

# Ohio Child Fatality Review Eighteenth Annual Report

This report includes reviews of child deaths that occurred in 2017 and aggregate reviews for 2013-2017.

## MISSION

To reduce the incidence of preventable child deaths in Ohio

## SUBMITTED TO:

John R. Kasich, Governor, State of Ohio

Ryan Smith, Speaker, Ohio House of Representatives

Larry Obhof, President, Ohio Senate

Fred Strahorn, Minority Leader, Ohio House of Representatives

Kenny Yuko, Minority Leader, Ohio Senate

Ohio Child Fatality Review Boards

Ohio Family and Children First Councils

## SUBMITTED BY

Ohio Department of Health

Ohio Children's Trust Fund

## Table of Contents

<b>Dedication</b>	2	Reviews by Age Group	47
		Infant Deaths	48
<b>Acknowledgments</b>	2	Infant Deaths Due to Prematurity	57
<b>Letter from the Director</b>	3	Deaths to Children 1 to 4 Years Old	61
<b>Introduction</b>	4	Deaths to Children 5 to 9 Years Old	65
Preventability	5	Deaths to Children 10 to 14 Years Old	68
<b>Limitations</b>	10	Deaths to Children 15 to 17 Years Old	71
<b>Reviews of 2017 Deaths</b>	11		
Summary of Reviews	12	<b>Reviews by Manner of Death</b>	75
Reviews by Demographic Characteristics	12	Homicides	76
Reviews by Age, Race, Gender	12	Suicides	79
Reviews by Manner of Death	13	Accidents	83
Reviews by Cause of Death	13	<b>Reviews by Cause of Death</b>	84
Deaths from Medical Causes	15	Asphyxia	85
Deaths from External Causes	17	Vehicular Injuries	87
<b>Reviews of 2013-2017 Deaths</b>	19	Weapon Injuries	92
2013-2017 Key Findings	20	Drowning	94
Summary of Reviews	23	Poisoning	96
Reviews by Age, Race, Ethnicity, Gender, County Type	23	Fire, Burn, Electrocution	98
Reviews by Manner of Death	24	<b>Action Items from Reviews</b>	99
Reviews by Cause of Death	24	<b>Conclusion</b>	100
Reviews by Medical Causes	25	<b>Appendix I: Overview of Ohio Child Fatality Review Program</b>	101
Reviews by External Causes	25	<b>Appendix II: Fetal Infant Mortality Review (FIMR)</b>	103
Reviews of Special Categories of Deaths	26	<b>Appendix III: 2017 Local Child Fatality Review Board Chairs</b>	105
Child Abuse and Neglect, All Ages	26	<b>Appendix IV: Preventability Tables</b>	110
Infant Sleep-Related Deaths	31	<b>Appendix V: Ohio County Type Designations</b>	114
Birth Defects, All Ages	45	<b>Appendix VI: Report to the Governor July 1, 2018 on Infant Safe Sleep</b>	115
		<b>Appendix VII: Glossary</b>	121
		<b>Appendix VIII: References</b>	122

## **DEDICATION**

---

Each child's death represents a tragic loss for the family, as well as the community. Child fatality review depends on committed professionals in every community throughout Ohio. With a desire to protect and improve the lives of young Ohioans, they have committed themselves to gaining a better understanding of how and why children die. With deepest sympathy, we respectfully dedicate this report to the memory of these children and to their families.

## **ACKNOWLEDGEMENTS**

---

This report is made possible by the support and dedication of more than 500 community leaders who serve on Child Fatality Review (CFR) boards throughout Ohio. Acknowledging that the death of a child is a community problem, members of the CFR boards step outside zones of personal comfort to examine all of the circumstances that lead to child deaths. We thank them for having the courage to use their professional expertise to work toward preventing future child deaths.

We also extend our thanks to the Ohio Child Fatality Review Advisory Committee members. Their input and support in directing the development of CFR in Ohio has led to continued program improvements.

We acknowledge the contributions of other agencies in facilitating the CFR program including the Ohio Children's Trust Fund, state and local vital statistics registrars, and the National Center for Fatality Review and Prevention.

The collaborative efforts of all of these individuals and their organizations ensure Ohio children can look forward to a safer, healthier future.

Dear Friends of Ohio Children:

We respectfully present the Eighteenth Annual Ohio Child Fatality Review (CFR) report. Established by the Ohio General Assembly in July 2000, the CFR program examines the factors contributing to children's deaths in Ohio. It is our hope that this report will lead to a reduction in the incidence of untimely and preventable deaths of Ohio children through the use of this data to inform interventions.

This report contains comprehensive summary data pertaining to child deaths during the five-year period of 2013 to 2017. In addition, it outlines the work undertaken by local CFR boards and state agencies to decrease preventable child deaths.

The CFR process begins at the local level, where local boards consisting of professionals from public health, recovery services, children's services, law enforcement and health care review the circumstances surrounding every child death in their county. It is through their collective expertise and collaborative assessment that preventive solutions and initiatives are developed for use throughout the state.

It is incumbent upon everyone to work together to prevent untimely child deaths in Ohio by:

- Assisting and supporting families to achieve healthy parenting practices through education and resources;
- Educating families, children, neighbors, organizations and communities about preventable child deaths;
- Empowering individuals to intervene in situations where violence and neglect harm children;
- Encouraging community and individual involvement in recognizing and preventing risk factors that contribute to child deaths; and
- Improving systems of care so all children receive optimal health care before and after birth and throughout their lives.

We encourage you to utilize the information presented in this report and to share it with others who can influence changes to benefit children and eliminate preventable child deaths. We hope that you will collaborate with local child fatality review boards and make a commitment to create a safer and healthier Ohio for our children.

Sincerely,



Lance D. Himes, JD  
Director  
Ohio Department of Health



## INTRODUCTION

---

The mission of CFR is to reduce the incidence of preventable child deaths in Ohio. Through the process of local reviews, communities and the state acknowledge that the circumstances involved in most child deaths are too complex and multidimensional for responsibility to rest with a single individual or agency.

The 2018 Child Fatality Review (CFR) Annual Report presents information from the reviews of deaths that occurred in 2017, as well as a summary of the data for deaths that occurred from 2013 through 2017. Child death reviews from 2017 show the most recent manners and causes of deaths while the deaths from 2013 – 2017 show trends over a five-year period.

Every child's death is a tragic loss for the family and community. Especially tragic is the child death that could have been prevented. Through careful review of these deaths, we are better prepared to prevent future deaths.

The Ohio CFR program was established in 2000 by the Ohio General Assembly in response to the need to better understand why children die. The law mandates CFR boards in each of Ohio's counties (or regions) to review the deaths of all children younger than 18 years of age. Ohio's CFR boards are composed of multidisciplinary groups of community leaders. Their careful review process results in a thorough description of the factors related to child deaths.

CFR does make a difference. In addition to the prevention initiatives, local and state initiatives impacted by the CFR process are highlighted throughout the report. These collaborations, partnerships and activities are proof that communities are aware that knowledge of the facts about a child death is not sufficient to prevent future deaths. Many deaths seem to happen "out of the blue," but as the facts about the circumstances of all the deaths are compiled and analyzed, certain risks to children become clear, including:

- Prematurity, which accounts for nearly half of all infant deaths.
- Unsafe sleep environments, which place healthy infants at risk of sudden death.
- Riding unrestrained in vehicles, which puts children at greater risk of death in the event of a crash.
- Racial disparity that results in black children dying from homicide at more than three times the expected rate.

The knowledge gained from the reviews must inform actions and reactions to recognize, intercept and intercede on behalf of Ohio's children.

The CFR process has raised the collective awareness of all participants and has led to a clearer understanding of agency responsibilities and opportunities for collaboration on all efforts addressing child health and safety. It is only through continued collaborative work that we can hope to protect the health and lives of Ohio's children.

## PREVENTABILITY FINDINGS IN 2013 - 2017 DEATH REVIEWS

---

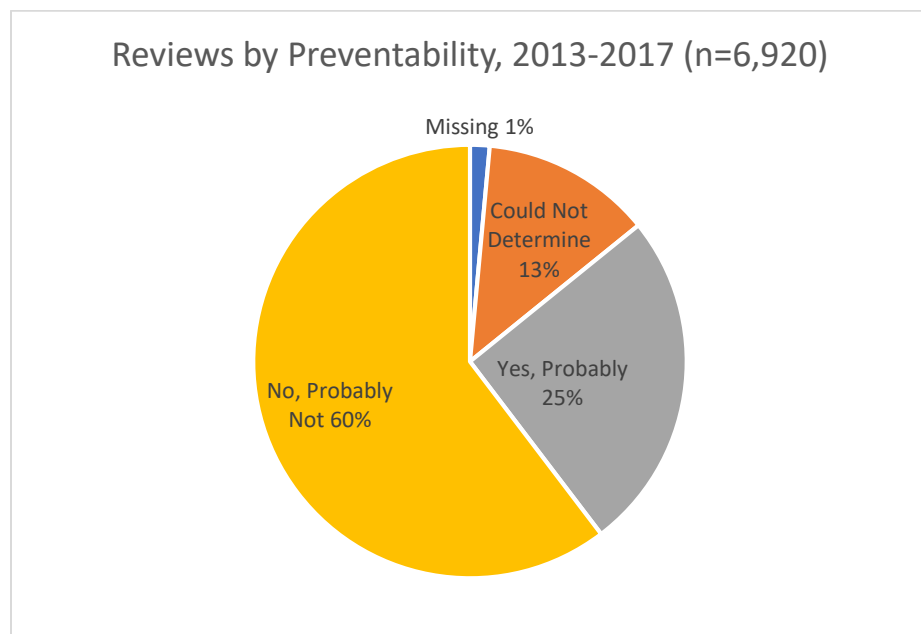
The most important reason to review child deaths is to improve the health and safety of children and to reduce the incidence of preventable child deaths in Ohio. A child's death is considered preventable if the community or an individual could reasonably have changed the circumstances that led to the death. The review process helps CFR boards focus on a wide spectrum of factors that may have caused or contributed to the death or made the child more susceptible to harm. After these factors are identified the board must decide which, if any, of the factors could reasonably have been changed. Cases are then deemed "probably preventable" or "probably not preventable."

Even if a particular case is deemed "probably not preventable," the CFR process is valuable in identifying gaps in care, systemic service delivery issues or community environmental factors that contribute to less than optimal quality of life for vulnerable individuals. For this reason, many local boards make recommendations and initiate changes even when a particular death is not deemed preventable.

Findings are used to generate recommendations for improved investigations, service delivery, changes in systems, local ordinance or state legislation or community or state prevention initiatives. These systems improvements and prevention programming are the ultimate goal of a CFR process that is based on the public health model, to keep children safe, healthy and protected.

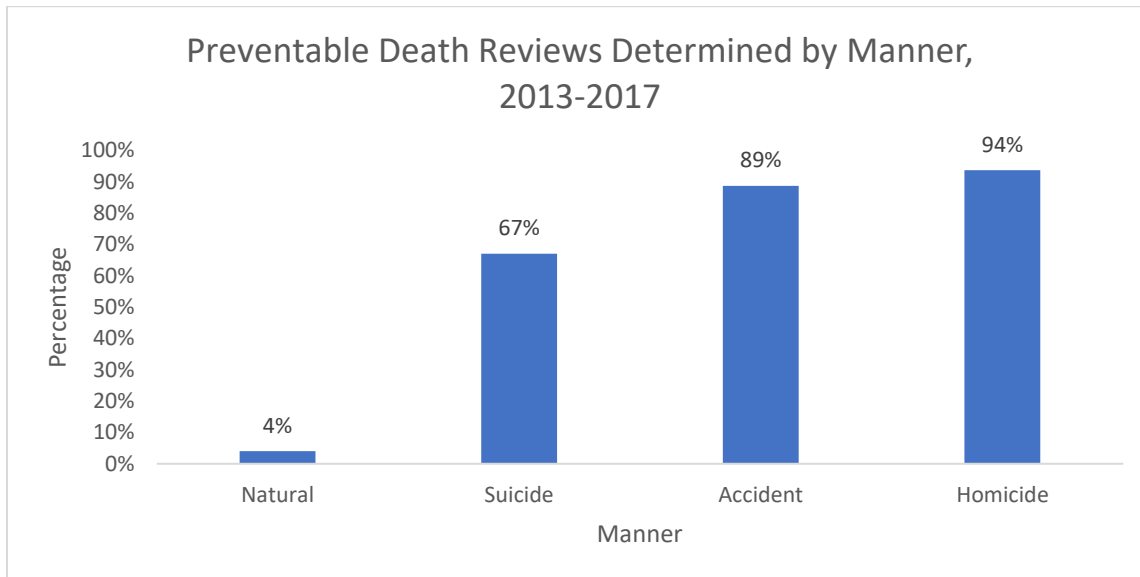
### CFR Findings

Of the 6,920 reviews for the five-year period 2013 through 2017, 25 percent of the reviews indicated the death probably could have been prevented. Preventability differed by manner of death and by age group.

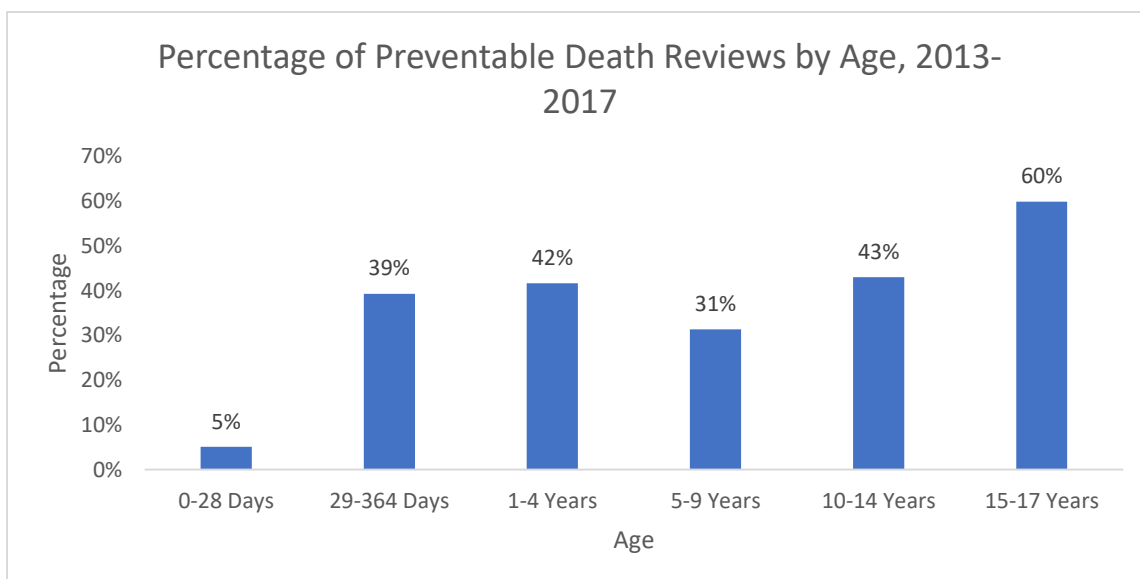


Local CFR boards determined the majority of suicides, accidents and homicides from 2013 - 2017 to be preventable.

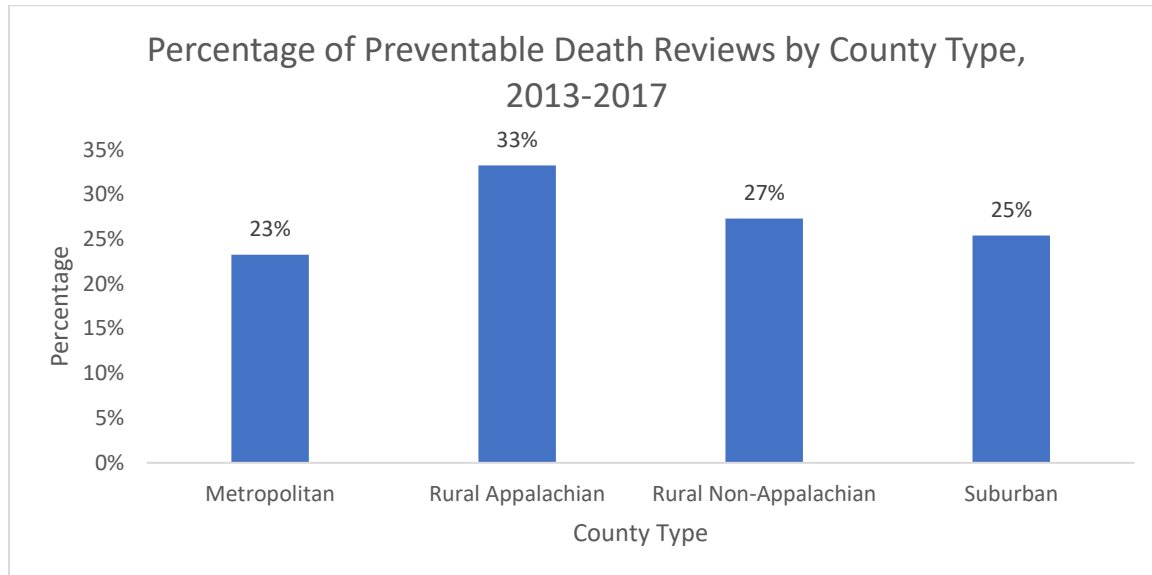
Manner of death is a classification of deaths based on the circumstances surrounding a cause of death and how the cause came about.



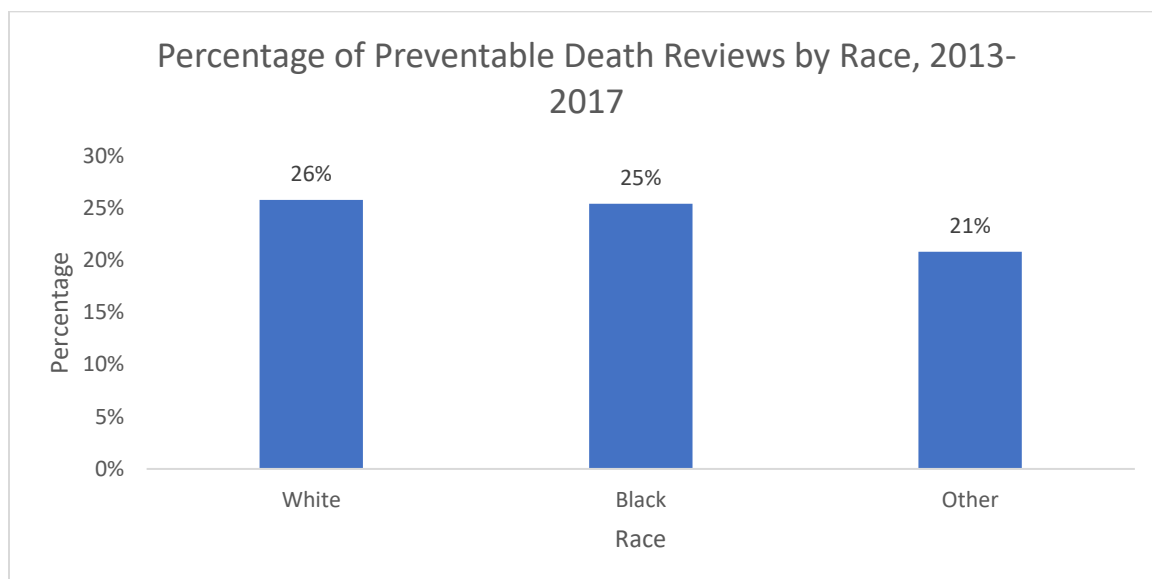
Local CFR boards determined that only 5 percent of deaths in the age group 0-28 days were preventable. Preventability generally increases with age and was 60 percent for children aged 15-17 years. As age increases the percentage of deaths due to external causes generally increases. Only 9 percent of infant deaths were due to external causes and 69 percent of deaths for ages 15 – 17 were due to external causes.



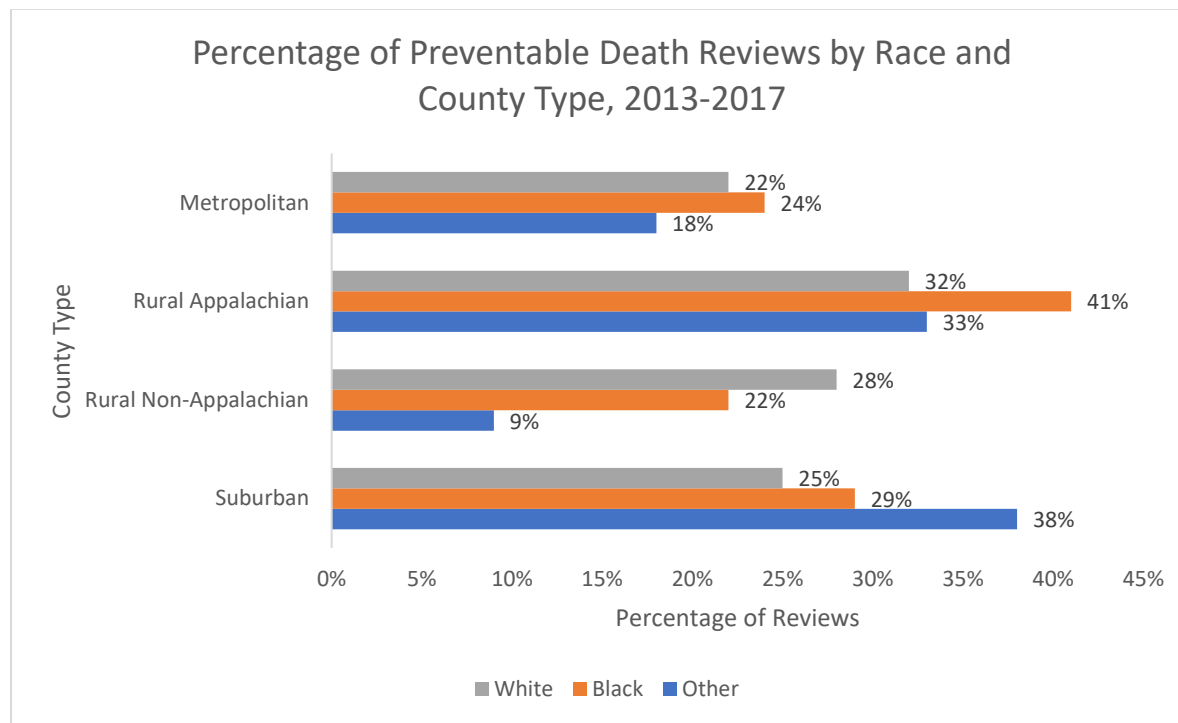
The highest percentage of overall preventable deaths were in rural Appalachia. Local CFR boards in rural Appalachian counties determined that a larger percentage of infant deaths and infant sleep related deaths were preventable as compared to the other county types.



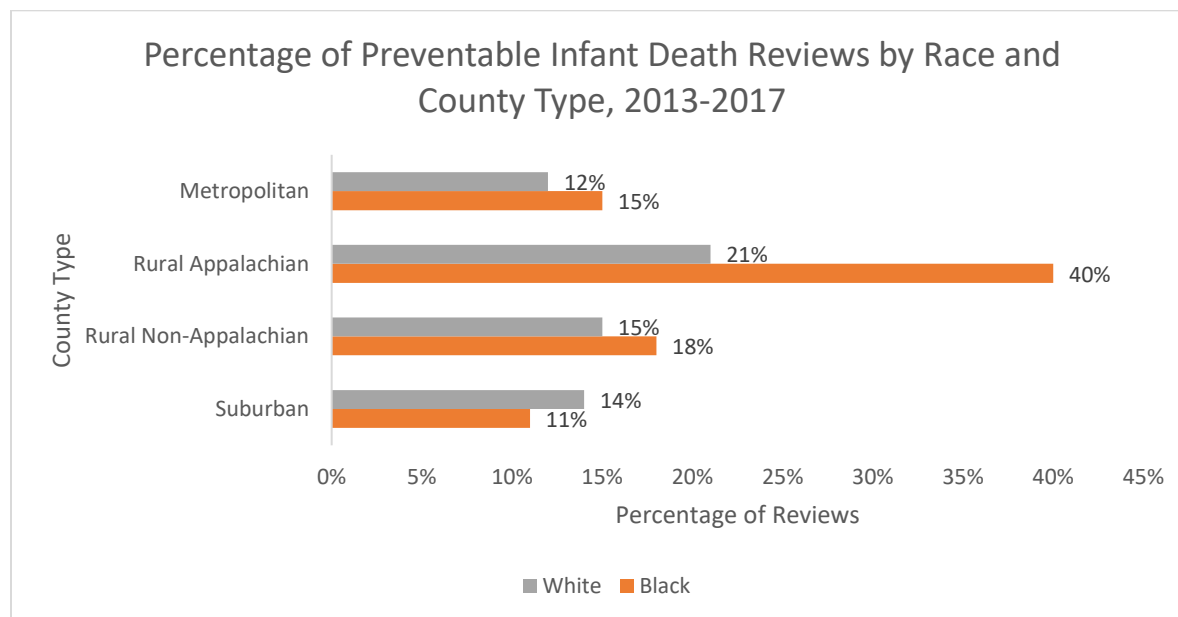
Local CFR boards determined that deaths to white children and black children were equally preventable.



