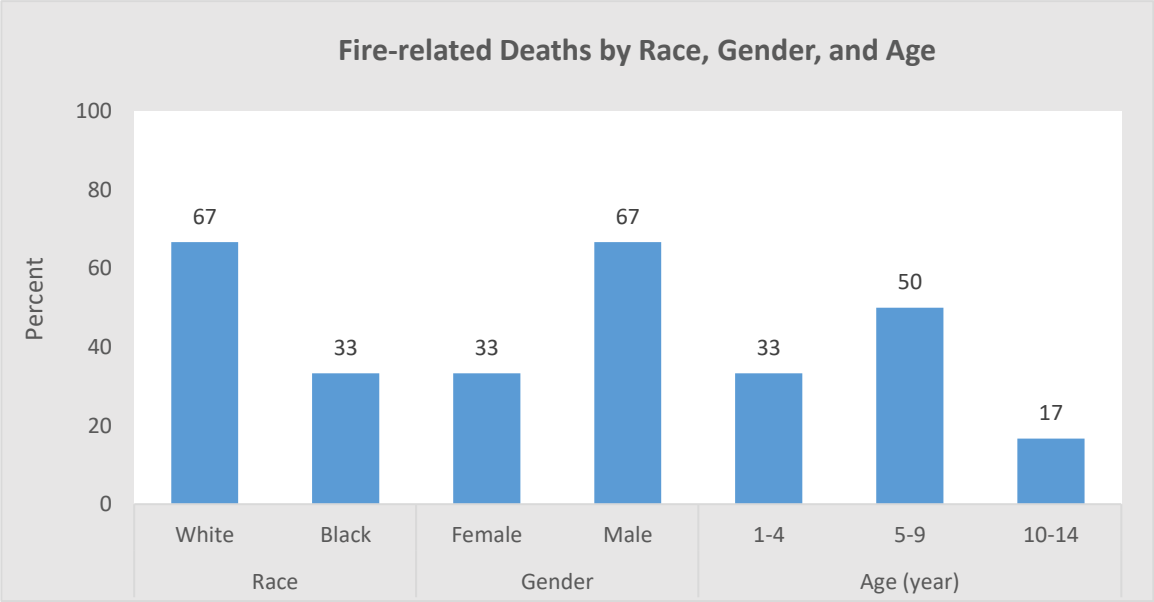


Data Source: National Center for Fatality Review Case Reporting System

Fire, Burn, or Electrocution

There were 6 fire-related deaths in 2016. All fire, burn, or electrocution-related deaths occurred in the age group between 1 and 14 years. Of those, 4 (67%) were White and 2 (33%) were Black, and 2 (33%) were female and 4 (67%) were males. There were 2 cases (33%) aged 1-4 years, 3 cases (50%) aged 5-9 years, and 1 case (17%) aged 10-14 years. Children 5-9 years had the highest percentage of fire-related deaths.