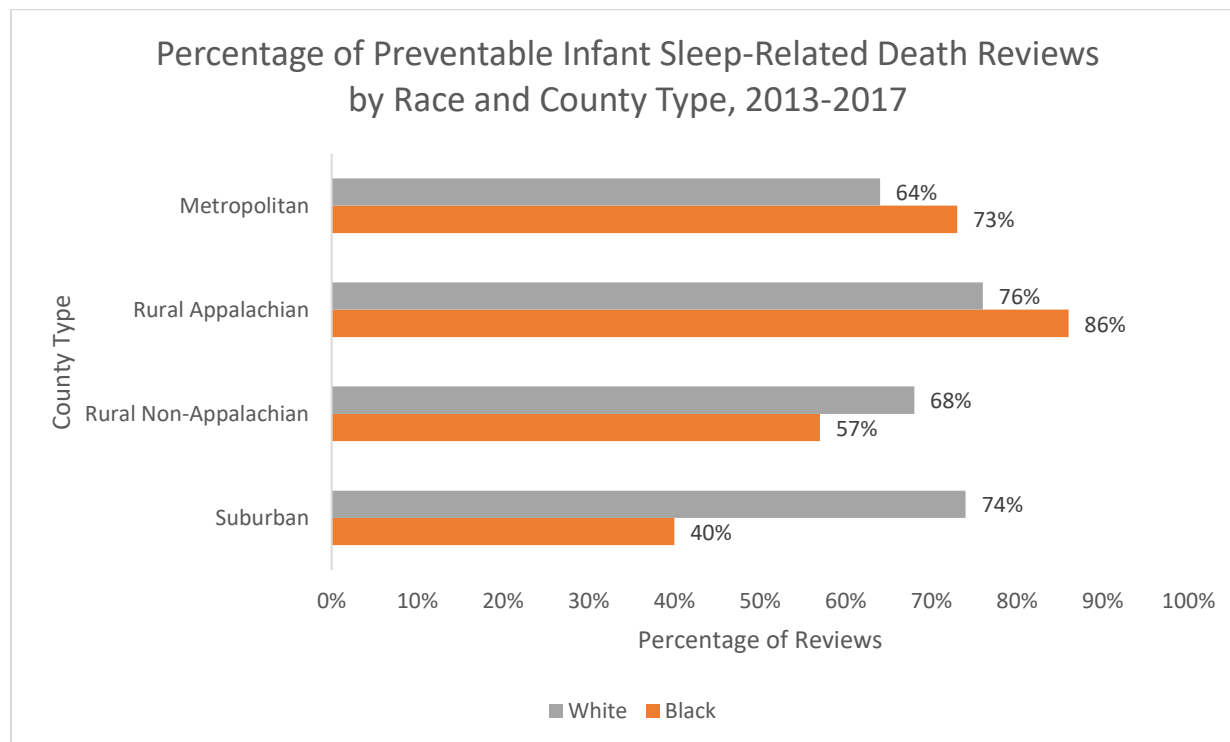
The following chart illustrates the percentage of reviews that were found to be preventable by race and county type combined. Rural Appalachian CFR boards determined a greater number of both white and black deaths were preventable as compared to the other county types. A map of Ohio's county types can be found in Appendix V.



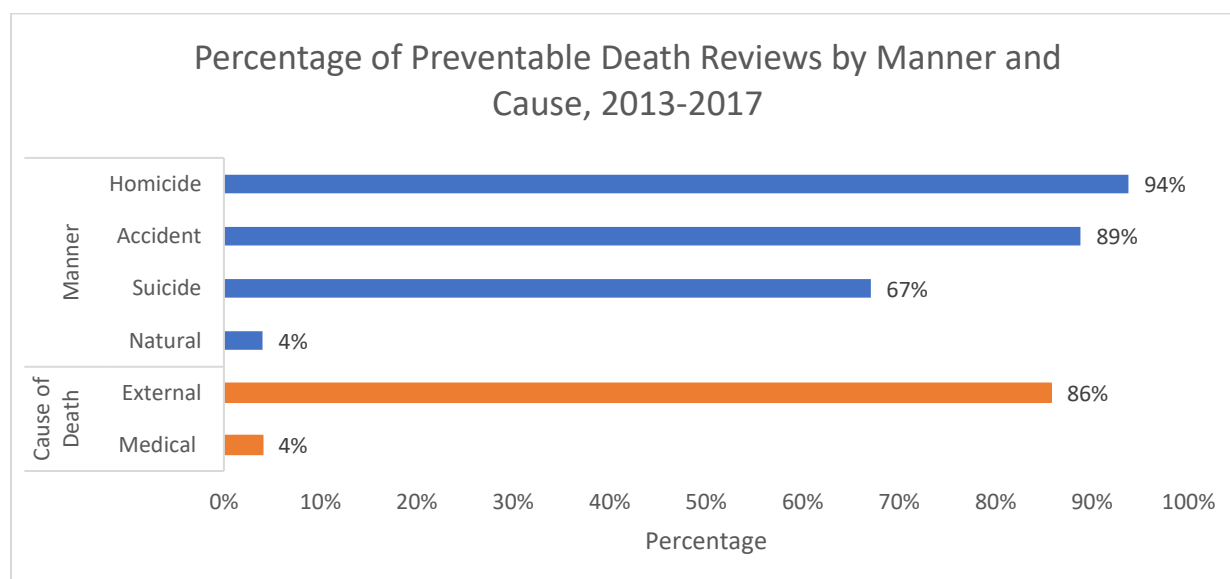
The following chart illustrates the percentage of infant death reviews that were found to be preventable by race and county type. Rural Appalachian CFR boards found a higher percentage of infant deaths to be preventable as compared to other county types.



Preventability of Infant Sleep-Related deaths by race and county type are found in the chart below. Suburban counties found that 40 percent of black sleep related deaths were preventable. The other county types found that the majority of black infant-sleep related deaths were preventable.



External causes of death including drowning and vehicle accidents are generally deemed preventable. Medical causes of death including congenital anomalies and cancer are generally not deemed preventable. Cause of death is the disease or injury that initiated the train of events leading directly to death, or the circumstances of the accident or violence which produced the fatal injury.



## **LIMITATIONS**

---

Calculation of rates is not appropriate with Ohio's CFR data because not all child deaths are reviewed. Instead of rates, CFR statistics have been reported as a proportion of the total reviews. This makes analysis of trends over time difficult, as an increase in the proportion of one factor will result in a mathematical decrease in the proportion of other factors.

For this report, cases with multiple races indicated were assigned to the race that represents the least proportion of the general child population of Ohio. For example, if a case indicated both black and Asian, the case was assigned to Asian, because the proportion of Asian children is less than the proportion of black children in Ohio.

The CFR case report tool and data system record Hispanic ethnicity as a variable separate from race. A child of any race may be of Hispanic ethnicity.

The ICD-10 codes used for classification of vital statistics data in this report were selected to most closely correspond with the causes of death indicated on the CFR Case Report Tool and may not match the codes used for some causes of death in other reports or data systems.

Since the inception of statewide data collection in 2001, Ohio CFR has used two different data systems, and the latest system has undergone improvements and revisions. Because of the differences in data elements and classifications, data in this annual report may not be comparable to data in previous reports. In-depth evaluation of contributing factors associated with child deaths is limited in some cases by small numbers insufficient to draw valid conclusions and lack of access to relevant data.

Each year a number of child deaths occur out-of-state. The first step of the review process, identification of a child death, is difficult when the death occurs out-of-state. Death certificates are recorded in the state where the death occurs and a process is not in place to routinely notify the county of residence for a timely review. This is a particular problem in rural Appalachian counties such as Harrison and Meigs counties, as well as Lawrence County, where the majority of the child deaths occur outside Ohio. By contrast, less than 2 percent of deaths to children of the twelve metropolitan counties died out-of-state. The state CFR coordinator continues to work with the Ohio Bureau of Vital Statistics to improve the timely notification of out-of-state deaths.

## REVIEWS OF 2017 DEATHS

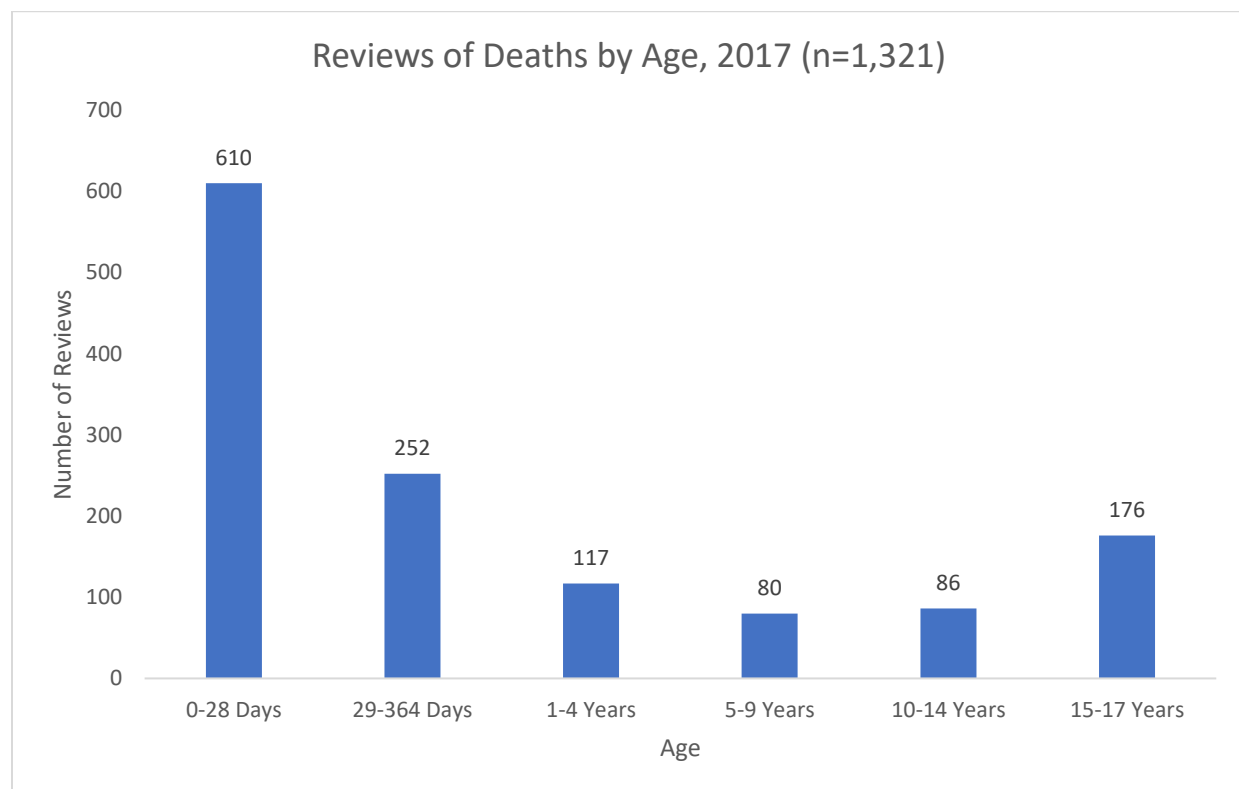
---

### Summary of Reviews

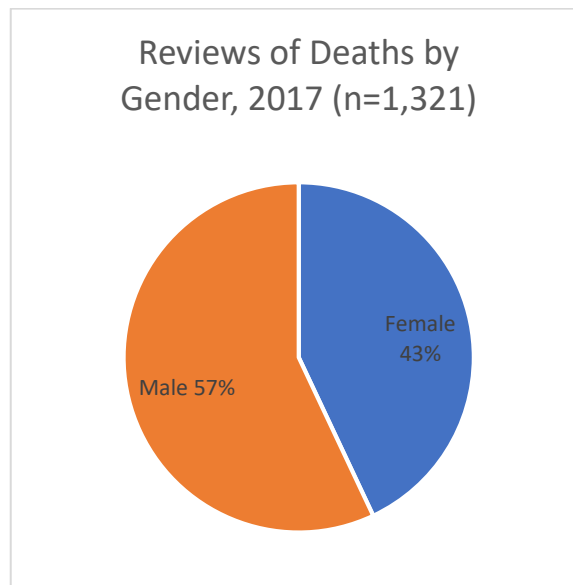
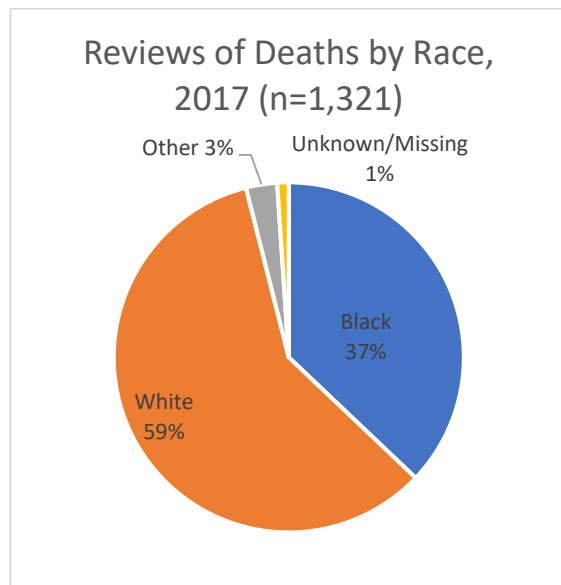
Beginning in 2014, in response to a growing demand for more current data regarding child deaths, all local Child Fatality Review (CFR) boards began reviewing deaths in the year in which the death occurred. Local CFR boards reviewed the deaths of 1,321 children who died in 2017. These deaths represent 84 percent of all child deaths (1,567) reported to the Ohio Bureau of Vital Statistics.

### Reviews by Demographic Characteristics

Sixty-five percent (862) of the reviews were for children less than 1 year of age. Black children are overrepresented in child death reviews (37 percent) compared to their representation in the general Ohio child population.<sup>1</sup> Males are also overrepresented in child death reviews, comprising 57 percent of reviews.







## Reviews by Manner of Death

For deaths being reviewed, CFR boards report the manner of death as indicated on the death certificate. Manner of death is a classification of deaths based on the circumstances surrounding a cause of death and how the cause came about. The five manner-of-death categories on the Ohio death certificate are natural, accident, homicide, suicide, and undetermined/ unknown/ pending. For deaths that occurred in 2017, the 1,321 reviews were classified as follows:

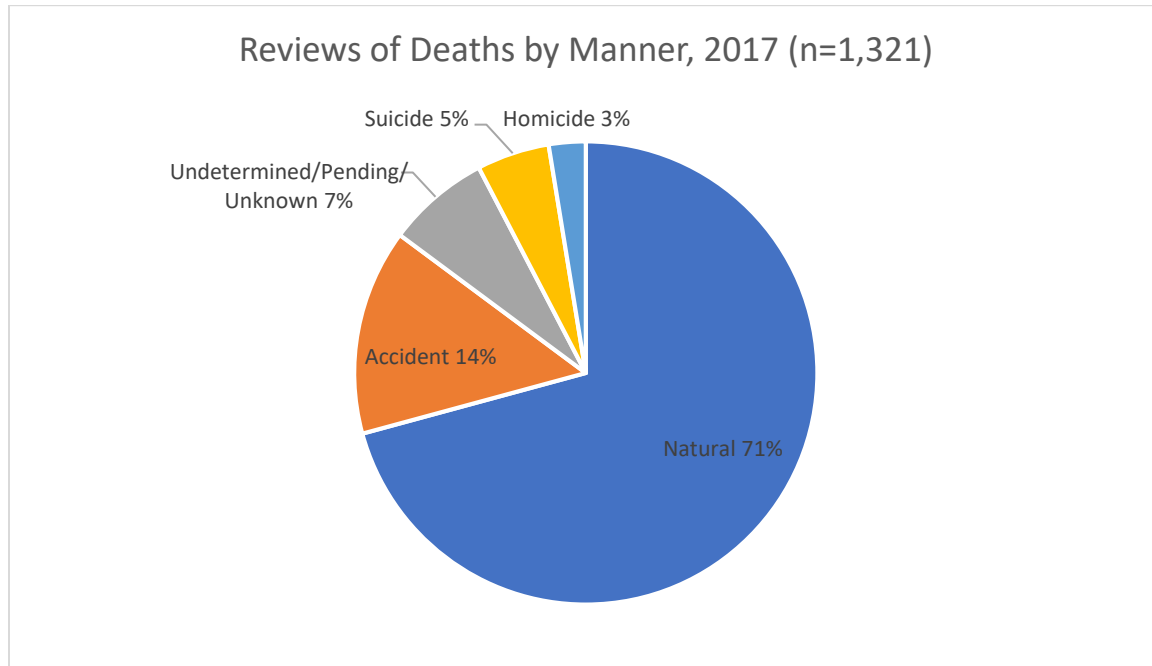
- Seventy-one percent (935) were natural deaths.
- Fourteen percent (190) were accidents.
- Seven percent (95) were of an undetermined or unknown manner or pending review.
- Five percent (67) were suicides.
- Three percent (34) were homicides.

## Reviews by Cause of Death

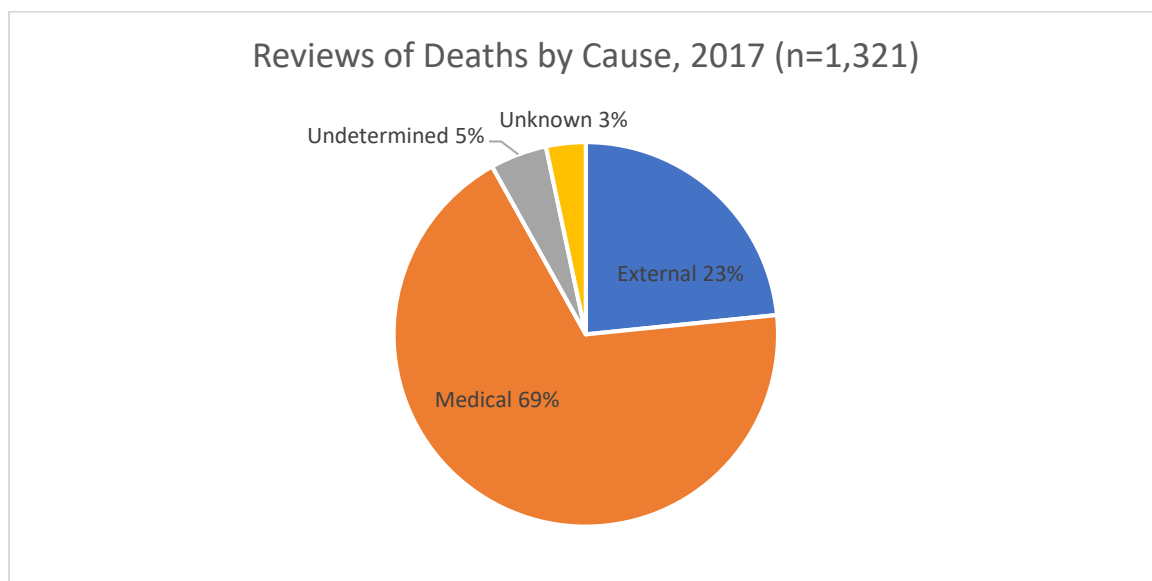
CFR boards select the cause of death category that provides the most information about the circumstances of the death to be recorded in the data system, with a focus on prevention. The CFR case report tool and data system implemented in 2005 classify causes of death by medical or external causes. Medical causes are further specified by particular disease entities. External causes are further specified by the nature of the injury. The cause of death category selected may not match the death certificate. In 2017, the 1,321 reviews were classified as follows:

- Sixty-nine percent (905) were due to medical causes.
- Twenty-three percent (309) were due to external causes.
- In five percent (63) of reviews, the cause of death could not be determined as either medical or external.
- Three percent (44) were unknown.

The following chart shows the percentage of reviews by manner. The five manner-of-death categories on the Ohio death certificate are natural, accident, homicide, suicide, and undetermined/unknown/pending.



The following chart shows the percentage of reviews by cause. The CFR case report tool and data system classifies causes of death by medical or external causes.



## Deaths from Medical Causes

### Background

Deaths from medical causes are the result of a natural process such as disease, prematurity or congenital defect. A death due to a medical cause can result from one of many serious health conditions.

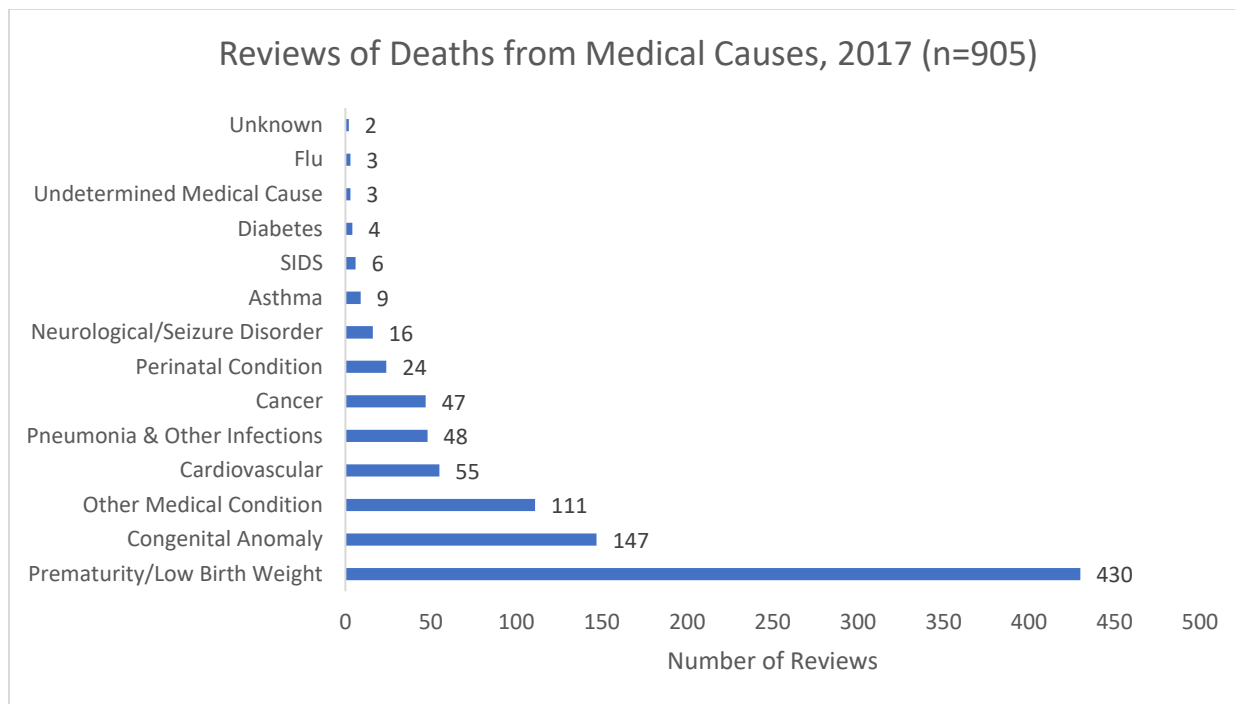
Many of the conditions are not considered to be preventable in the same way accidents are preventable. But with some illnesses such as asthma, infectious diseases and screenable genetic disorders, under certain circumstances, fatalities may be prevented. Many might be prevented through better counseling or care during preconception and pregnancy, earlier or more consistent prenatal care and smoking cessation counseling and support. While some conditions cannot be prevented, early detection and prompt, appropriate treatment can often prevent deaths.

### CFR Findings

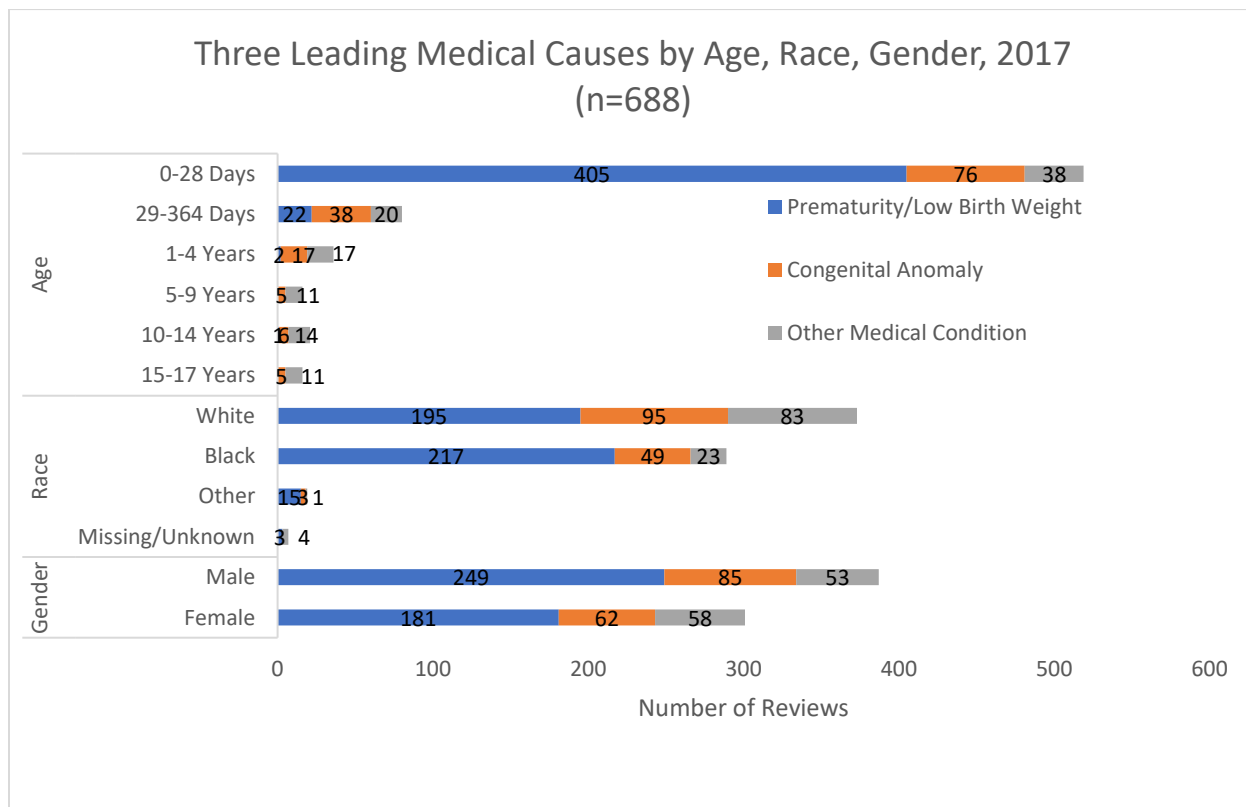
Sixty-nine percent (905) of the 1,321 reviews for 2017 deaths were from medical causes.

- The CFR data system provides a list of 15 medical conditions in addition to an "Other" category for classifying deaths from medical causes more specifically. Prematurity/low birth weight, congenital anomalies, and other medical conditions were the three leading medical causes of death.
  - Forty-seven percent (430) of the deaths from medical causes were due to prematurity/low birth weight.
  - Sixteen percent (147) were due to congenital anomalies.
  - Twelve percent (111) were due to other medical conditions.
  - Six percent (55) were due to cardiovascular causes.

Prematurity and congenital anomalies accounted for more than half of 2017 reviews by medical causes.



The following chart shows the three leading medical causes by age, race and gender.

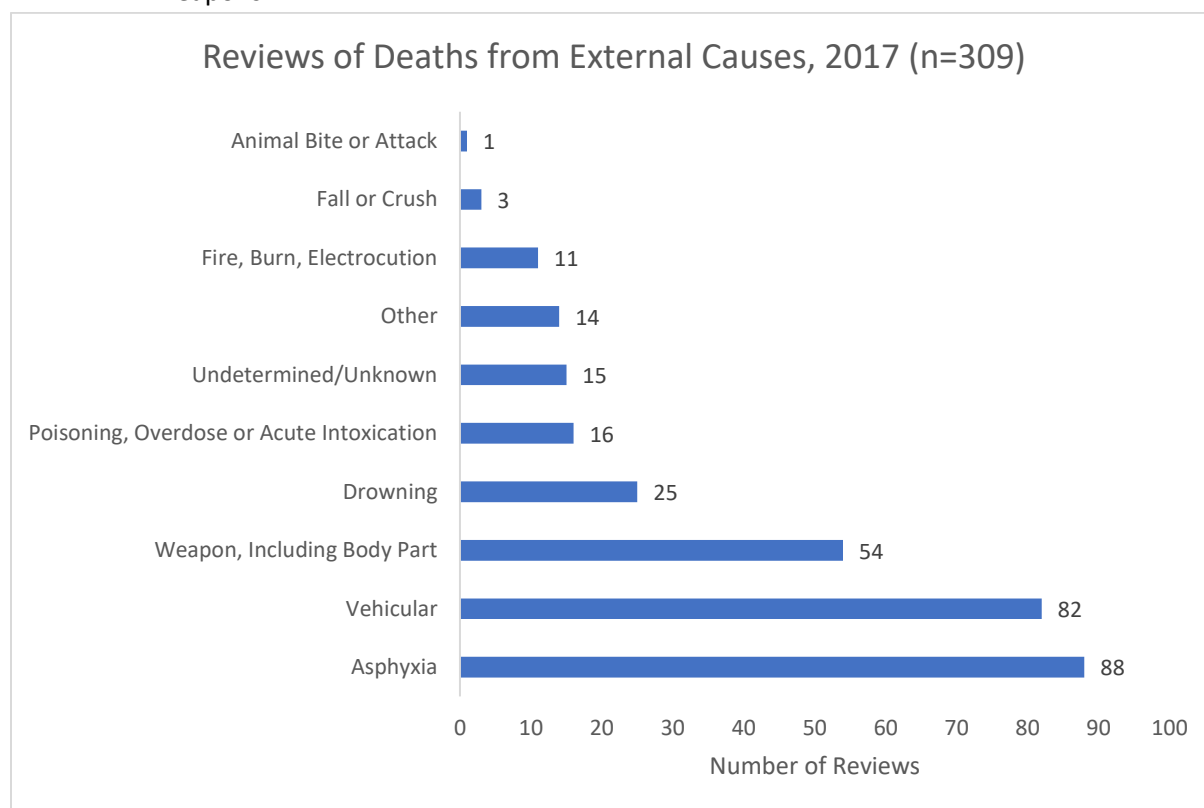


## Deaths from External Causes

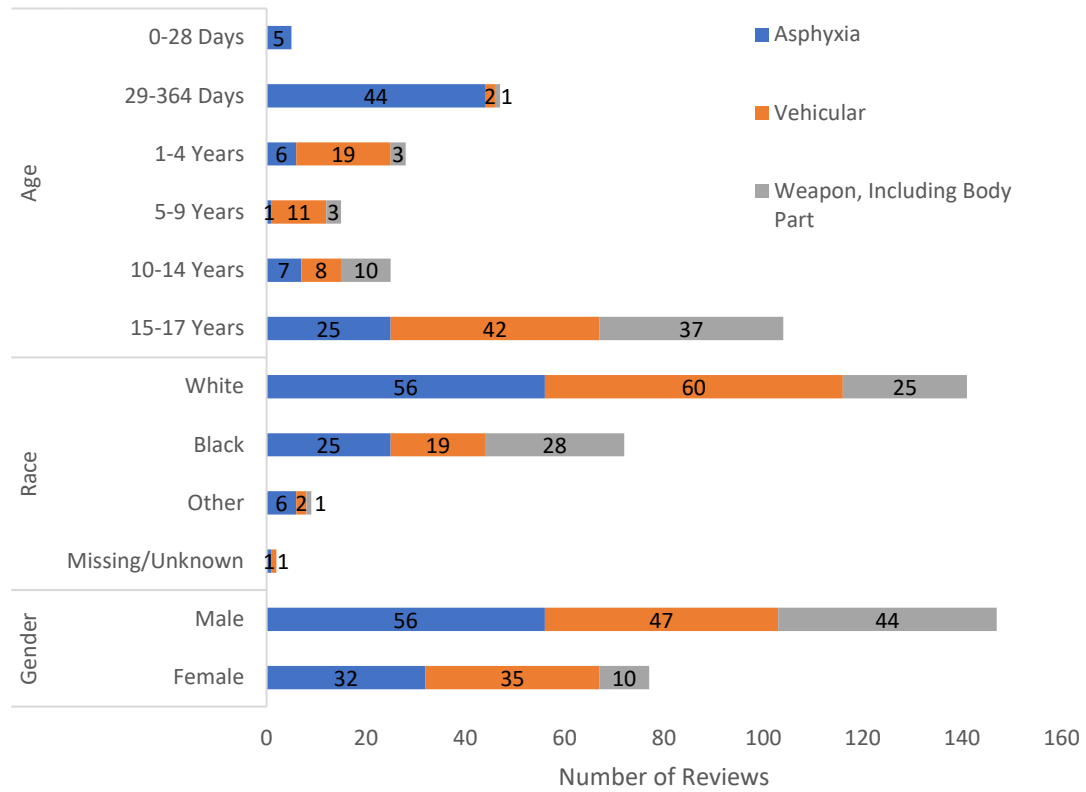
External causes of death are injuries, either unintentional or intentional, resulting from acute exposure to forces that exceed a threshold of the body's tolerance, or from the absence of such essentials as heat or oxygen.<sup>2</sup>

Twenty-three percent (309) of the 1,321 reviews for 2017 deaths were due to external causes. Asphyxia, vehicular injuries and weapons injuries were the three leading external causes for the 309 reviews.

- Twenty-eight percent (88) were due to asphyxia.
- Twenty-seven percent (82) were due to vehicular injuries.
- Seventeen percent (54) were due to weapons injuries, including the use of body parts as weapons.



### Three Leading External Causes by Age, Race, Gender, 2017 (n=224)



## 2013 - 2017 KEY FINDINGS

---

For the five-year period 2013-2017, reviews were completed for 6,920 child deaths, which is 91 percent of the child deaths reported by the Ohio Bureau of Vital Statistics. Deaths that were not reviewed include cases still under investigation or involved in prosecution, and out of state deaths reported too late for thorough review. Late-year deaths for which death certificates were not yet available to local review boards were also not reviewed.

### Reviews by Race and Gender

Black children and boys of all races died at disproportionately higher rates than white children and girls of all races for most causes of death. Thirty-five percent (2,456) of deaths reviewed were black children and 57 percent (3,980) were boys of all races. Their representation in the general population is 18 percent for black children and 51 percent for boys of all races. Ninety percent of reviews were for non-Hispanic children.

- Twenty-six percent of the deaths of white children were found to be preventable.
- Twenty-five percent of the deaths of black children were found to be preventable.

Reviewed cases are categorized by manner and cause of death. Manner of death is a classification of deaths based on the circumstances surrounding a cause of death and how the cause came about. The five manner of death categories on the Ohio death certificate are natural, accident, homicide, suicide, or undetermined/ pending/ unknown.

- Natural deaths accounted for 71 percent of all deaths reviewed.
- Accidents (unintentional injuries) accounted for 14 percent of the deaths reviewed.
- Homicides accounted for 4 percent of the deaths reviewed.
- Suicides accounted for 4 percent of the deaths reviewed.
- Seven percent of the deaths reviewed were of an undetermined, or unknown manner.
- Twenty-five percent of all reviews were found to be preventable by local CFR boards.

### Sleep-related Reviews

Fifteen percent (691) of the infant deaths reviewed were sleep-related.

- Eighty-eight percent of reviewed sleep-related deaths were for infants between 29 days and 1 year of age.
- Co-sleeping was reported at time of death for 52 percent of reviews.
- Second-hand smoke exposure was reported for 35 percent of reviews.
- Infants were put to sleep on their back in 48 percent of reviews.
- Seventy-one percent of infant sleep-related deaths were found to be preventable.

### Child Abuse and/or Neglect Reviews

Two percent of the deaths reviewed were related to child abuse and/or neglect

- Seventy-nine percent of child abuse/neglect reviews were for children younger than 5 years of age.
- In forty-two percent of the reviews, the perpetrator was a parent (biological, step, or adoptive).
- Ninety-five percent of these deaths were found to be preventable.

## **Reviews by Age Group**

Sixty-seven percent of the deaths reviewed were infants (birth-364 days old).

- Seventy percent of reviews were for infants 28 days or younger.
- Eighty-one percent of reviews were due to medical causes.
- Sixty-five percent were born at or before 36 weeks of gestation.
- Twenty-three percent of mothers smoked during pregnancy.
- Sixty percent of all deaths reviewed were deemed probably not preventable by local CFR teams.

Ten percent of the deaths reviewed were children 1-4 years old.

- Congenital anomalies, not preventable (12 percent) and drowning, preventable (10 percent) were the two leading causes of death (excluding categories indicated as 'other').
- Many of the preventable deaths in this age group are drowning related as well as accidents.
- Forty-two percent of deaths reviewed were deemed probably preventable by local CFR teams.

Six percent of the deaths reviewed were children 5-9 years old.

- Cancer, not preventable (17 percent) and vehicular injuries, preventable (14 percent) were the two leading causes of death (excluding categories indicated as 'other').
- Fifty-seven percent of these deaths reviewed were deemed probably preventable by local CFR teams.

Seven percent of the deaths reviewed were children 10-14 years old.

- Cancer (14 percent), and vehicular injuries (14 percent) were the two leading causes of death (excluding categories indicated as 'other').
- Forty-four percent of deaths reviewed were deemed probably preventable.

Ten percent of the deaths reviewed were children 15-17 years old.

- Vehicular (35 percent) and weapons (33 percent) injuries were the two leading causes of death.
- Sixty percent of these deaths reviewed were deemed probably preventable.

## **Homicide Reviews**

Four percent of the deaths reviewed were homicides.

- Sixty-five percent of homicide reviews were for males.
- Fifty-three percent of homicide reviews were for black children.
- Weapon use accounted for 78 percent of homicide reviews, most frequently through the use of a firearm (56 percent).
- Seventeen percent of homicide perpetrators were parents (biological, step or adoptive).
- Local CFR boards found that 94 percent of homicide deaths were preventable.

## **Suicide Reviews**

Four percent of the deaths reviewed were suicides.

- Seventy-seven percent of suicide reviews were for white children.
- Sixty-eight percent of suicide reviews were for males.
- Most frequently, asphyxia (55 percent) was the cause of death.
- The majority of suicide reviews (168) were for children age 15-17.
- Local CFR boards found that 67 percent of suicide deaths were preventable.



## **Accident Reviews**

Fourteen percent of the deaths reviewed were accidents.

- Infants (30 percent) and children age 15-17 years (25 percent) had the highest incidence of accidents.
- Thirty-eight percent of accident reviews were due to vehicular causes.
- Drowning deaths and fire, burn, electrocutions accounted for an additional 22 percent of accident reviews.
- Local CFR boards found that 89 percent of accident related deaths were preventable.

## **Medical Causes**

Seventy percent of the deaths reviewed were due to medical causes.

- Most deaths due to medical causes were infants less than 1 year of age.
- The most frequent medical cause of death was prematurity (45 percent).
- Congenital anomalies combined with all other medical causes accounted for an additional 37 percent of medical cause reviews.
- Local CFR boards found that four percent of these deaths were preventable.

## **External Causes**

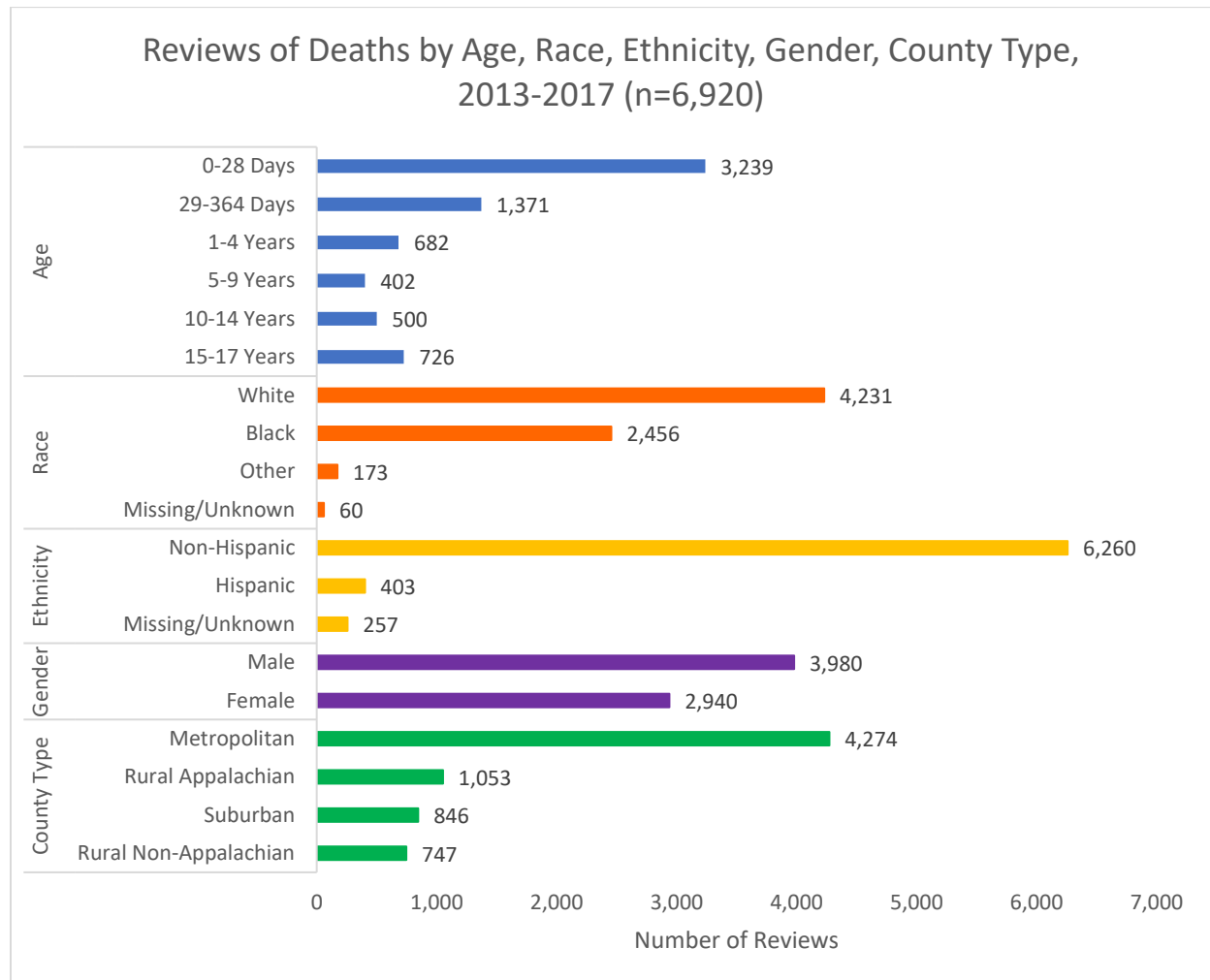
Twenty-three percent of deaths reviewed were due to external causes.

- Twenty-nine percent of the external deaths reviewed were caused by asphyxia.
  - Fifty-seven percent of asphyxia reviews were for infants.
  - Of the 458 asphyxia deaths, fifty-three percent (244) were infant sleep related.
- Twenty-three percent of the external deaths reviewed were caused by vehicular injuries.
  - Forty-eight percent of vehicular reviews were for children 15-17 years old.
  - Twelve percent of bicycle, motorcycle, or ATV related deaths reported helmets were used properly.
- Twenty-one percent of external deaths reviewed were caused by weapon injuries.
  - Forty-nine percent of weapon reviews were for children 15-17 years old.
  - Sixty-three percent of weapon reviews were classified as homicide.
- Eight percent of the external deaths reviewed were caused by drowning.
  - Forty-five percent of drowning reviews occurred in open water e.g. lake or pond.
- Five percent of external deaths reviewed were caused by fires, burns, or electrocutions.
  - Children ages 1-9 represented sixty-four percent of the reviews.
- Two percent of external deaths reviewed were caused by poisoning.
  - Fifty-six percent of poisoning reviews indicated prescription drugs as the substance.
- Local CFR boards found that 86 percent of these deaths were preventable.

## REVIEWS OF 2013-2017 DEATHS

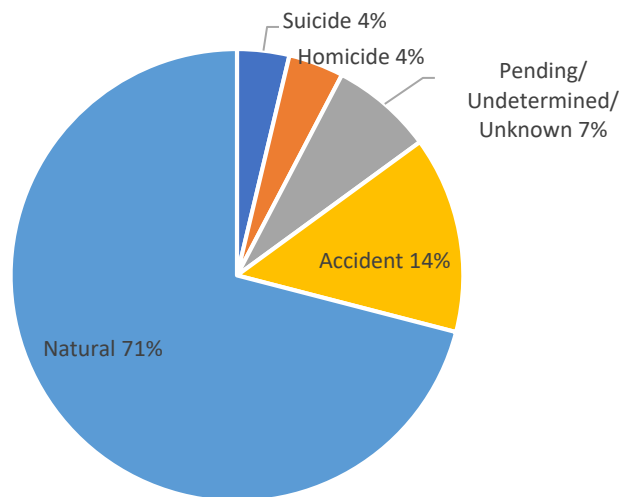
### Summary of Reviews

Data have been analyzed for a five-year period, 2013 through 2017; combining years provides enough data to gain more understanding of the factors related to child death. For the five-year period, Ohio CFR boards have completed 6,920 reviews, which represent 91 percent of the 7,576 child deaths reported by the Ohio Bureau of Vital Statistics. For the five-year period, the proportional distribution of reviews across many factors, including manner of death, age, race, and gender, has changed very little. ODH categorizes Ohio's 88 counties into four county type designations (suburban, rural non-Appalachian, Appalachian, and metropolitan) based on similarities in terms of population and geography. The current county type designations originated with the Ohio Family Health Survey in 1998 and are based on the U.S. Code and U.S. Census information. See Appendix V for a map of Ohio counties by county type. To analyze the CFR data by county type, the computer-assigned case number was used to determine the county of review. In nearly all cases, the county of review is the county of the child's residence.

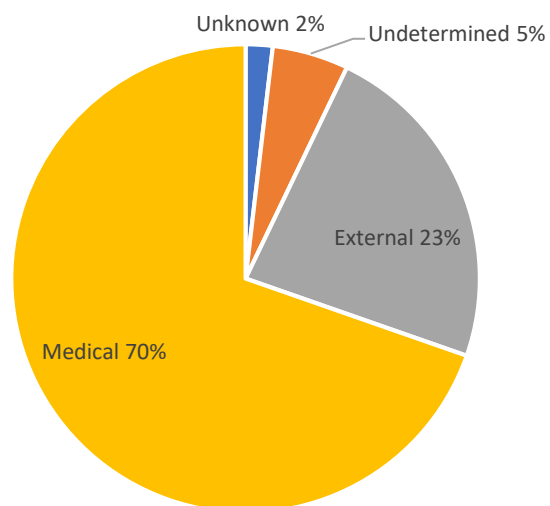


Reviews are classified by manner and cause of death. Within cause of death, external and medical causes are further specified by nature of the injury and the disease entities, respectively.