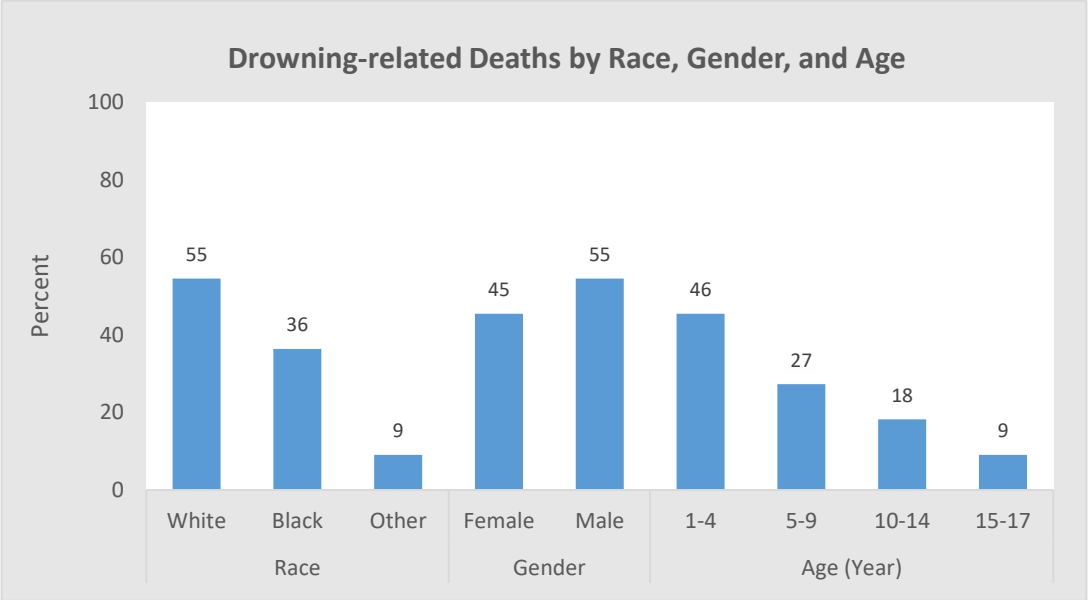


Data Source: National Center for Fatality Review Case Reporting System

Of the 6 fire-deaths, candles were the fire source of 2 death cases, and space heaters were the fire source of 3 death cases. The fire source of one death case was unknown. For 2 death cases, there was no smoke alarm; the presence of a smoke alarm was unknown for the rest.

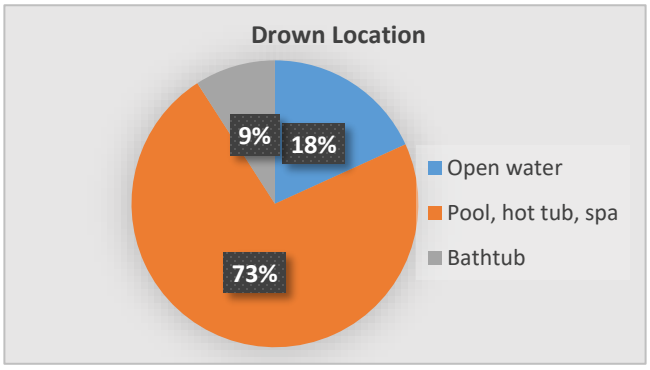
Drowning

There were 11 drowning-related deaths in 2016. Of those, 6 (55%) were White and 4 (36%) were Black, and 1 case (9%) was identified as other race. By gender 5 cases (45%) female and 6 cases (55%) were males. By age 5 cases (46%) were aged 1-4 years, 3 cases (27%) were aged 5-9 years, and 2 cases (18%) were aged 10-14 years, and 1 case (9%) was aged 15-17 years. All drowning-related deaths occurred in the age group between 1 and 17 years. Children 1-4 years had the highest percentage of drowning-related deaths.



Data Source: National Center for Fatality Review Case Reporting System

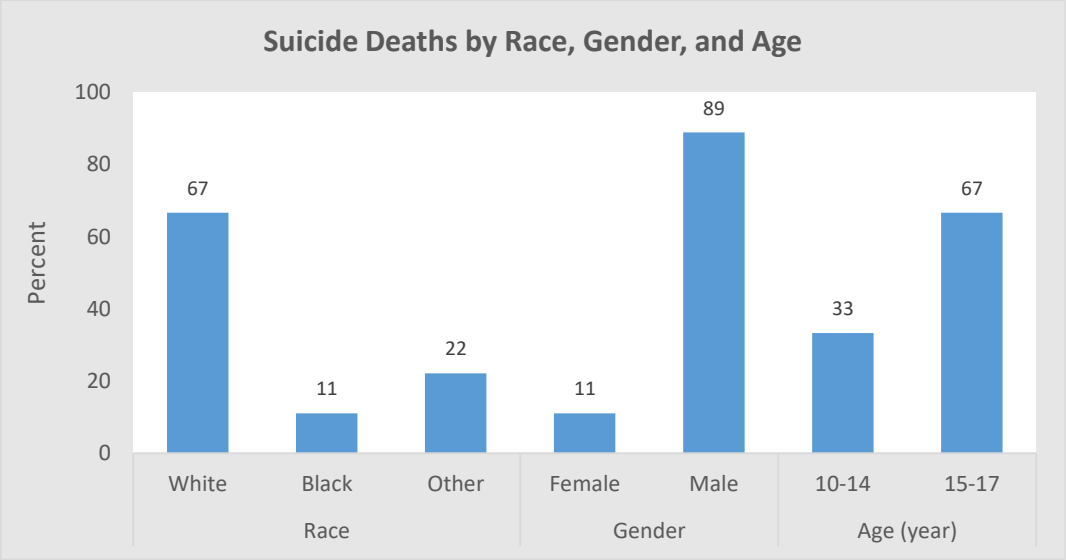
The majority of drowning-related deaths occurred in a pool, hot tub, or spa (73% or 8 cases), followed by open water (18% or 2 cases).