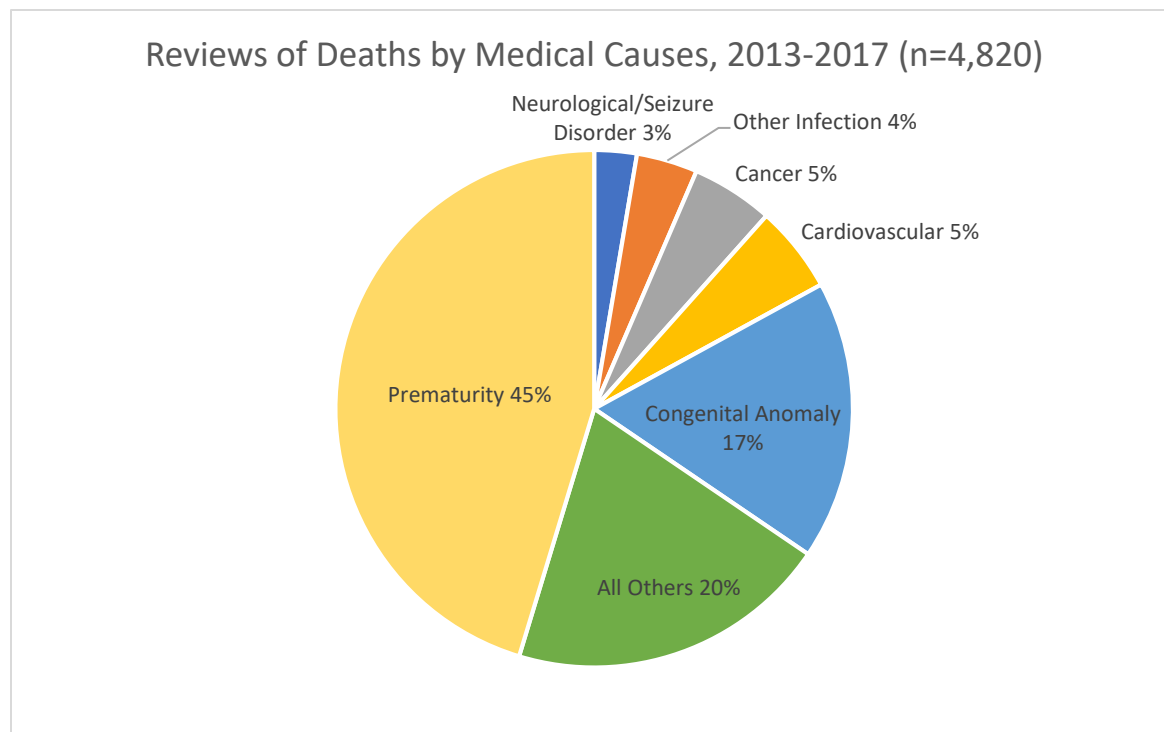
Reviews of Deaths by Manner, 2013-2017 (n=6,920)



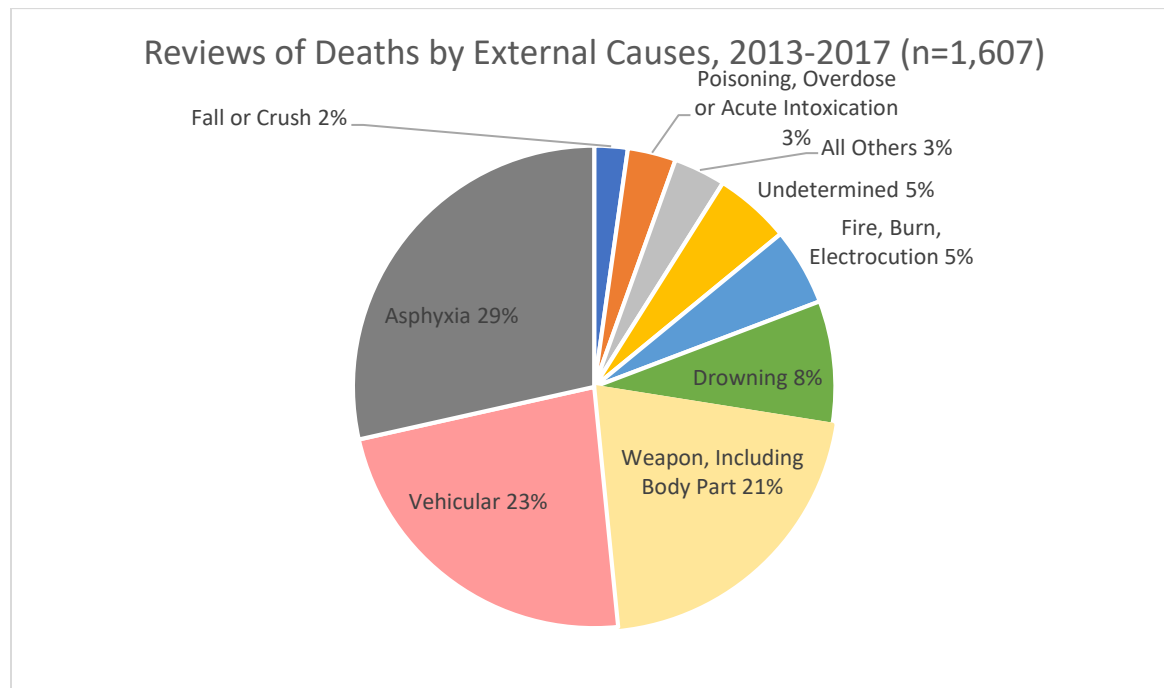
Reviews of Deaths by Cause, 2013-2017 (n=6,920)



Of the 4,820 reviews by medical causes, prematurity accounted for 45 percent of the reviews.



Leading external causes of death included asphyxia, vehicular injuries and weapons.



## Reviews of Special Categories of Deaths

### Child Abuse and Neglect, All Ages

#### Background

Child abuse and neglect is any act or failure to act on the part of a parent or caretaker that results in death, serious physical or emotional harm, sexual abuse or exploitation, or that presents an imminent risk of serious harm. Physical abuse includes punching, beating, shaking, kicking, biting, burning or otherwise harming a child and often is the result of excessive discipline or physical punishment that is inappropriate for the child's age. Head injuries and internal abdominal injuries are the most frequent causes of abuse fatalities. Neglect is the failure of parents or caregivers to provide for the basic needs of their children, including food, clothing, shelter, supervision and medical care. Deaths from neglect are attributed to malnutrition, inadequate weight gain, infections and accidents resulting from unsafe environments and lack of supervision.

Some deaths from child abuse and neglect are the result of long-term patterns of maltreatment, while many other deaths result from a single incident. According to Prevent Child Abuse America, there are several factors that put parents at greater risk of abusing a child: social isolation, difficulty dealing with anger and stress, financial hardship, alcohol or drug abuse, mental health issues, and apparent disinterest in caring for the health and safety of their child.<sup>3</sup>

Many child abuse and neglect deaths are coded on the official death certificate as other causes of death, particularly unintentional injuries or natural deaths. In a study of 51 deaths identified as child abuse and neglect by local Ohio Child Fatality Review (CFR) boards in 2003 and 2004, 31 different causes of death were recorded on the death certificates. The causes included both medical and external injuries, both intentional and unintentional.<sup>4</sup>

According to the Centers for Disease Control and Prevention (CDC), nationally about 1,750 children died from abuse and neglect in 2016.<sup>5</sup> This translates to nearly five children dying each day as a result of abuse or neglect. Best estimates are that any single source of child abuse fatality data, such as death certificates, exposes just the tip of the iceberg. The interagency, multidisciplinary approach of the CFR process may be the best way to recognize and assess the number and the circumstances of child maltreatment fatalities. Even the CFR process is likely to undercount child abuse fatalities due to delays in reviews caused by lengthy investigation and prosecution procedures.

#### CFR Findings

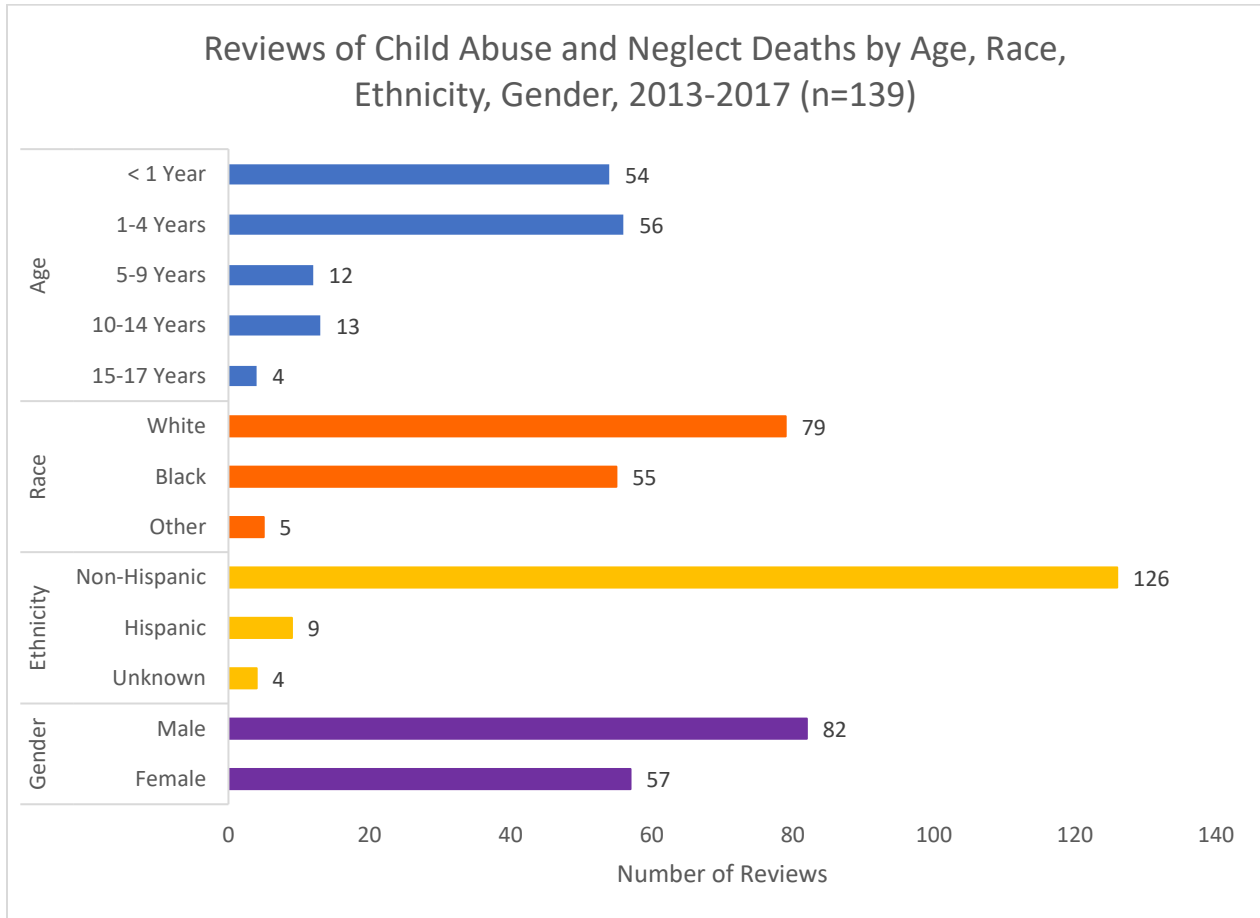
##### Preventability of Child Abuse and Neglect

Of the 139 deaths due to child abuse and neglect, 95 percent were determined to be probably preventable. Preventability could not be determined in four percent of the reviews. One percent of the reviews were found probably not preventable.

For the five-year period from 2013 through 2017, CFR boards reviewed 139 deaths from child abuse and neglect. These represent two percent of the 6,920 deaths reviewed.

- Sixty percent (84) of the reviews indicated that abuse caused or contributed to the death, while 35 percent (48) indicated that neglect caused or contributed to the death. Seven reviews indicated both abuse and neglect caused or contributed to the death.

- Seventy-nine percent (110) of child abuse and neglect deaths occurred among children younger than 5 years old.
- Thirty-six percent (50) of the child abuse and neglect deaths reviewed indicated the child had a prior history of child abuse and neglect.
- Twenty percent (28) of the deaths had an open child protective services case at the time of the incident.
- Twenty-nine percent (41) of the reviews indicated the child's primary caregiver had a prior history as a perpetrator of abuse or neglect.



The 139 deaths identified as child abuse and neglect were the result of several kinds of injuries. Parents, whether biological, step or adoptive parents, cause more deaths than any other group.

## Ohio Children's Trust Fund

As Ohio's sole public funding source dedicated to child abuse and child neglect prevention, the Ohio Children's Trust Fund (OCTF) is in the forefront of prevention activities throughout the state. From establishing guidelines for evidence-based program development to accessing innovative prevention curricula, producing educational and public awareness materials, and impacting social service policy legislation, the OCTF provides expertise and resources for legislators, the media, state agencies, and the public. The mission of the OCTF is to prevent child abuse and child neglect through investing in strong communities, healthy families and safe children.

The OCTF was created in 1984 and is governed by a board of 15 members representing a broad public-private partnership. Current OCTF board members reflect a diversity of expertise, as well as geographic interest. The board consists of representatives from the following fields: social work, child abuse and neglect services, government relations and advocacy, the healthcare industry and the private sector, higher education, the legal community, the medical community, and mental health and nonprofit executive leadership. Eight members are appointed by the governor to represent the residents of Ohio, four members are legislative appointees, and three members are the directors of the Ohio departments of Health, Job and Family Services, and Mental Health and Addiction Services. The board supervises the policies and programs of the trust fund, and the Ohio Department of Job and Family Services serves as the administrative agent for procurement and budgeting purposes.

The OCTF is funded with fees collected at the local level on certified copies of birth certificates, death certificates, and divorce decrees and dissolutions. In addition, the trust fund is Ohio's lead agency on the U.S. Department of Health and Human Services' Community-Based Child Abuse Prevention grant, which funds community-based primary and secondary child abuse prevention programs. The OCTF also solicits and accepts gifts, donations and money from public and private sources and engages in public-private partnerships.

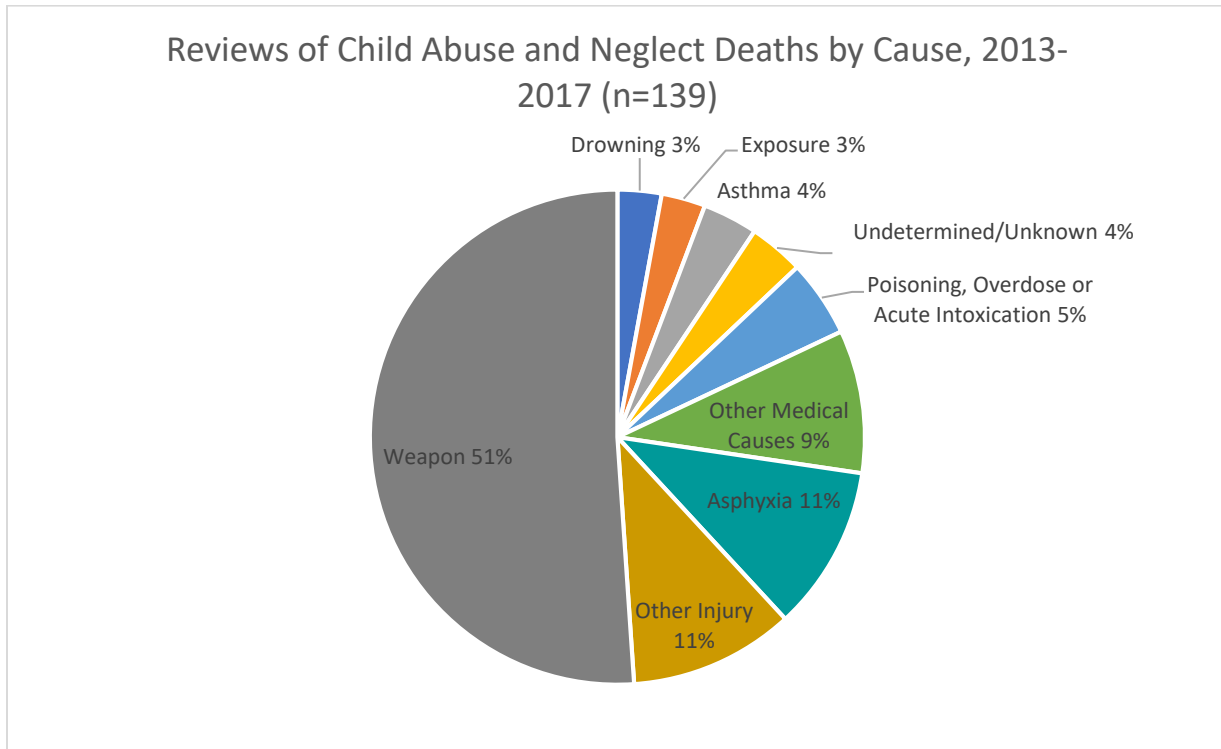
Trust fund revenues are invested in prevention programs at the local level through a regional model led by regional prevention councils throughout Ohio's 88 counties for primary and secondary prevention, through contracts with Ohio entities to fund child abuse and child neglect prevention programs that have statewide significance, and through other statewide discretionary projects identified by the board.

In October 2010, the OCTF became the provisional Ohio chapter of Prevent Child Abuse America. In February 2012, the trust fund achieved full charter status. The OCTF and Prevent Child Abuse America share a common mission. Through this collaboration, Ohio's statewide prevention efforts are aligned under one entity that is able to further these mutual goals.

As explained in the OCTF 2016-2021 strategic plan, the trust fund has become Ohio's leader and authority on child maltreatment prevention. The strategic plan provides more details regarding five strategic focus areas: increase awareness of the OCTF; increase family support, develop a unified systemic response to child abuse and neglect prevention; increase the promotion of child safety and health; and an established efficient and effective organizational structure. These strategic focus areas are designed to assist the OCTF in achieving its future vision: The Ohio Children's Trust Fund is a well-known innovative hub (center of excellence) for best practices, research, and resources promoting children's health and safety. In addition, the OCTF activities support families and communities. The OCTF works collaboratively with state and local systems to facilitate efficient and effective work at the local level. More information on OCTF available at:

<https://jfs.ohio.gov/octf/>

Weapons, asphyxia and other injuries were the leading causes of the 139 child abuse and neglect death reviews.



Reviews of Child Abuse and Neglect Deaths by Person Causing Death, 2013-2017 (n=139)

Person	#	%
Biological Parent	53	38%
Mother's or Father's Partner	22	16%
Adoptive/Foster/Step Parent	6	4%
Other Relative	6	4%
Other	4	3%
Babysitter	2	1%
Friend	2	1%
Missing/Unknown	44	32%
Total	139	100%



#### Local Initiatives:

Infant caretakers in Lucas County currently have the resources of Mercy Hospitals' Crying Baby Hotline 24 hours a day, 7 days a week. Caretakers can speak to a registered nurse whenever they are frustrated or concerned about a baby that won't stop crying. An assessment is done over the phone to uncover any possible health issues for the crying. When no issues are found, callers are educated on comforting techniques to help soothe the baby. Support and encouragement are also provided to the callers. More information available at:

<https://www.mercy.com/about-us/regions/toledo/toledo-community-programs>

## Infant Sleep-Related Deaths

### Background

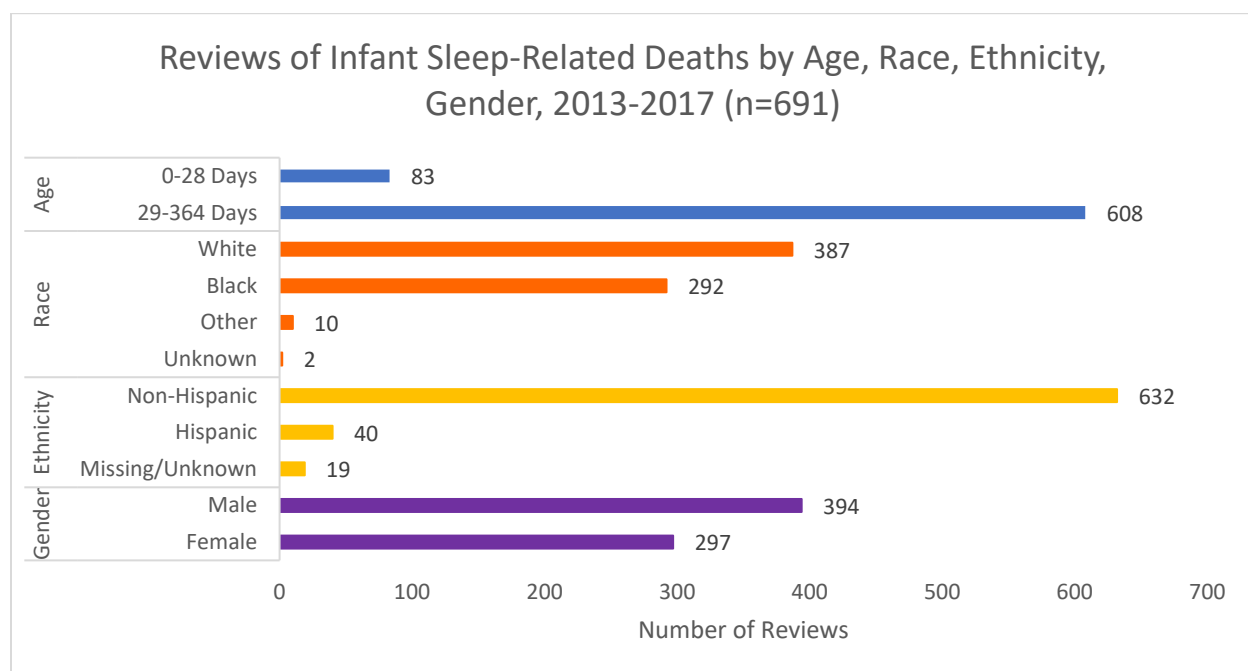
Since the beginning of the Ohio CFR program, local boards have been faced with a significant number of deaths of infants while sleeping. Some of these sudden unexpected infant deaths (SUIDs) are diagnosed as sudden infant death syndrome (SIDS), while others are diagnosed as accidental suffocation, positional asphyxia, overlay (the obstruction of breathing caused by the weight of a person or animal lying on the infant) or undetermined. SIDS is a subset of SUID and is a medical cause of death. It is the diagnosis given to the sudden death of an infant under 1 year of age that remains unexplained after the performance of a complete postmortem investigation, including an autopsy, an examination of the scene of death and review of the infant's health history.<sup>6</sup> The distinction between SIDS and other SUIDs is challenging. Many of the risk factors for SIDS and asphyxia are similar. Incomplete investigations, ambiguous findings and the presence of known risk factors for other causes of death result in many SUIDs being diagnosed as "undetermined cause" rather than SIDS. The difficulty of obtaining consistent investigations and diagnoses of infant deaths led the Centers for Disease Control and Prevention (CDC) to launch an initiative to improve investigations and reporting.<sup>6</sup> An infant death investigation training was hosted by the Franklin County CFR board in June 2011 and ODH hosted three similar trainings in 2014 and 2016. As of September 2014, Ohio coroners now are required to complete a death scene investigation using the CDC protocol and the investigation reporting form. The investigation form is to be shared with the local CFR board reviewing the death.

### CFR Findings

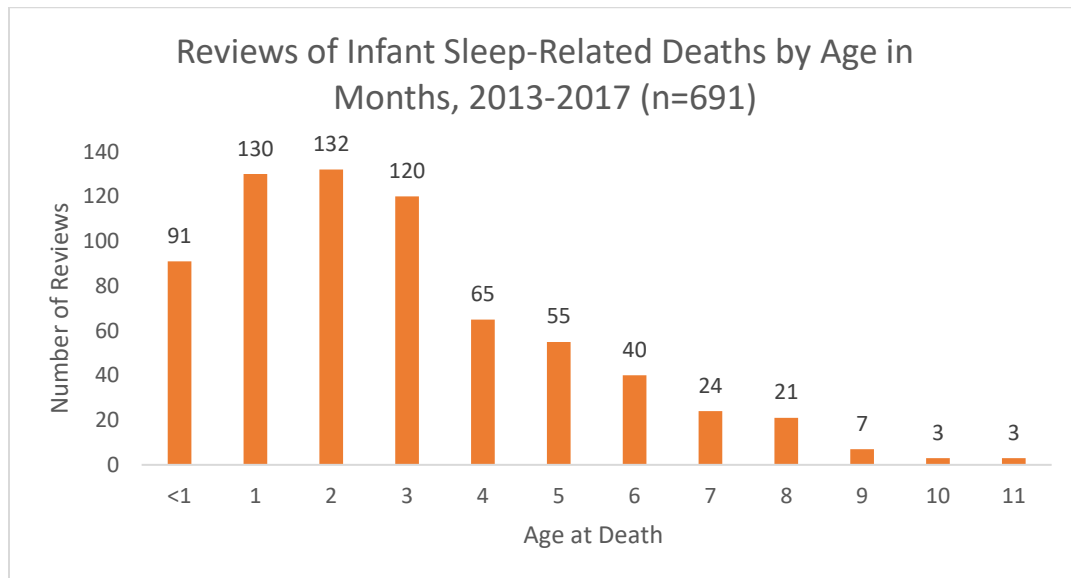
#### Preventability of Infant-Sleep Related Deaths

Of the 691 Infant-Sleep Related Deaths, 71 percent were found to be preventable. Preventability could not be determined in 21 percent of the reviews. Seven percent of the reviews were found to be probably not preventable.

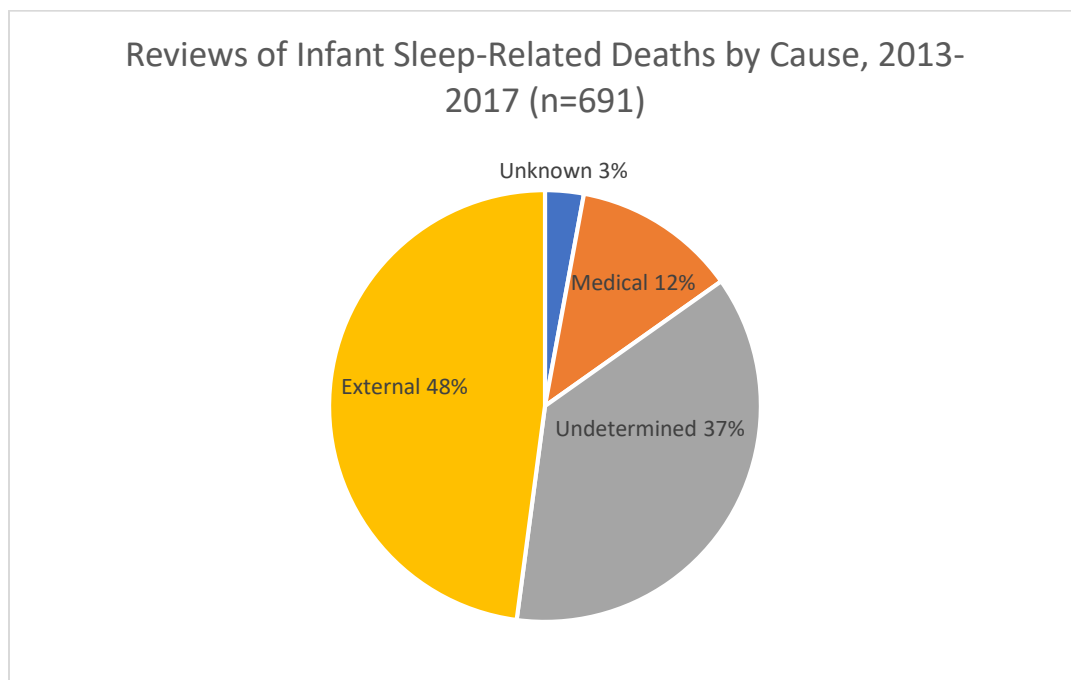
During the five-year period 2013 through 2017, local boards reviewed 691 sleep-related deaths which account for 15 percent of the 4,610 infant death reviews.



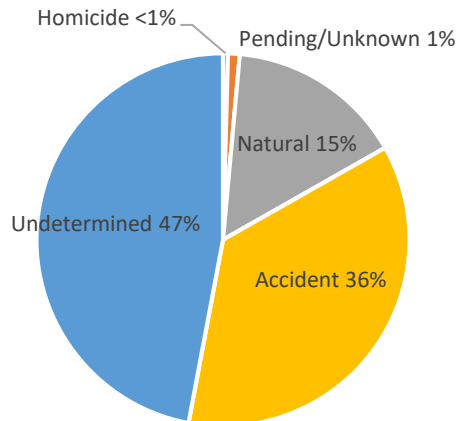
Fifty-five percent (382) of the 691 sleep-related deaths involved infants between one month and three months old. Sleep-related deaths become less common as infants age but still occur up to eleven months of age.



As discussed earlier in this section, determining the cause of death for infants in sleep situations is difficult even when a complete investigation has occurred. Thirty-seven percent of sleep-related deaths were diagnosed as an undetermined cause.

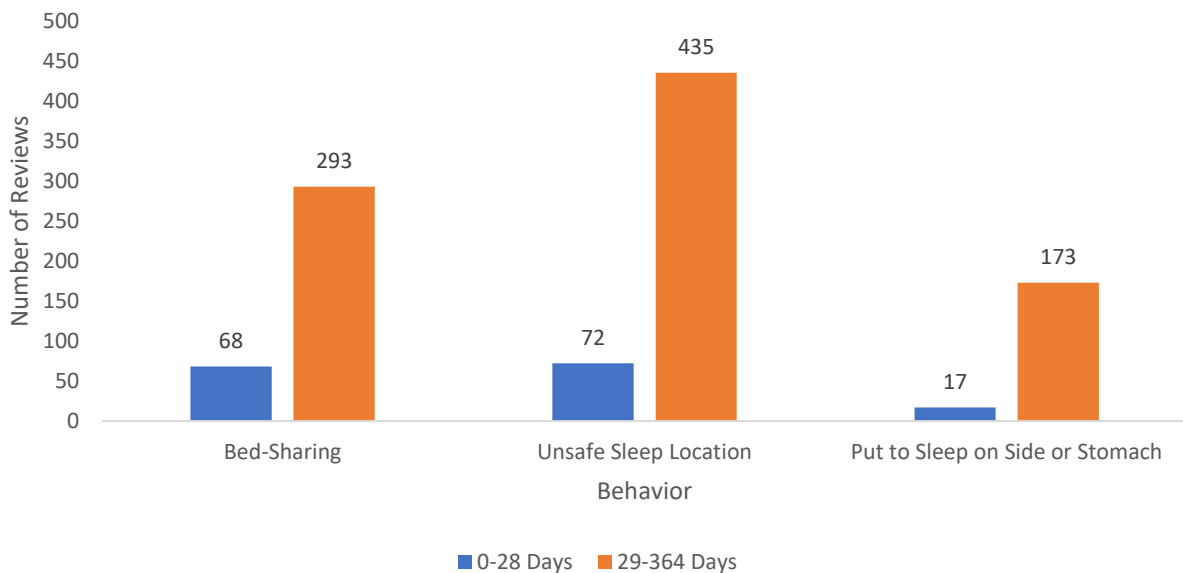


### Reviews of Infant Sleep-Related Deaths by Manner, 2013-2017 (n=691)

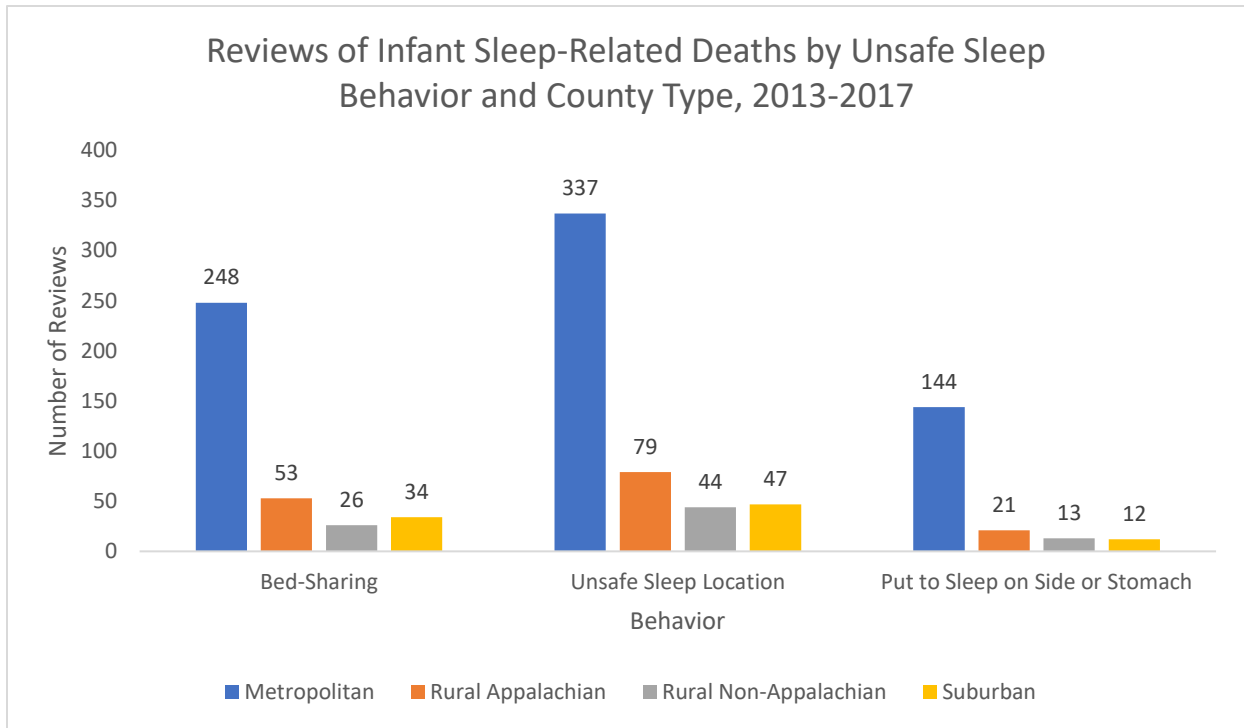


The following unsafe sleep practices were identified by local CFR boards. It should be noted that the same child death could be represented in multiple unsafe sleep behavior categories. For example, the same child may have bed-shared and also been put to sleep on his or her side. Bed sharing refers to sharing the same sleep surface with a person or animal. Unsafe sleep locations included couches, adult beds and futons.

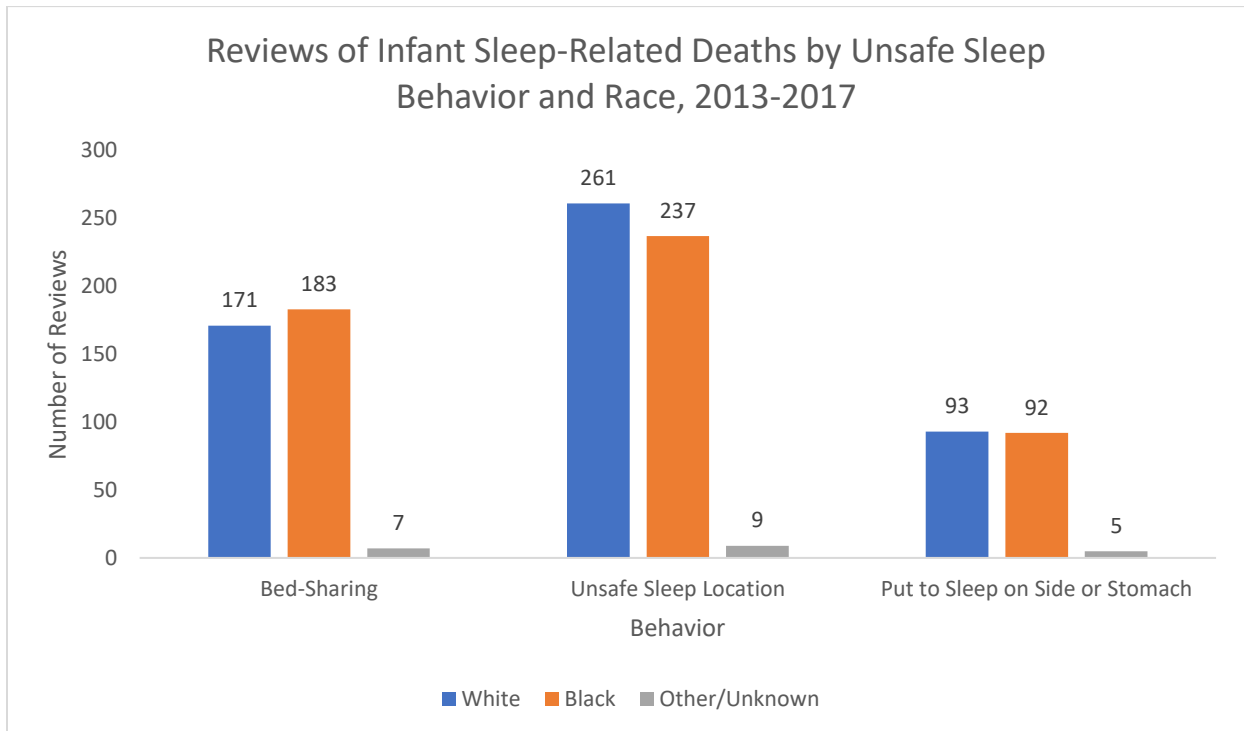
### Reviews of Infant Sleep-Related Deaths by Unsafe Sleep Behavior and Age, 2013-2017



The following chart shows the unsafe sleep behavior involved by county type.



The following chart shows the unsafe sleep behavior involved by race of the child.



#### Local Safe Sleep Initiatives:

##### Allen County

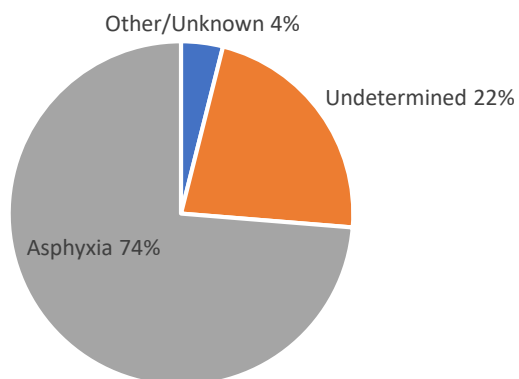
- Infant safe sleep campaigns occur within Allen County. Allen County Public Health offers various safe sleep messages to families that receive services at the health department. Some examples include posting information on social media websites, hanging posters in waiting rooms, and providing handouts to people participating in the Moms and Babies First Program and those receiving infant immunizations. The Cribs for Kids Program provides Pack 'n Plays to be distributed in the community to promote and provide safe sleep environments for infants in need. Along with providing the cribs, education on safe-sleep practices are discussed when families receive the Pack 'n Play. Allen County Children's Services and Help Me Grow also provide safe sleep information. <https://www.allencountypublichealth.org/nursing/caring-for-two/>

##### Cuyahoga County

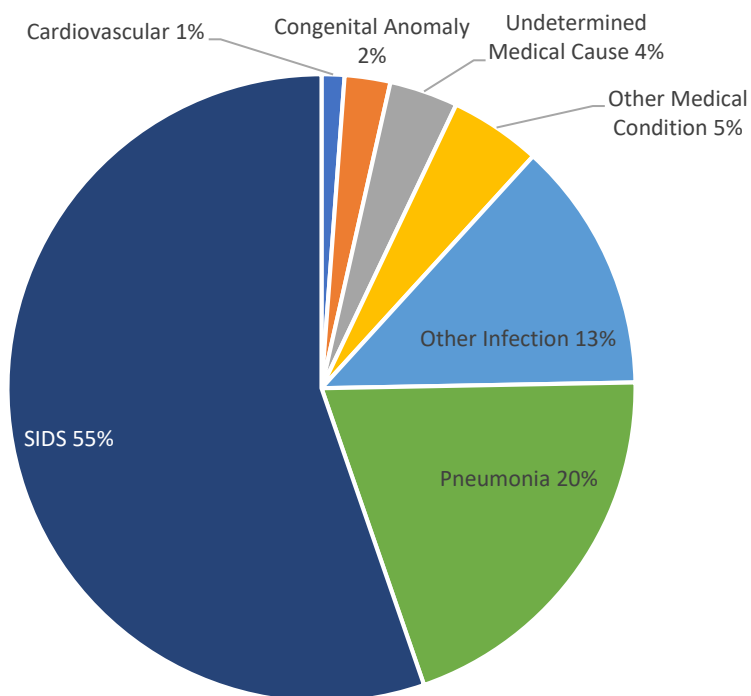
- The Cuyahoga County Division of Children and Family Services (DCFS) evaluates safe sleeping arrangements when conducting home visits or safety checks. All DCFS-involved families with children under the age of 2 receive a presentation by their DCFS worker on how to practice safe sleep. Pack 'n Plays are also distributed to families identified as needing a safe sleep environment.
- "Safe sleep cards" with the message, "Alone, on my Back, in a bare naked Crib," local data about sleep-related deaths, and a picture of a safe sleep environment continue to be circulated throughout Cuyahoga County. They have been distributed to hospitals, home visiting programs, community recreation centers, neighborhood clinics, churches, and family serving agencies.
- Cuyahoga County Board of Health (CCBH) partnered with Starting Point to provide safe sleep education and the development of an agency safe sleep policy for the providers of in-home daycares and the staff of daycare centers.
- CCBH is a leading Cribs for Kids Pack 'n Play distribution center for low income families in need of a safe sleep environment.
- CCBH developed an infant safe sleep policy for the agency to ensure consistent safe sleep messaging and content in all department programs and activities. More information available at:

<http://www.ccbh.net/safe-sleep-for-babies/>

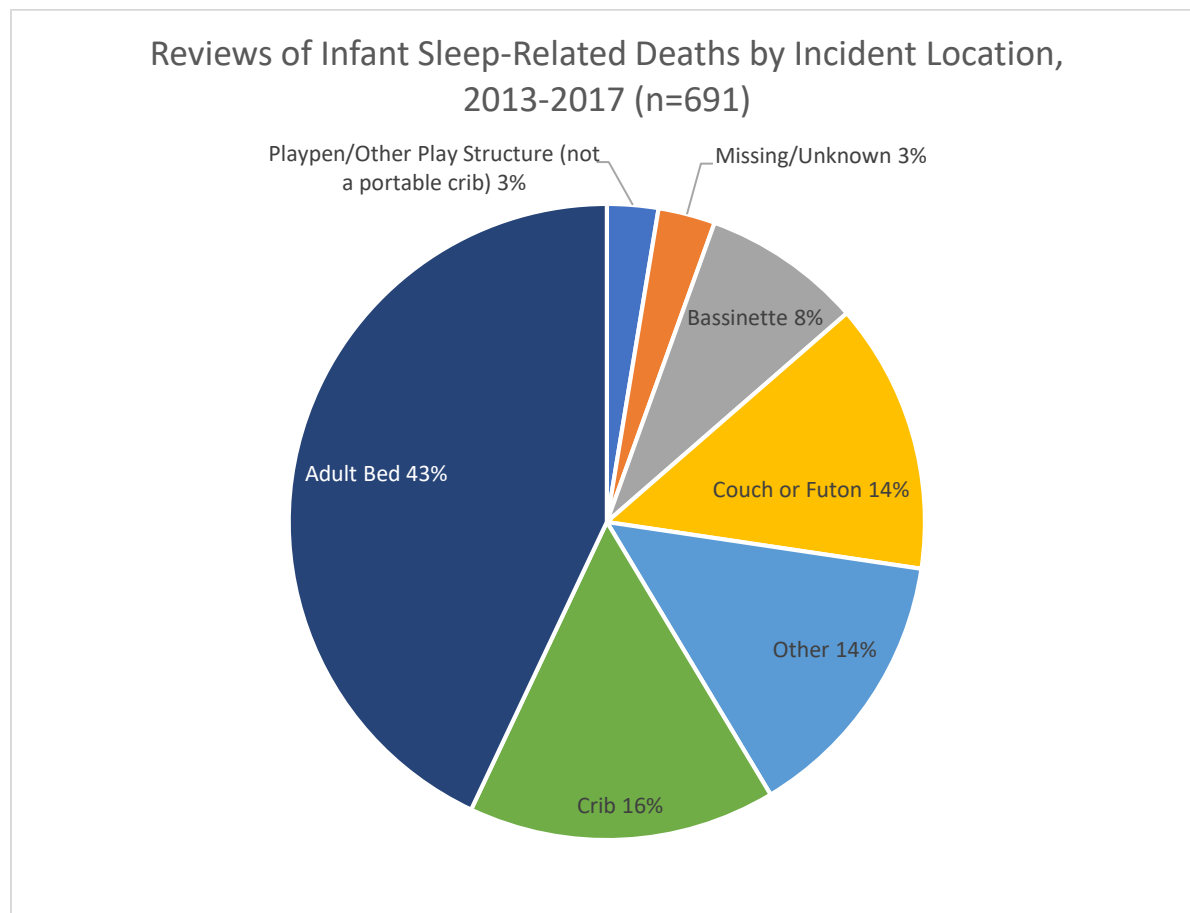
### Reviews of Infant Sleep-Related Deaths by External Causes, 2013-2017 (n=331)



### Reviews of Infant Sleep-Related Deaths by Medical Causes, 2013-2017 (n=85)



Of the 164 infant sleep-related deaths in which a crib or bassinette was indicated as the incident location, 83 percent (136) reported object(s) found in the sleep space. Among the 136 reviews indicating objects in the crib or bassinette, the most commonly found objects were thin blankets (72 percent), comforters or quilts (32 percent), and pillows (25 percent).



Bed-sharing was reported at the time of the death in 52 percent (361) of reviews.

Reviews of Infant Sleep-Related Deaths by Bed-Sharing, 2013-2017 (n=691)

Bed-Sharing	#	%
Yes	361	52%
No	263	38%
Unknown	58	8%
Missing	9	1%
Total	691	100%



## Infant Safe Sleep Recommendations

In October 2016, the American Academy of Pediatrics (AAP) issued a policy statement expanding its 2005 recommendations for reducing the risk of SIDS and other sleep-related infant deaths. Many local CFR risk reduction activities are based on these recommendations. ODH continues to urge parents and caregivers to follow these recommendations as the most effective way to reduce the risk of infant death.

- Place infants for sleep wholly on the back for every sleep, nap time and bedtime.
- Use a firm sleep surface. A firm crib mattress is the recommended surface.
- Room-sharing without bed-sharing is recommended. The infant's crib should be in the parents' bedroom, close to the parents' bed.
- Keep soft objects and loose bedding away from the infant's sleep area.
- Pregnant women should obtain regular prenatal care.
- Avoid smoke exposure during pregnancy and after birth.
- Avoid alcohol and illicit drug use during pregnancy and after birth.
- Breastfeeding is recommended.
- Consider offering a pacifier at nap time and bedtime.
- Avoid overheating and head covering in infants.
- Avoid commercial devices that are inconsistent with safe sleep recommendations.
- Supervised, awake tummy time is recommended to facilitate development.
- Do not use home cardiorespiratory monitors as a strategy to reduce the risk of SIDS.
- All infants should be immunized in accordance with AAP and CDC recommendations.

A number of unsafe sleep circumstances were commonly reported for sleep-related deaths:

- Bed-sharing was reported at the time of the death in 52 percent (361) of reviews. Among reviews indicating bed-sharing, infants most often shared a sleep surface with an adult only (69 percent), an adult and another child (15 percent), or another child only (6 percent).
- Of the 361 reviews that indicated bed-sharing with an adult or adult and another child, 43 percent indicated the supervisor was impaired at the time of the incident with 87 percent impaired by sleep and 11 percent impaired by alcohol or drugs.
- Forty-four reviews (12 percent of those indicating bed-sharing) indicated an adult fell asleep while feeding the infant, with twenty-four bottle-feeding, seventeen breastfeeding, and three unknown.
- Infants were put to sleep on their back in only 48 percent of reviewed deaths, and found on their back in 32 percent of reviewed deaths.
- Of the 190 sleep-related deaths where the infant was placed to sleep on the side or stomach, 93 were white children, 92 were black children and 5 deaths were races categorized as "other". Males accounted for 114 of the deaths and 76 of the deaths were females.
- Secondhand smoke exposure was reported for 242 (35 percent) of the infant sleep-related deaths.