Data Source: National Center for Fatality Review Case Reporting System

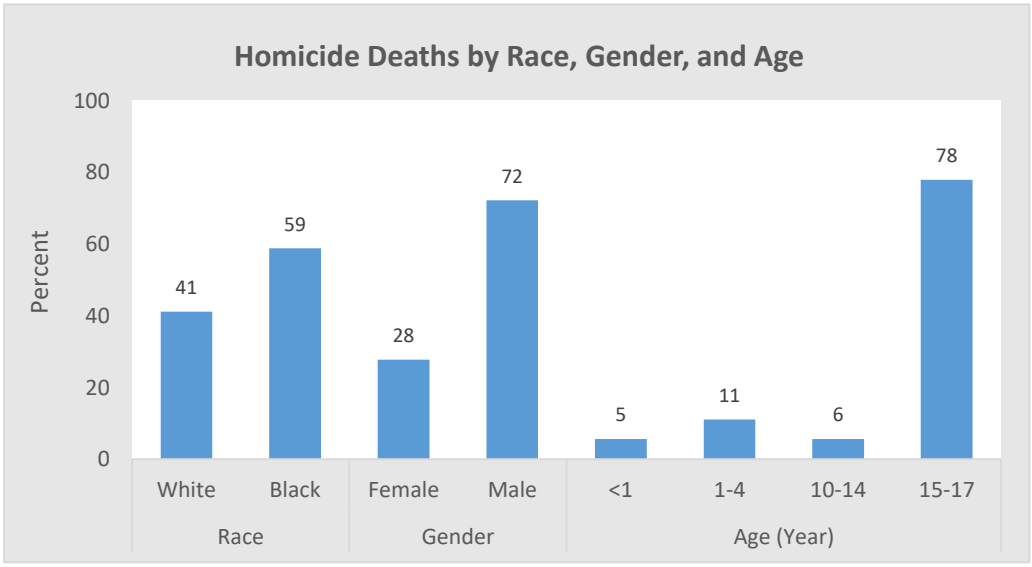
Suicide, Homicide, and Firearm-related Deaths

There were 9 suicide deaths in 2016. Of those, 6 (67%) were White, 1 (11%) were Black, 2 (22%) were identified as other race. By gender, 1 case (11%) female and 8 cases (89%) were males. All suicide deaths occurred in the age group between 10 and 17 years. There were 3 cases (33%) aged 10-14 years, and 6 cases (67%) were aged 15-17 years.



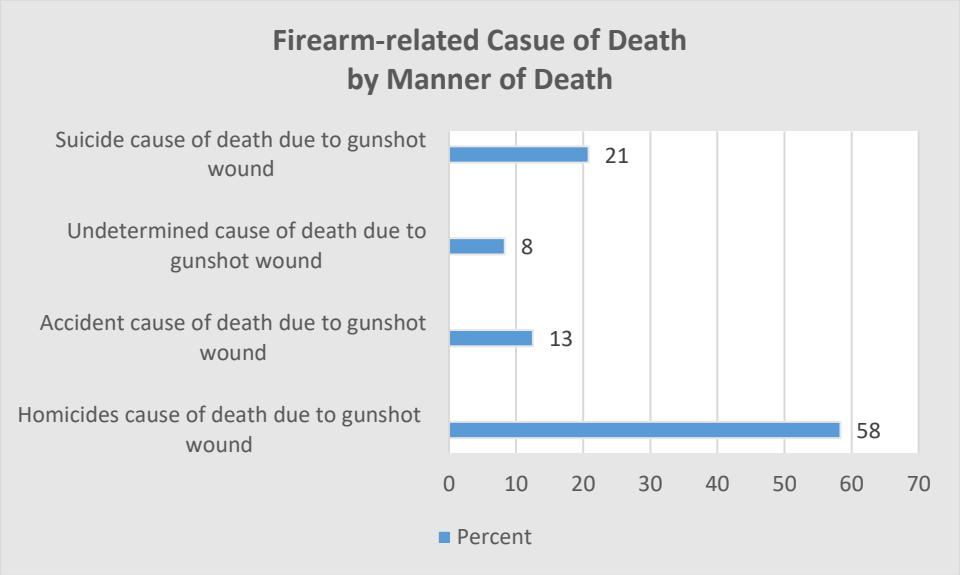
Data Source: National Center for Fatality Review Case Reporting System

There were 18 homicide deaths in 2016. Of those, 7 (41%) were White, and 10 cases (59%) were Black, and 5 cases (28%) female and 13 cases (72%) were male. There was one infant death; the rest occurred in the age group between 1 and 17 years. There were 2 cases (11%) aged 1-4 years, 1 case (6%) was aged 10-14 years, and 14 cases (78%) were aged 15-17 years.



Data Source: National Center for Fatality Review Case Reporting System

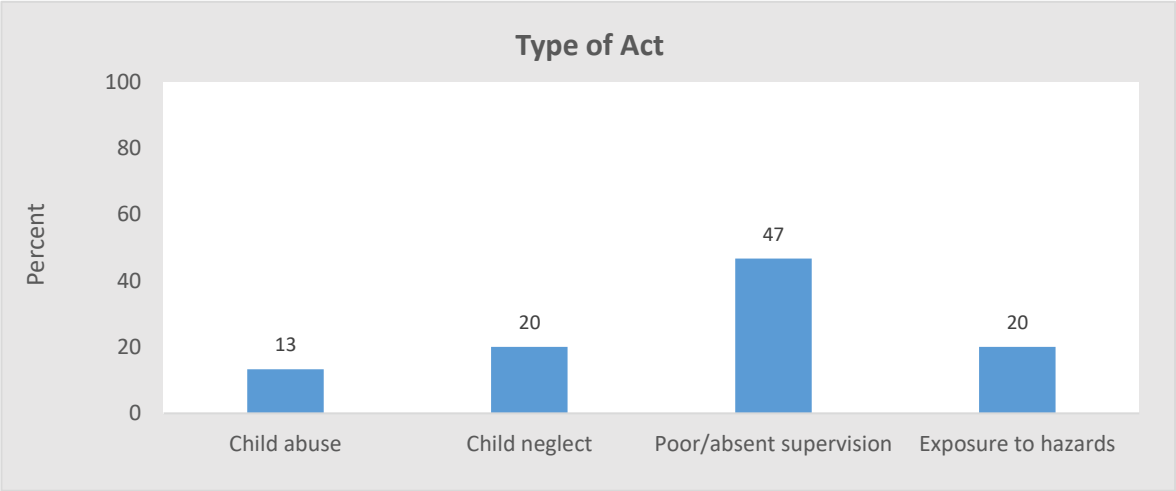
Among suicide, homicide, accident, and undetermined manner of deaths, there were 24 cases that had causes of death related to firearms. There were 3 cases (13%) with the manner of death ruled as accidents, 2 cases (8%) with the manner of death being as undetermined, 14 (58%) cases with the manner of death being homicide, and 5 cases (21%) with the manner of death being ruled as suicide. Of the 5 cases of accident and undetermined manner of death caused by firearm, all were male with 3 cases (60%) were Black and 2 cases (40%) were White. By age, 1 case (20%) was aged 1-4 years, 2 cases (40%) were aged 10-14 years old, and 2 cases (40%) were aged 15-17 years old.