Passage of Am. Sub. SB 276 by the 130<sup>th</sup> General Assembly required the creation of an infant safe sleep education program. Please see Appendix VII for the second annual report on the implementation of this new law.

## Local Prevention Initiatives:

### Franklin County

- Columbus Public Health (CPH) is charged by the CelebrateOne initiative to establish infant safe sleep practices as a community social norm and to develop a coordinated community process for ensuring high-risk families have a crib. CPH regularly provides portable cribs to community partners and residents who need them. In 2016, a total of 1,135 portable cribs were distributed in Franklin County by CPH and over 30 partner agencies. CPH also works collaboratively with CelebrateOne and conducts Safe Sleep Ambassador trainings in the community. The Ambassador training emphasizes the 2016 American Academy of Pediatrics Recommendations for a Safe Infant Sleeping Environment. In 2016, a total of 374 new Ambassadors were trained, and over 500 Ambassadors have been trained in 2017. Additionally, CPH and CelebrateOne are implementing an infant safe sleep campaign to educate and inform parents and caregivers.

<http://celebrateone.info/>

### Lucas County

- There are two crib programs in Lucas County to provide a safe sleep space for infants. The Cribs for Kids program provides a Pack 'n Play to Lucas County families that do not have a safe crib for their infant. Parents must be referred by a care coordinator from various community agencies. Parents then attend a class that presents educational information about safe sleep and SIDS risk reduction. Their care coordinator provides a home visit to the family after the baby's arrival to reinforce the safe sleep message. The class is offered 4-6 times per month. Through this program, 387 Pack 'n Play cribs were distributed in 2017.
- The Maternal Child Health Program at the Toledo-Lucas County Health Department also distributes cribs. This program offers safe sleep education and a Pack 'n Play to any expectant mother or mother of an infant less than twelve months of age, from any county in Ohio. In 2017, 203 Pack 'n Play cribs were distributed through this program. More information available at:

<http://www.lucascountyhealth.com/community-outreach/children-pregnancy/cribs-for-kids/>

Among reviews indicating bed-sharing, infants most often shared a sleep surface with an adult only (69 percent), an adult and another child (15 percent), or another child only (6 percent).

Reviews of Infant Sleep-Related, Bed-Sharing Deaths, by Person and/or Animal Shared With, 2013-2017 (n=361)

Sleep Surface Shared With	#	%
Adult	250	69%
Adult & Another Child	53	15%
Missing	24	7%
Child	21	6%
Unknown	10	3%
Pet	2	1%
Adult & Pet	1	<1%
Total	361	100%

Reviews of Infant Sleep-Related Deaths, Bed-Sharing with an Adult, Child, Pet, or Combination Indicated, by Impairment of Supervisor, 2013-2017 (n=327)

Supervisor Impaired	#	%
Yes	141	43%
No	87	27%
Unknown	84	26%
Missing	15	5%
Total	327	100%

Forty-four reviews (12 percent of those indicating bed-sharing) indicated an adult fell asleep while feeding the infant, with twenty-four bottle-feeding, seventeen breastfeeding, and three unknown.

Reviews of Infant Sleep-Related, Bed-Sharing, Deaths, Caregiver/Supervisor Fell Asleep While Feeding Child, 2013-2017 (n=361)

Fell Asleep While Feeding	#	%
Yes	44	12%
No	265	73%
Unknown	42	12%
Missing	10	3%
Total	361	100%

### OCTF Infant Mortality Prevention Initiatives

The Ohio Children's Trust Fund (OCTF) invests in numerous statewide prevention programs and initiatives including partnering with multiple organizations to develop prevention strategies that aim to reduce Ohio's alarmingly high rate of infant mortality, including:

- Two quality improvement projects relating to safe sleep and injury prevention for infants, birth to 12 months of age as well as an earned media campaign to raise awareness through statewide print and electronic news reports of safe sleep practices;
- The development and utilization of a safe sleep/infant mortality specific tool designed to aid clinicians in screening families for risk and providing education to families as to best practices. The tool is being utilized in pediatric primary care offices and in several community settings including faith-based organizations;
- The creation of a part II maintenance of certification self-assessment module that will provide essential education for healthcare providers on child abuse and neglect prevention; and
- Community-based prevention services that provide families with advice, guidance and other help from health, social service and child development professionals. These services provide communities with access to parent education and community education classes. Parents learn how to improve their family's health and provide better opportunities for their children. More information available at:

<https://jfs.ohio.gov/octf>

Infants were put to sleep on their back in only 48 percent of reviewed deaths and found on their back in 32 percent of reviewed deaths.

Reviews of Infant Sleep-Related Deaths by Put to Sleep Position, 2013-2017 (n=691)

Put to Sleep Position	#	%
On Back	334	48%
Unknown	153	22%
On Stomach	113	16%
On Side	77	11%
Missing	14	2%
Total	691	100%

Reviews of Infant Sleep-Related Deaths by Found Sleep Position, 2013-2017 (n=691)

Found Position	#	%
On Stomach	247	36%
On Back	218	32%
Unknown	139	20%
On Side	73	11%
Missing	14	2%
Total	691	100%

Being exposed to secondhand smoke on a regular basis was reported for 242 (35 percent) of the infant sleep-related deaths.

Reviews of Infant Sleep-Related Deaths by Second Hand Smoke Exposure, 2013-2017 (n=691)

Response	#	%
Unknown	299	43%
Yes	242	35%
No	122	18%
Missing	28	4%
Total	691	100%

### Preventability of Infant-Sleep Related Deaths

Of the 691 Infant-Sleep Related Deaths, 71 percent were found to be preventable. Preventability could not be determined in 21 percent of the reviews. Seven percent of the reviews were found to be probably not preventable.

### ODH Infant Feeding and Infant Safe Sleep Policies

The Ohio Department of Health is committed to promoting optimal health and safety for all Ohio infants and decreasing infant mortality. ODH recognizes its leadership role in establishing standards for policies and practices that promote healthy behaviors among its employees, programs, subgrantees and other state agencies for what ODH believes to be in the best interest of Ohio residents. Since 2012, the department adopted and began implementation of two policies regarding infant health: feeding and safe sleep. The purpose of the policies is to establish a consistent message across all department programs and activities regarding breastfeeding and safe sleep. The policies can be found at:

[http://www.odh.ohio.gov/odhprograms/cfhs/cf\\_hlth/cfhs1.aspx](http://www.odh.ohio.gov/odhprograms/cfhs/cf_hlth/cfhs1.aspx).

A training video about the policies is available on OhioTRAIN at:

<https://oh.train.org/DesktopShell.aspx>.

Local health departments and other state agencies are encouraged to adopt similar policies.

## Birth Defects, All Ages

### **Background**

Birth defects or congenital anomalies are one of the leading causes of infant mortality in the United States and account for approximately 19 percent of infant deaths in Ohio. Nationally, birth defects are a major cause of morbidity and mortality throughout childhood. Approximately three percent of babies are born with a birth defect. In Ohio, this is approximately 4,500 babies each year. Some birth defects are life-threatening, in which the case a baby may only live for a few months.

Most birth defects occur in the first three months of pregnancy as the baby's organs begin to develop, however some birth defects occur later in pregnancy as organs continue to grow. For many birth defects, the causes are unknown but thought to be multi-factorial, that is, a combination of genes, lifestyle behaviors and environmental factors.

Research from Ohio birth defects surveillance systems and the Ohio Child Fatality Review system contributes to identifying risk factors and prevention strategies. Risk factors for birth defects include smoking or drinking alcohol during pregnancy; certain medical conditions, such as obesity, or diabetes that is not controlled; certain prescription medications; family history of birth defects; and becoming pregnant after the age of 35 years.

### **CFR Findings**

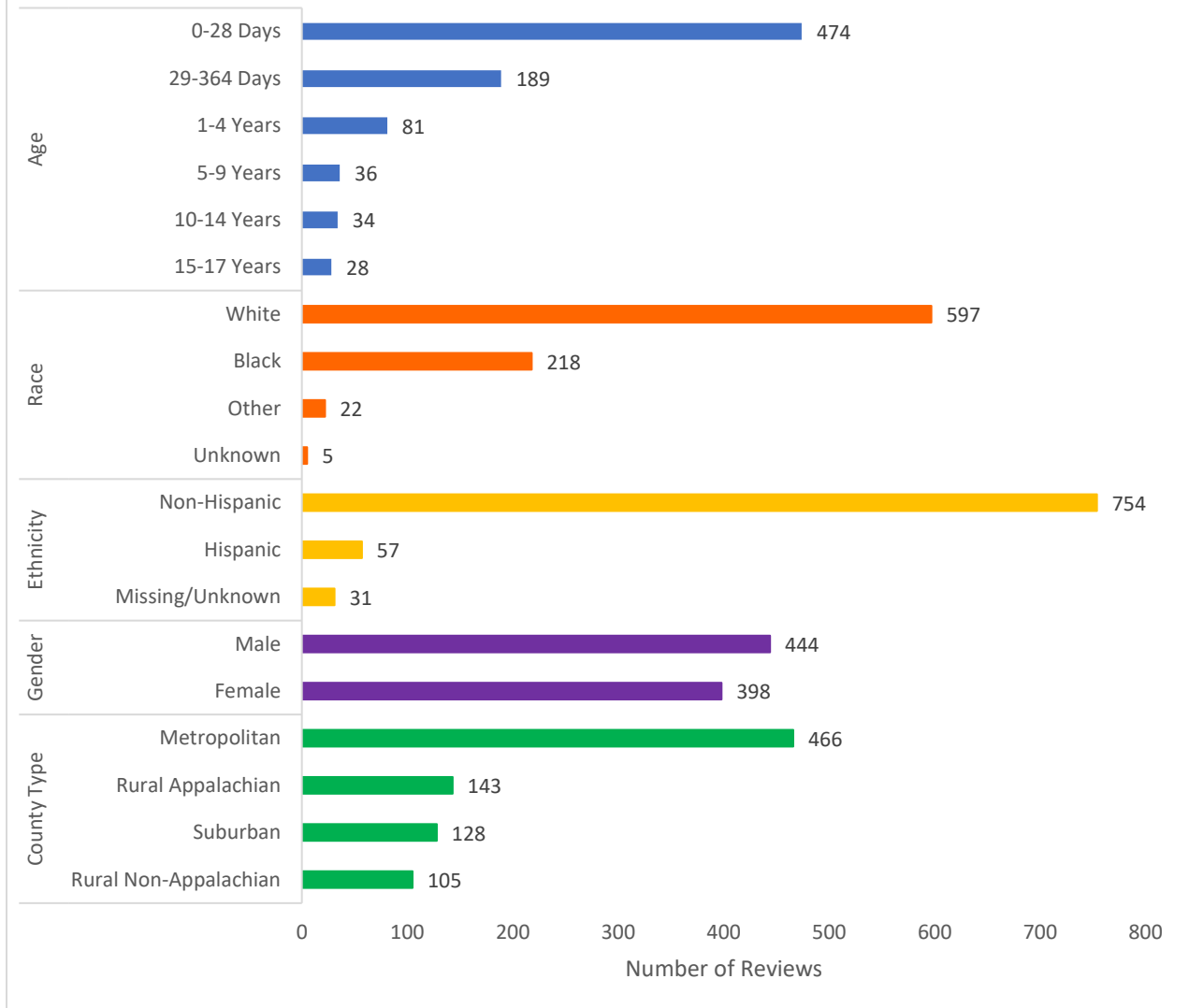
#### **Preventability of Congenital Anomaly deaths**

Of the 842 deaths due to congenital anomalies 96 percent were determined to be probably not preventable. Preventability could not be determined in three percent of the reviews. One percent of the reviews were found to be probably preventable.

Among medical causes of death, congenital anomalies accounted for 17 percent of reviews.



# Reviews of Congenital Anomaly Deaths by Age, Race, Ethnicity, Gender, County Type, 2013-2017 (n=842)



## Reviews by Age Group

In response to recommendations from the Ohio CFR Advisory Committee to present the data and findings in ways that are meaningful and useful to program developers and policy makers, this report presents the findings by age groups. It is reasonable to assume that some risk and protective factors may vary by age group.<sup>7</sup>

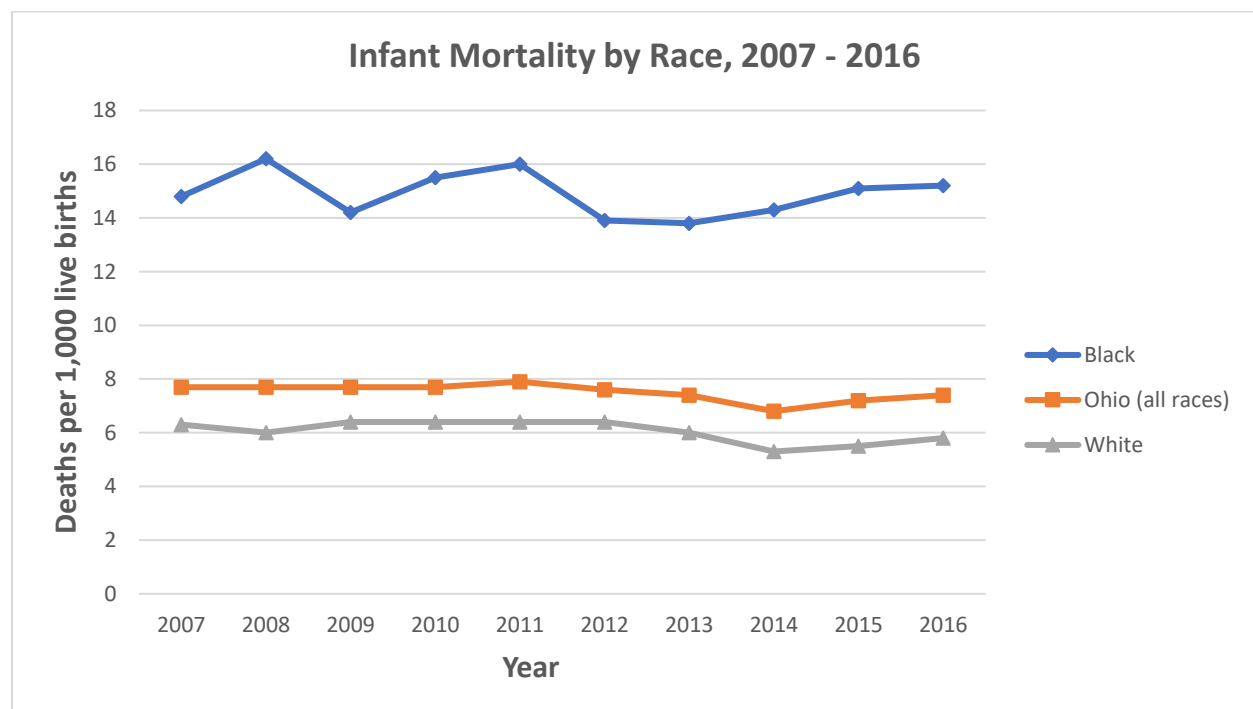
## Infant Deaths

### Background

Infant mortality is an important gauge of the health of a community because infants are uniquely vulnerable to the many factors that impact health, including socioeconomic disparities. The U.S. infant mortality rate for 2016 was 5.9 infant deaths per 1,000 live births.

Ohio's 2016 overall infant mortality rate was 7.4; the black infant mortality rate was 15.2; and the white infant mortality rate was 5.8 deaths per 1,000 live births.<sup>8</sup>

Though the infant mortality rate in Ohio declined from 7.8 in 2006 to 7.4 in 2016, Ohio's 2016 overall infant mortality rate remains higher than the national average. In addition, the racial disparity continues to be substantial, with black infants dying at more than twice the rate of white infants. For these reasons, The Ohio Department of Health has identified decreasing infant mortality as a top priority in its state health improvement plan.

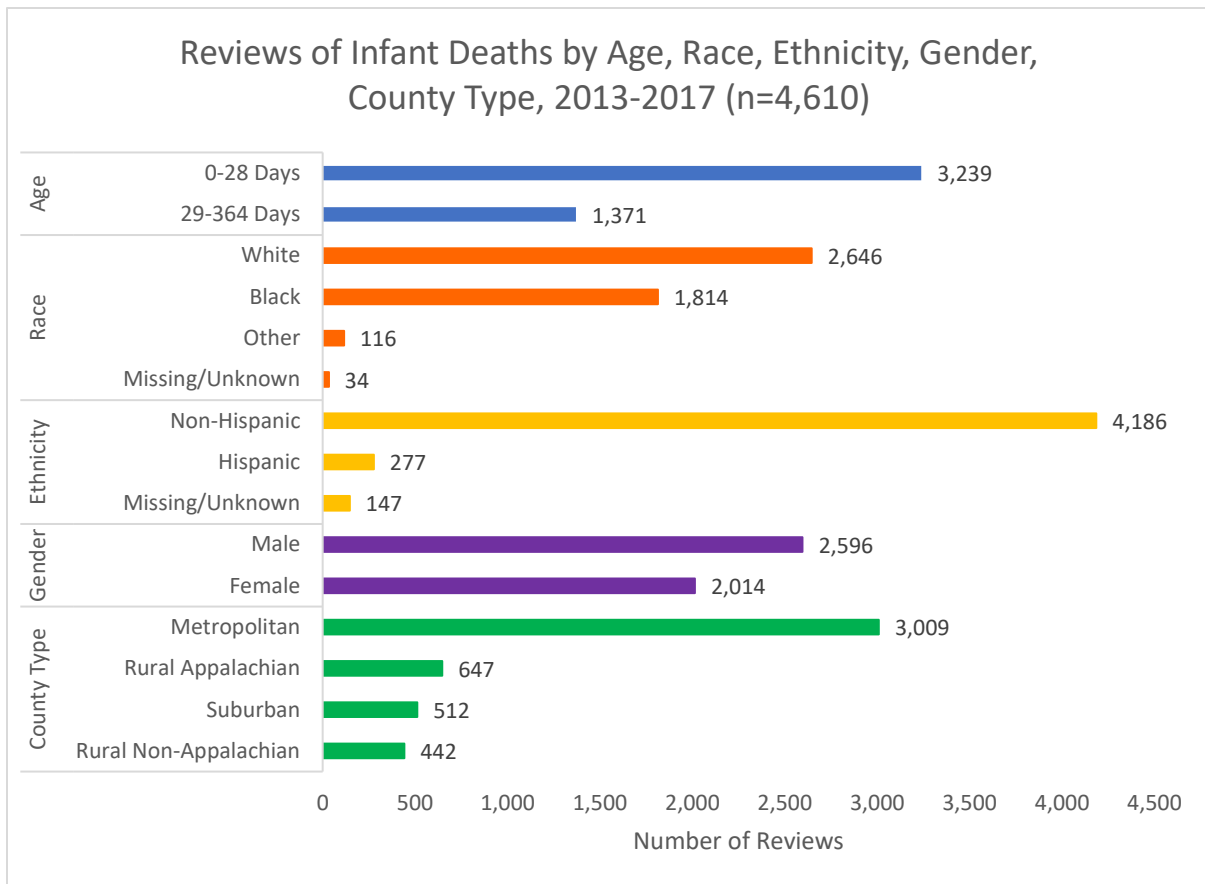


Local Prevention Initiatives:

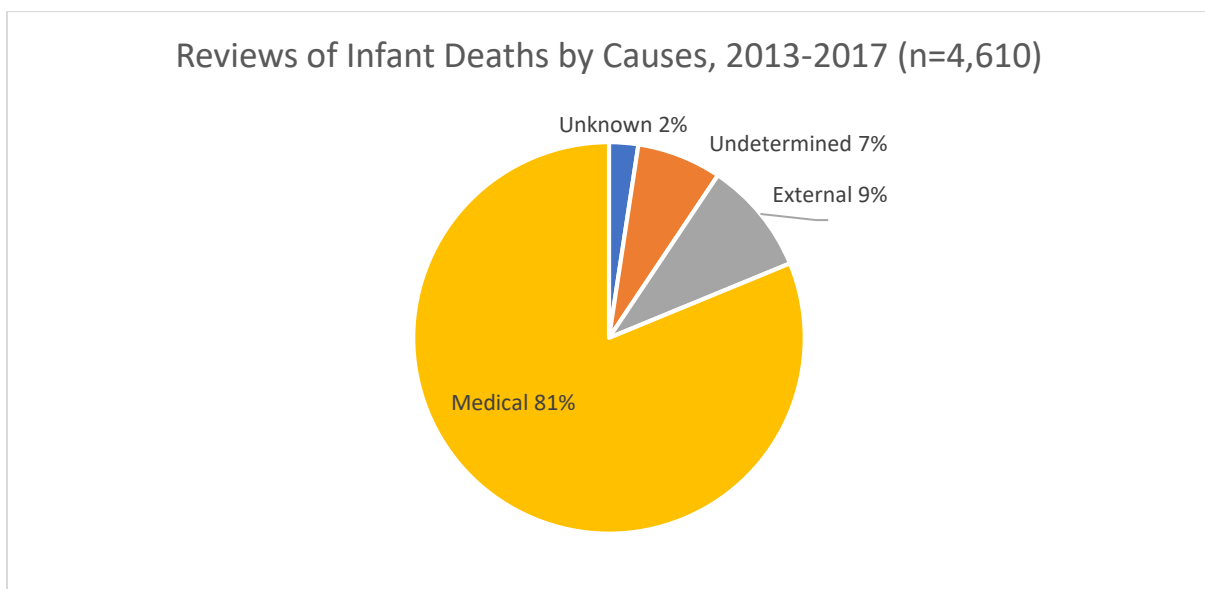
The Perry County Safe Baby Connection is a program that assures that babies ride safe (car seat education and distribution), sleep safe (education and receive Pack 'n Play), and are safe from communicable diseases (ensure babies are current on vaccinations). More information available at:

<http://perrycountyhealth.info>

The following chart shows the 4,610 infant deaths by age, race, ethnicity, gender and county type.



Eighty-one percent of infant deaths were due to a medical cause.

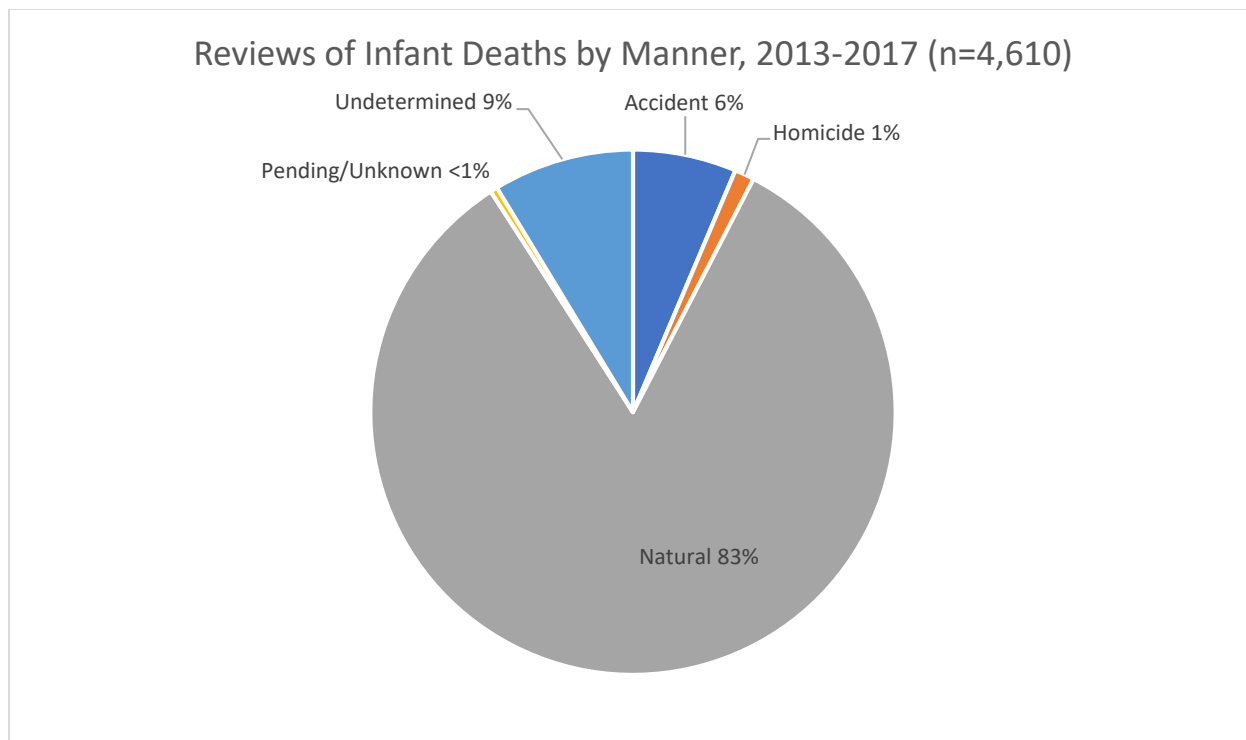


Local Prevention Initiatives:

Infant Mortality has been greatly reduced due to the Community Health Worker Erie County has on staff to assist prenatal moms in connecting them to resources needed, assisting with transportation to appointments and making sure the mom/caregivers have a Pack 'n Play for baby to have a safe environment to sleep and increasing quality of life for baby. More information available at:

<http://eriecohealthohio.com/departments/pages/primary-care/medical-services-additional-services-and-resources/>

Eighty-three percent of infant deaths occurred by a natural manner.