Data Source: Office of Vital Records, Mississippi State Department of Health

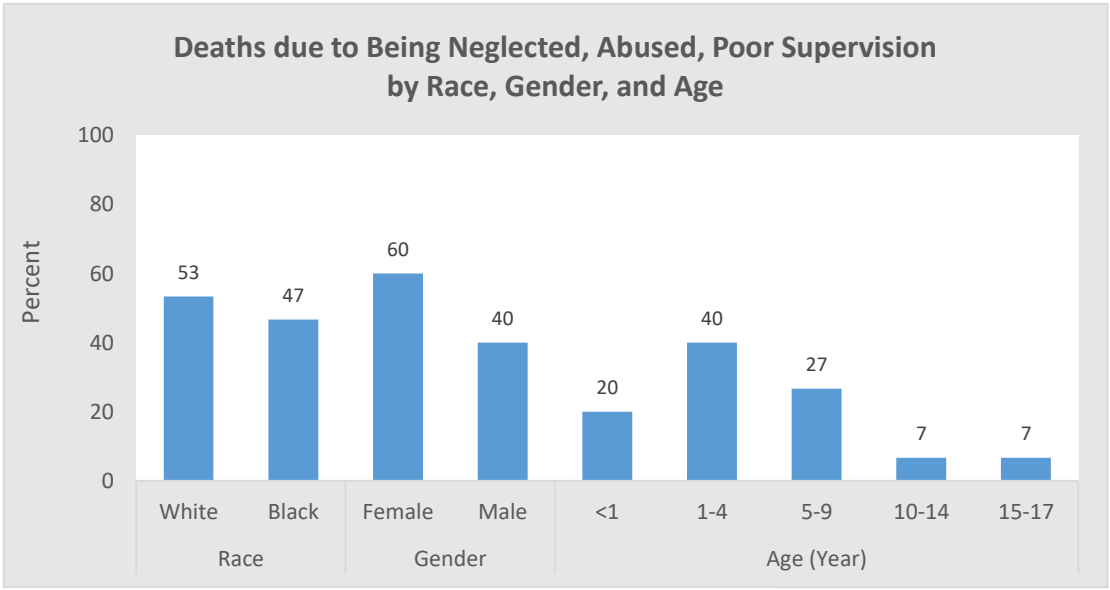
Abuse, Neglect, and Poor Supervision

There were 15 deaths associated with abuse, neglect, poor/absent supervision, and exposure to hazards in 2016. There were 2 cases (13%) attributed to abuse, 3 cases (20%) were attributed to neglect, 7 cases (47%) were due to poor/absent supervision, and 3 case (20%) were due to exposure to hazards (20% or 3 cases). By manner of death, 1 case (7%) was natural, 2 cases (13%) were undetermined, 3 cases (20%) were homicide, and 9 cases (60%) were accident.



Data Source: National Center for Fatality Review Case Reporting System

Of those, 8 cases (53%) were White, and 7 cases (47%) were Black, and 9 cases (60%) were female and 6 cases (40%) were males. There were 3 infant deaths (20%); the rest occurred in the age group between 1 and 17 years. There were 6 cases (40%) aged 1-4 years, 4 cases (27%) aged 5-9 years, 1 case (7%) aged 10-14 years, and 1 case (7%) aged 15-17 years.



Data Source: National Center for Fatality Review Case Reporting System

Recommendations and Prevention Efforts

The Child Death Review Panel makes the following recommendations to the Chairmen of the House Public Health and Human Services Committee and the Senate Public Health and Welfare Committee.

- Promote safe sleep education to parents and caregivers by working with birthing hospitals and childcare centers.
- Increase public awareness on restraint violations in motor vehicles by: 1) making it known passengers can be fined for restraint violations and 2) including questions about seat belt usage and restraint violations on driver's test.
- Increase fines for restraint violations to $50.
- Better signage and lights at construction zones for motor vehicle operators.
- A request for a representative from the Mississippi Department of Mental Health appointed to the Child Death Review Panel.
- Additional laws around reporting from schools of bullying that potentially can lead to suicide attempts.
- Additional supporting documents for suicide cases. The Child Death Review Panel request school records for at-risk patterns noted.
- The Child Death Review Panel requests that all death investigation reports involving a gun include a question about the owner of the gun and where the gun is stored.
- Increase public awareness about life jacket usage for those 12 and under on personal watercraft.
- A comprehensive state law on smoke alarms in rental properties and sprinklers in apartment complexes.

MISSISSIPPI STATE DEPARTMENT OF HEALTH