Reviews of Infant Deaths by Leading Causes of Death (External and Medical), 2013-2017	
Prematurity	2,173
Congenital Anomaly	663
Other Medical Condition	336
Asphyxia	259
Cardiovascular	158

#### Preventability of Infant deaths

Of the 4,610 infant deaths 70 percent were determined to be probably not preventable. Fifteen percent of the reviews were found to be probably preventable. Preventability could not be determined in 13 percent of the reviews.

## Ohio Equity Institute

In 2012, the Ohio Department of Health began partnering with nine Ohio communities to improve overall birth outcomes and reduce the racial disparities in infant mortality. The Ohio Equity Institute, most commonly known as OEI, is a data-driven, community-led, high-visibility movement by nine urban Ohio counties. In 2016, participating counties accounted for 59% of all infant deaths in Ohio and 86% of the state's black infant deaths.

- Butler County
- Canton, Stark County
- Cincinnati, Hamilton County
- Cleveland, Cuyahoga County
- Columbus
- Dayton, Montgomery County
- Summit County
- Toledo, Lucas County
- Youngstown, Mahoning County

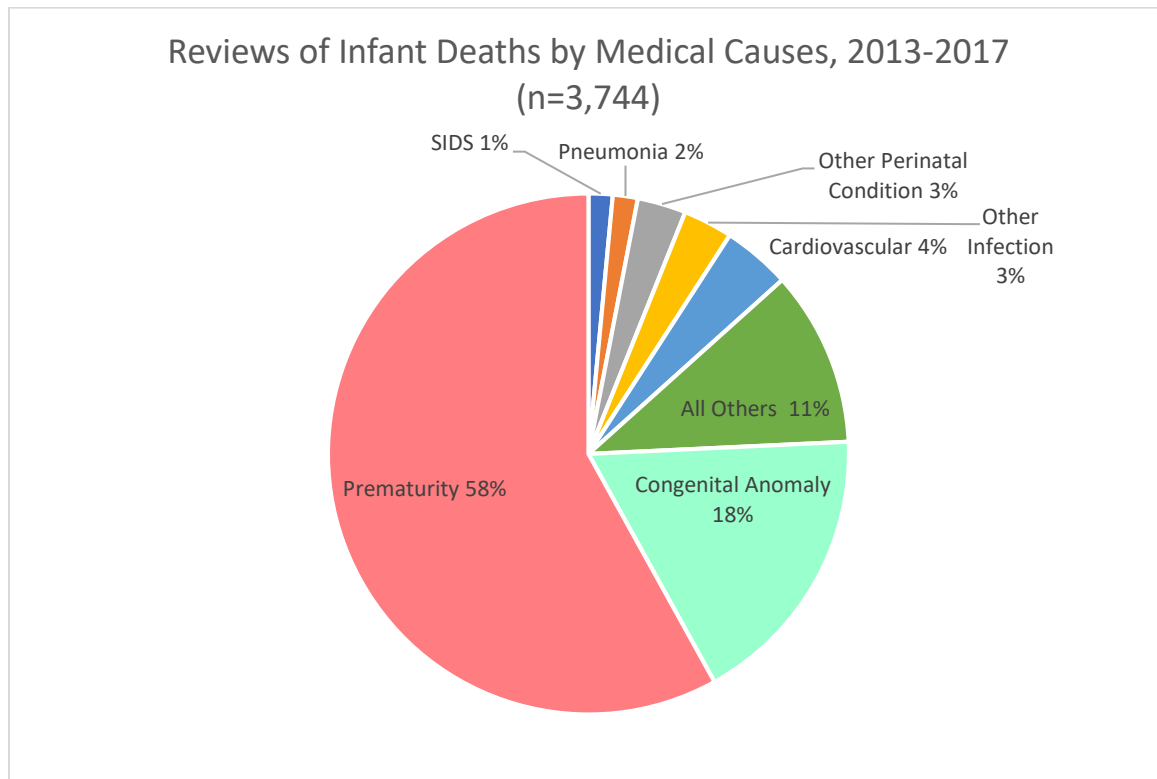
The structure of OEI is based on: 1) Race, racism and inequities in birth outcomes, 2) Epidemiology of birth outcomes, 3) Evidence-based interventions for vulnerable populations, 4) Leadership and 5) Evaluation. Through data-driven decisions specific to target populations in participating communities, OEIs have coordinated the availability and awareness of evidence-based strategies shown to improve birth outcomes. Some of these strategies include group facilitated prenatal care, safe sleep practices, smoking cessation and safe birth spacing. In fiscal year 2019, the OEI structure will transition to consist of teams addressing social determinants of health through policy and practice changes and Neighborhood Navigators connecting women to clinical and social services.

The Ohio Department of Health also helped OEI teams build capacity for infant mortality data analysis by funding an epidemiologist in each of the nine high-risk metropolitan areas. This data analysis support helps communities in planning, implementing and evaluating infant mortality initiatives at the local level.

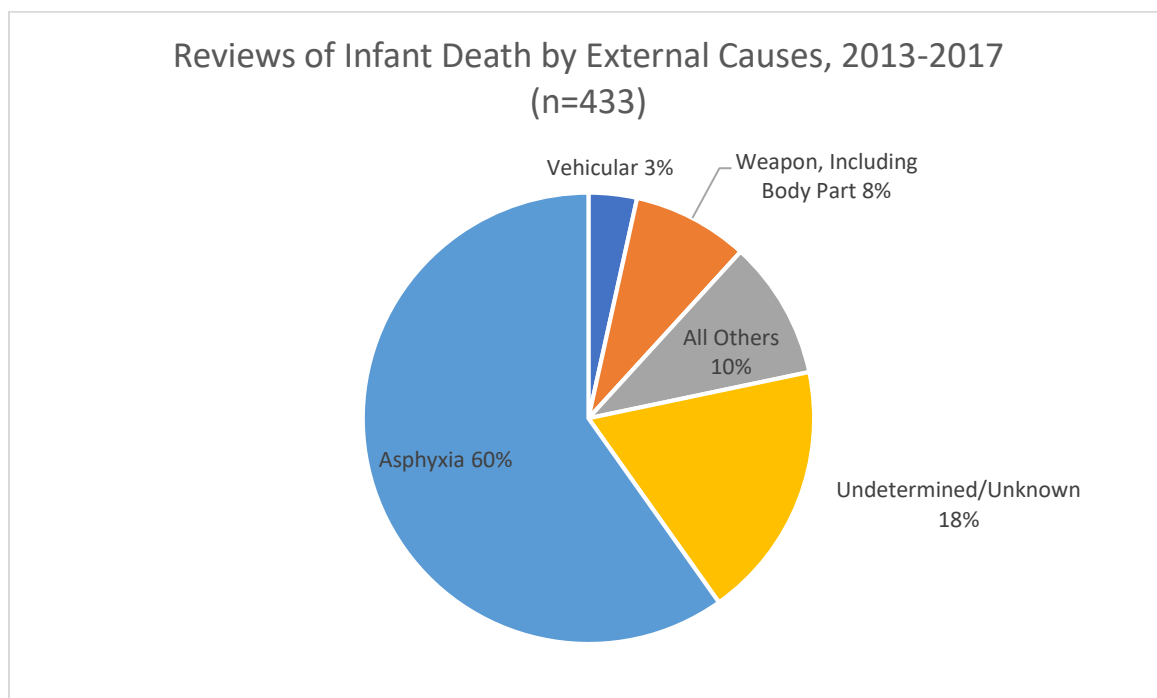
For more information about OEI, go to:

<http://www.odh.ohio.gov/OEI>

The chart below shows the medical causes in infant death reviews. Prematurity accounts for more than half of the medical cause reviews.



The following charts shows the external causes in infant deaths. The leading external cause is asphyxia.





Birth Weight and Maternal Age for Infant, Premature Deaths, 2013-2017 (n=2,173)

Birth Weight	#	%
< 500 grams	1,141	53%
500-999 grams	643	30%
1,000-1,499 grams	88	4%
1,500-2,499 grams	48	2%
≥ 2,500 grams	7	<1%
Missing/Unknown	246	11%

Maternal Age*	#	%
≤ 19 years	189	9%
20-24 Years	520	25%
25-29 Years	576	28%
30-34 Years	451	22%
35-39 Years	211	10%
≥ 40 years	57	3%
Missing/Unknown	44	2%

\*Where primary caregiver identified as female biological parent and age available (n=2,048).

Other Birth History Factors for Infant, Premature Deaths, 2013-2017 (n=2,173)

Other Birth History Circumstances	Yes		No		Missing/Unknown	
	#	%	#	%	#	%
Multiple Birth	613	13%	3,765	82%	232	5%
No Prenatal Care	300	7%	3,629	79%	681	15%
Mother Had Medical Complications During Pregnancy	1,963	43%	1,104	24%	1,543	33%
Mother Smoked During Pregnancy	1,083	23%	2,841	62%	686	15%
Mother Used Illicit Drugs During Pregnancy	307	7%	1,322	29%	2,981	65%
Infant Born Exposed to Illicit Drugs	152	3%	0	0%	4,458	97%

The Ohio Department of Health uses CFR data to inform the development and implementation of programs serving the maternal and child health population. Maternal smoking is a risk factor for low birth weight and other poor birth outcomes, so CFR data related to smoke exposure in infants who have died has been important to the Baby & Me – Tobacco Free program.

Baby & Me – Tobacco Free (BMTF) is a smoking cessation program created to reduce the burden of tobacco use on the pregnant and post-partum population. Women who quit smoking are less likely to have premature and low-birth weight babies and reduce the damaging effect of secondhand smoke on their children. The program's design has proven effective in decreasing the number of women who smoke during and after pregnancy.

The program uses a unique approach, combining cessation support specific to pregnant women, offering practical incentives, targeting low-income women (the largest group of smokers during pregnancy), and monitoring success. The Baby & Me – Tobacco Free program collaborates with local agencies that provide prenatal services to the target audience.

The BMTF program is implemented in Ohio at twenty- six sites throughout the state and this year added partner eligibility. The partner must comply with the program guidelines and if he/she remains smoke- free they will then qualify for the program incentives. The Moms Quit for Two Program, which began in January 2016, expands the reach of the BMTF to increase smoking cessation among pregnant and postpartum women. Both programs are a part of a larger effort to promote smoking cessation and reduce secondhand smoke exposure among Ohio's most vulnerable population. Both programs support the core State Health Improvement Plan and the Ohio Department of Health Strategic Plan components.

To learn more about perinatal smoking cessation:

<https://www.odh.ohio.gov/odhprograms/cfhs/psmok/presmoke1.aspx>

## Infant Deaths Due to Prematurity

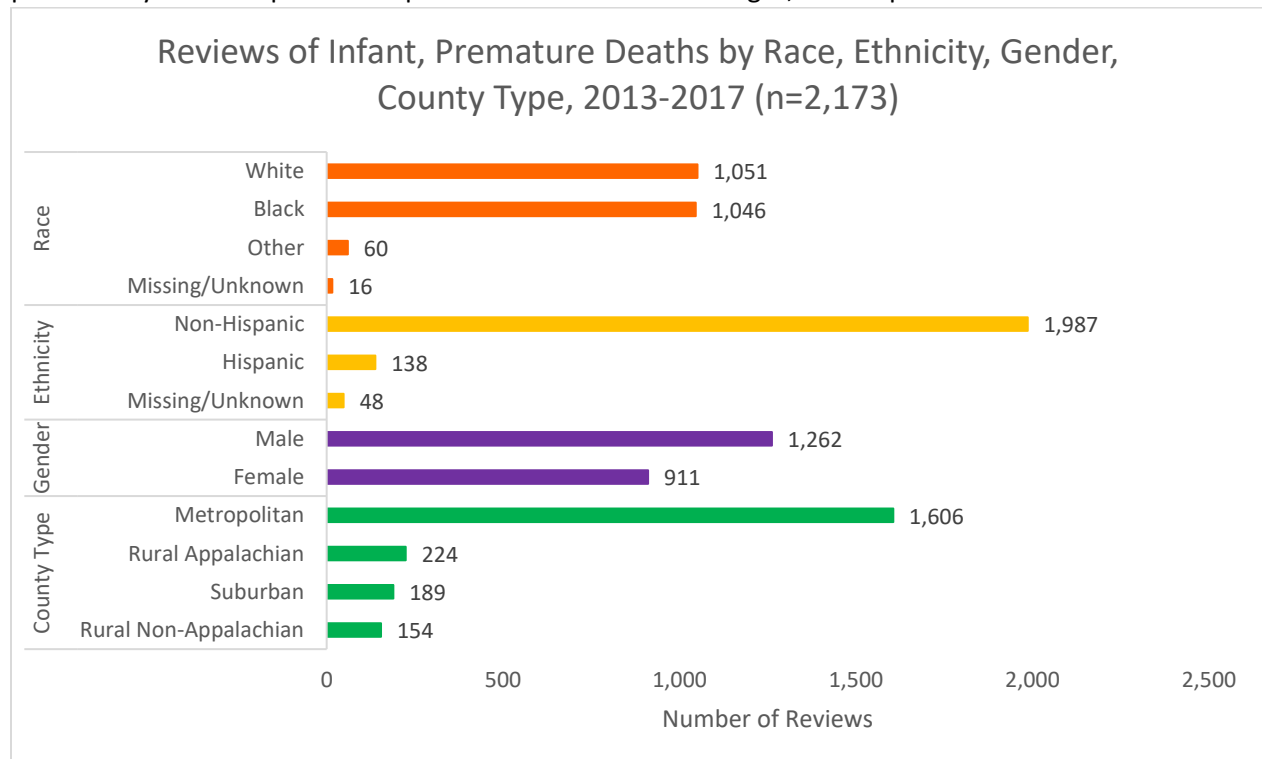
### Background

Prematurity is any birth prior to 37 weeks of gestation. Infants born even a few weeks early are at increased risk for severe health problems, lifelong disability and death. Prematurity is the leading cause of infant death nationally. According to the CDC, nearly a half million infants (one out of every nine births) are born prematurely each year in the United States and black women are 60 percent more likely to have a premature birth compared to white women.<sup>9</sup> As the leading cause of death for Ohio's children, prematurity is a major contributor to Ohio's high infant mortality rate. In response to the need to better understand the factors related to prematurity, this section has been added to the annual report.

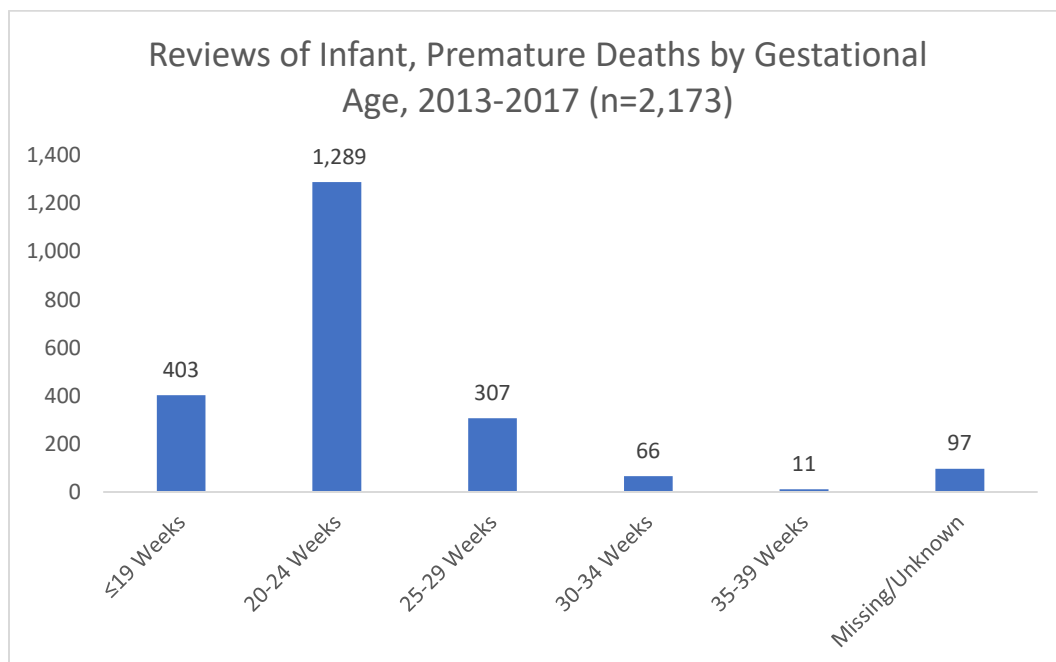
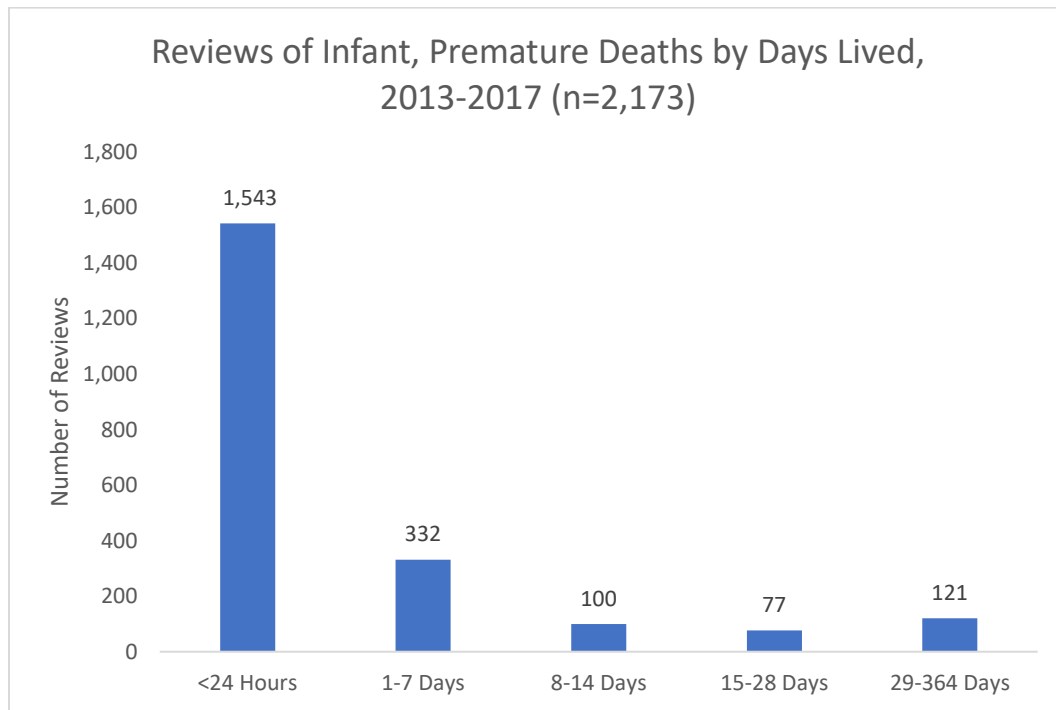
### CFR Findings

The CFR case report tool and data system capture information about prematurity as both a condition of birth and a cause of death. Gestational age at birth is noted for reviews of all infant deaths from all causes. Many infants born prematurely survive the immediate complications of their early birth, but die from some other cause. A separate variable is used to record the deaths directly attributed to prematurity. This chapter includes for analysis only those reviews where the death was attributed directly to the prematurity.

For the five-year period from 2013 through 2017, local CFR boards reviewed 2,173 infant deaths due to prematurity. These represent 31 percent of all deaths for all ages, and 47 percent of the reviews for



Racial disparities in premature infant deaths are persistent. Despite being only 18 percent of the Ohio child population, 48 percent of premature infant deaths were black children.



Birth Weight and Maternal Age for Infant, Premature Deaths, 2013-2017 (n=2,173)

Birth Weight	#	%
< 500 grams	1,141	53%
500-999 grams	643	30%
1,000-1,499 grams	88	4%
1,500-2,499 grams	48	2%
≥ 2,500 grams	7	<1%
Missing/Unknown	246	11%
Maternal Age*	#	%
≤ 19 years	189	9%
20-24 Years	520	25%
25-29 Years	576	27%
30-34 Years	451	21%
35-39 Years	211	10%
≥ 40 years	57	3%
Missing/Unknown	44	2%

\*Where primary caregiver identified as female biological parent and age available (n=2,048).

Other Birth History Factors for Infant, Premature Deaths, 2013-2017 (n=2,173)

Other Birth History Circumstances	Yes		No		Missing/Unknown	
	#	%	#	%	#	%
Multiple Birth	442	20%	1,636	75%	95	4%
No Prenatal Care	230	11%	1,613	74%	330	15%
Mother Had Medical Complications During Pregnancy	1,170	54%	334	15%	669	31%
Mother Smoked During Pregnancy	450	21%	1,427	66%	296	14%

Most Common Medical Complications, Among Mothers with Medical Complications During Pregnancy, Premature Deaths, 2013-2017 (n=1,170)

Medical Complications	#
Premature rupture of membranes (PROM)	465
Chorioamnionitis	290
Previous Preterm/Small for Gestation Age Infant	206
Incompetent Cervix	190
Uterine Bleeding	167
Chronic Hypertension	70
Diabetes	70
Pregnancy-Related Hypertension	61
Hydramnios/Oligohydramnios	40
Other Infectious Disease	32
Eclampsia	24

**Preventability of Premature Infant deaths**

Of the 2,173 infant deaths due to prematurity 84 percent were determined to be probably not preventable. Preventability could not be determined in 12 percent of the reviews. Three percent of the reviews were found to be probably preventable.

Local CFR boards consider individual factors related to preventability based on information and records available to them. In the absence of complete information (e.g., prenatal records, and maternal conditions) boards may not have enough information to determine preventability, and may select “probably not preventable”. While there are circumstances in which prematurity is not preventable, there are other circumstances in which it may be. State-level analysis of aggregate data provides the opportunity to investigate these circumstances.

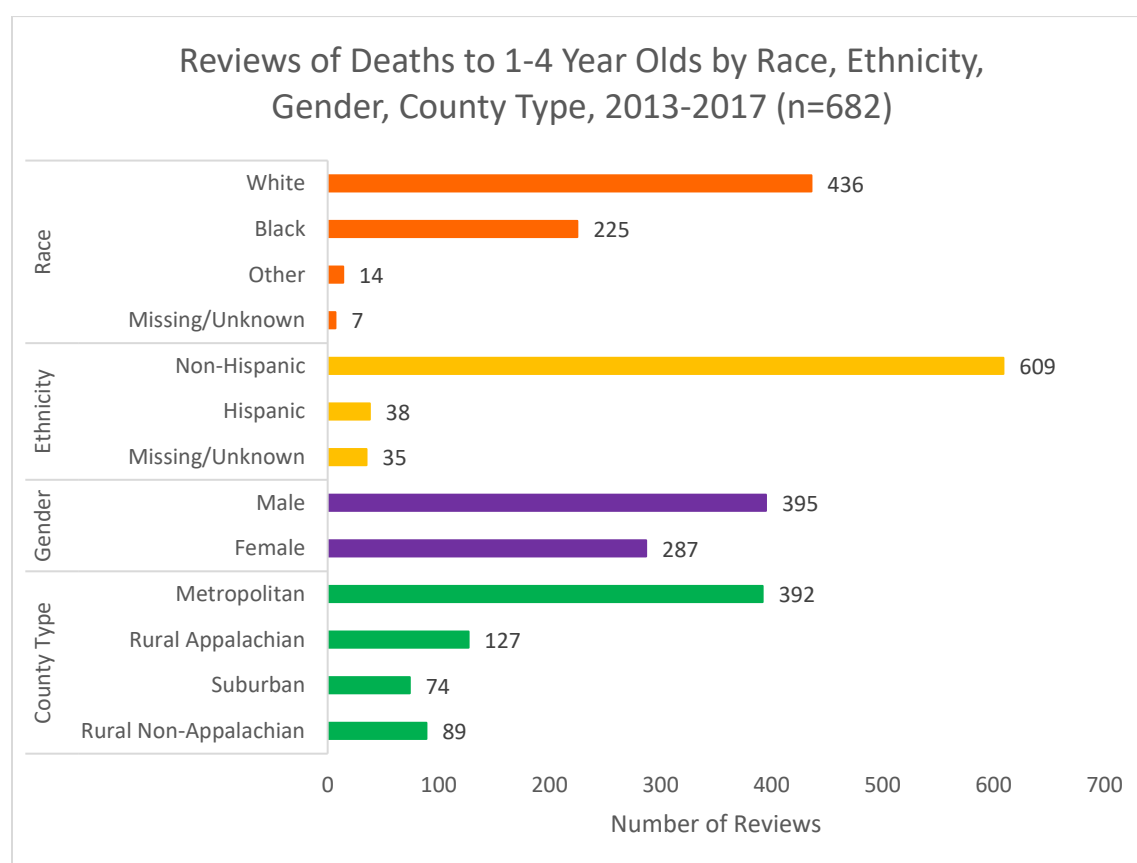
## Deaths to Children 1 to 4 Years Old

### Background

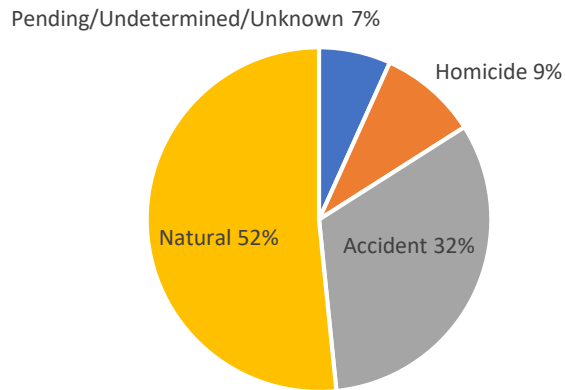
No longer babies, toddlers and preschoolers experience increased mobility and more awareness of their surroundings, but lack the reasoning skills to protect themselves from many dangers.<sup>10</sup> According to the National Center for Health Statistics, the leading causes of death for 1 to 4 year olds are accidents, congenital anomalies and cancer. Nationally, the 2015 mortality rate for this age group increased slightly from 2014, increasing from 24 per 100,000 in 2014 to 25 per 100,000 children in 2015.<sup>7</sup>

### CFR Findings

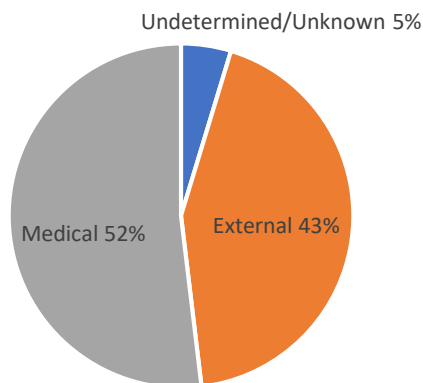
For the five-year period from 2013 through 2017, local CFR boards reviewed 682 deaths to children ages 1 to 4 years. These represent 10 percent of all 6,920 deaths reviewed.



### Reviews of Deaths to 1-4 Year Olds by Manner, 2013-2017 (n=682)



### Reviews of Deaths to 1-4 Year Olds by Cause, 2013-2017 (n=682)



#### Preventability in ages 1-4

Of the 682 deaths in this age group 45 percent were determined to be probably not preventable. Forty-two percent of the reviews were found to be probably preventable. Preventability could not be determined in 12 percent of the reviews.



### Ohio's Booster Seat Law

Ohio's Child Restraint Law requires children to use belt-positioning booster seats when they outgrow their child safety seats (usually at 4 years old and 40 pounds). The belt-positioning booster seats must be used until the child is 8 years old, unless the child is at least 4 feet, 9 inches tall. Booster seats raise the child so the shoulder and lap belt are correctly positioned across the strongest parts of the child's body, rather than riding up over the child's neck and stomach. By requiring the use of booster seats, the law will help prevent serious injuries and deaths to young children.

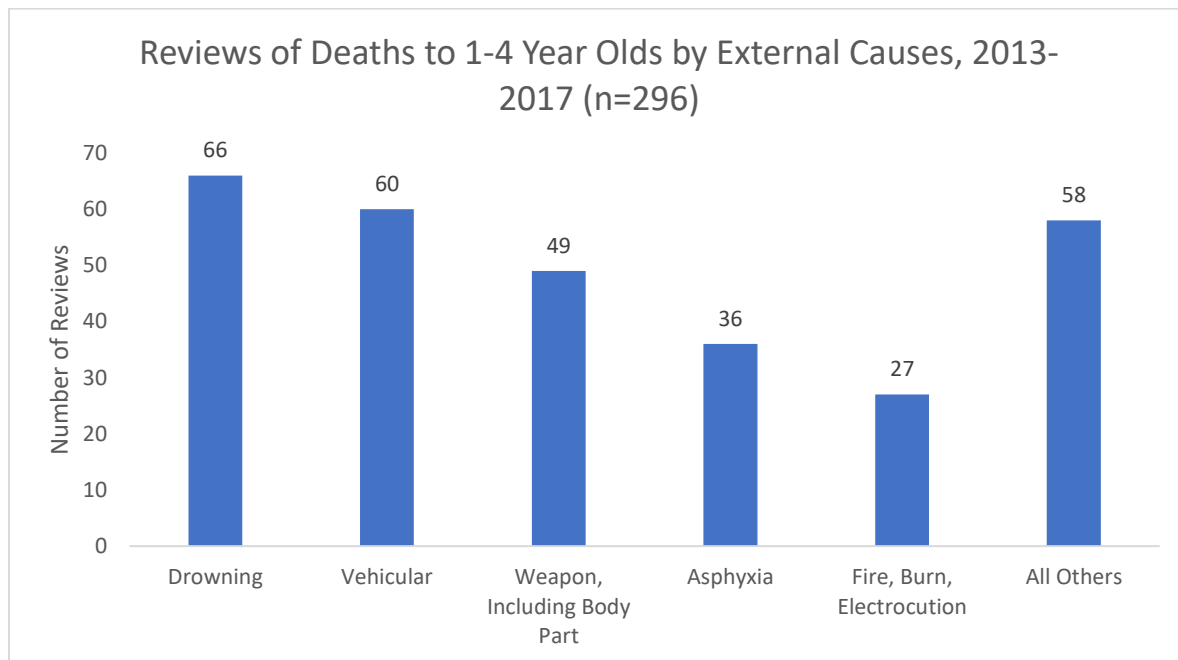
The current law requires the following:

- Children younger than 4 years old or less than 40 pounds must use a child safety seat.
- Children younger than 8 years old must use a booster seat until they are at least 4 feet, 9 inches tall.
- Children ages 8 to 15 must be restrained by the standard safety belts.

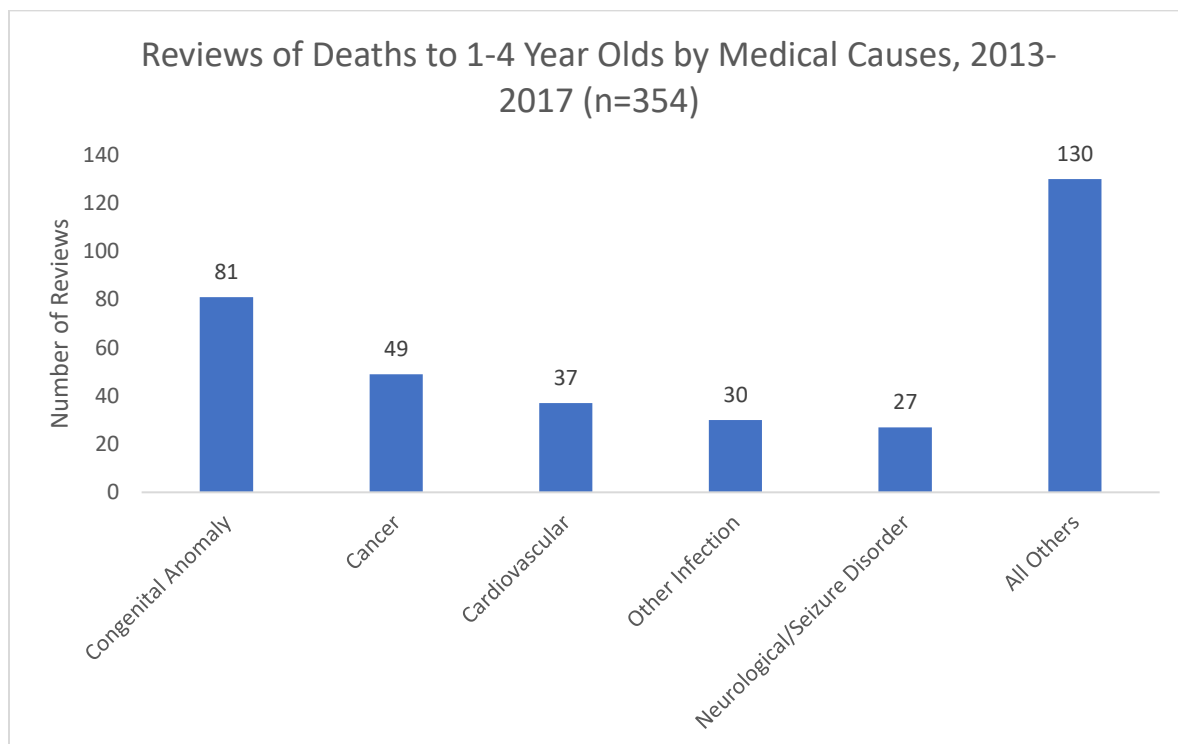
More information about the law and choosing the correct car seat or booster seat can be found at:

<https://www.odh.ohio.gov/health/vipp/cps/Child%20Passenger%20Safety%20Law.aspx>

The chart below shows five external causes of deaths, as well as all other causes, in ages 1-4. Other external causes include exposure, fall, and poisoning.



The chart below shows common medical causes of deaths in ages 1-4. Among other medical causes are flu, asthma, malnutrition, pneumonia, and prematurity



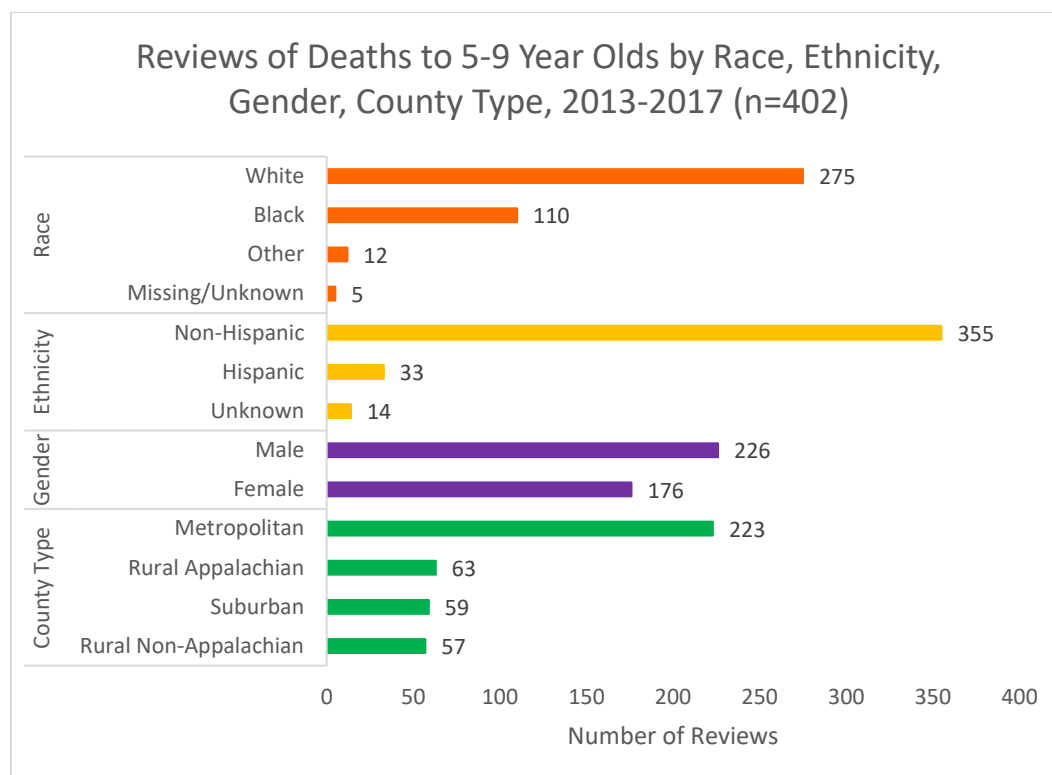
## Deaths to Children 5 to 9 Years Old

### Background

Children ages 5 to 9 years continue to improve motor skills and have more regular contact with people outside of their family. They have a growing understanding of consequences and of right and wrong.<sup>10</sup> According to the National Center for Injury Prevention and Control, the leading causes of death for 5 to 9 year olds nationally are motor vehicle injuries, cancer and congenital anomalies.<sup>11</sup>

### CFR Findings

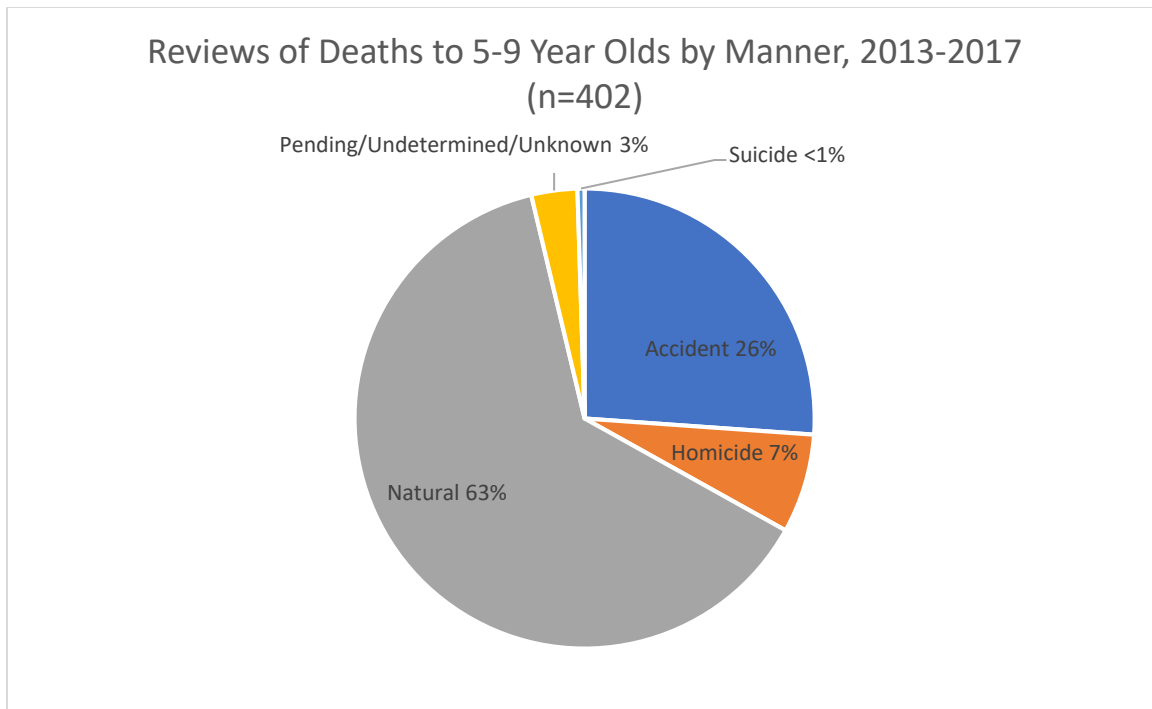
For the five-year period from 2013 through 2017, local CFR boards reviewed 402 deaths to children ages 5 to 9 years. These represent 6 percent of all 6,920 deaths reviewed.



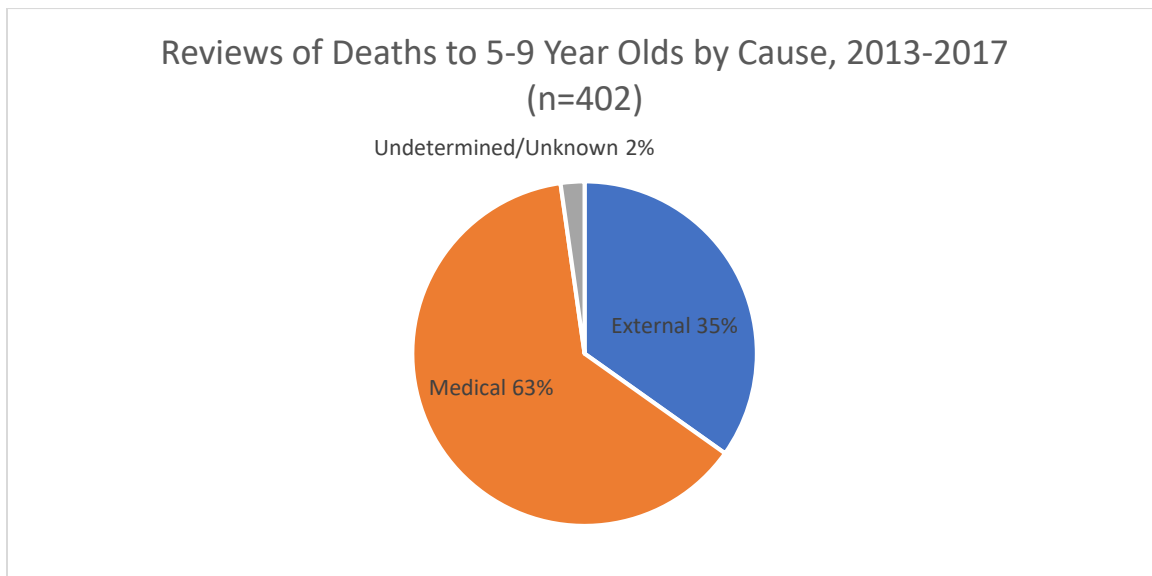
### Preventability in ages 5-9

Of the 402 deaths in this age group 57 percent were determined to be probably not preventable. Thirty-one percent of the reviews were found to be probably preventable. Preventability could not be determined in 10 percent of the reviews.

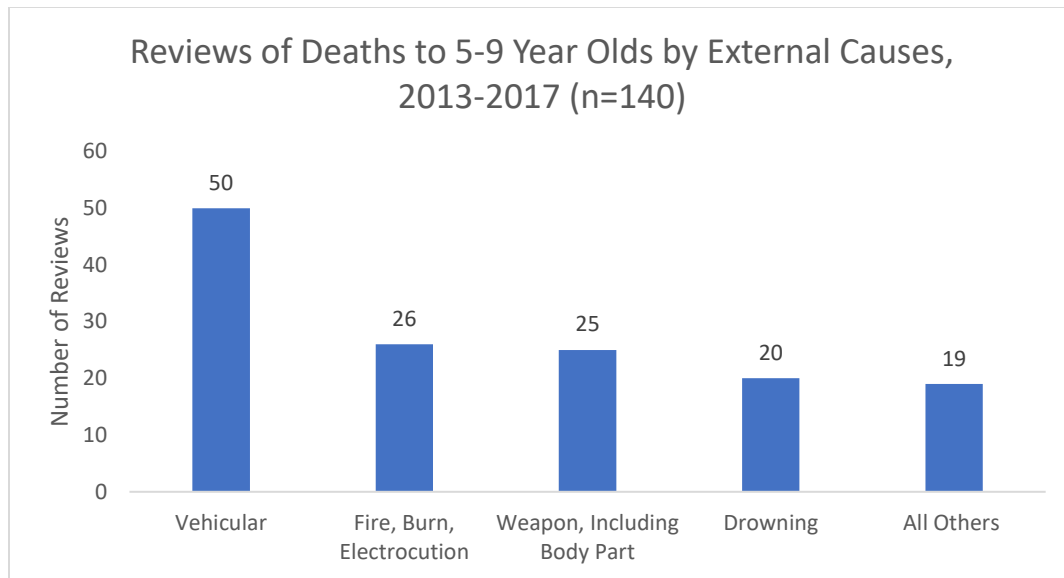
For children aged 5-9 years the majority of reviews were for deaths of a natural manner.



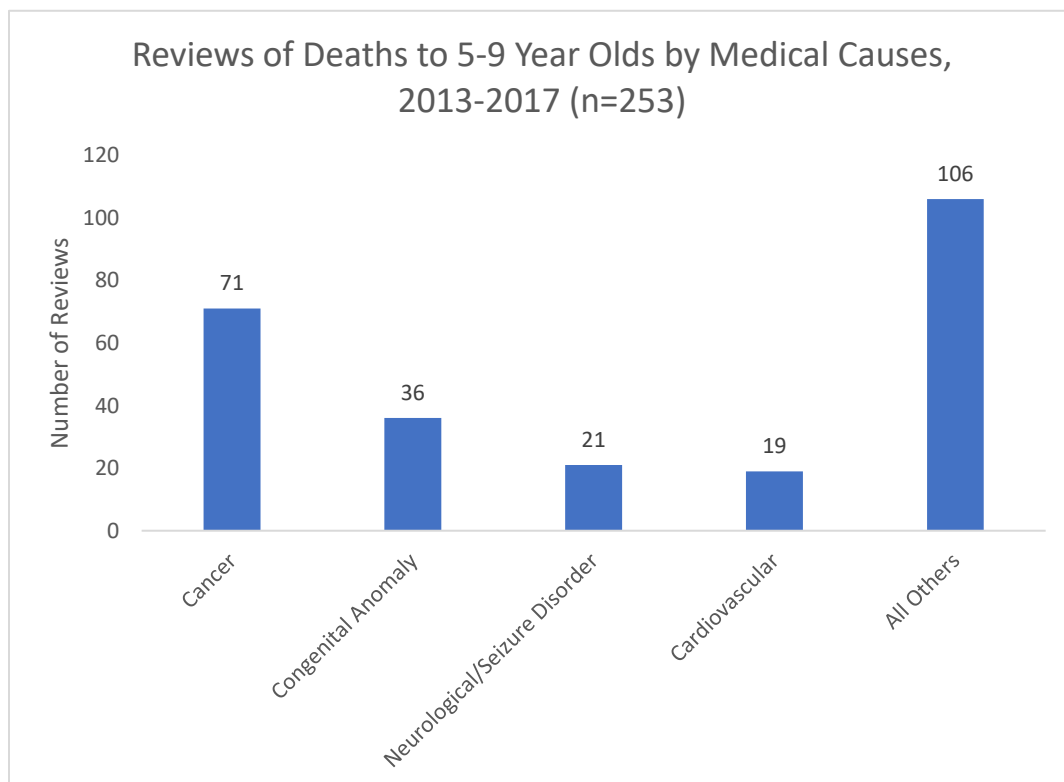
The following chart shows the percentage of reviews by cause in ages 5-9 years.



Other external causes of death included poisoning, asphyxia, and falls.



Among medical causes of death, cancer accounted for the single largest cause of death. Other medical causes of death include pneumonia, asthma, flu and diabetes.



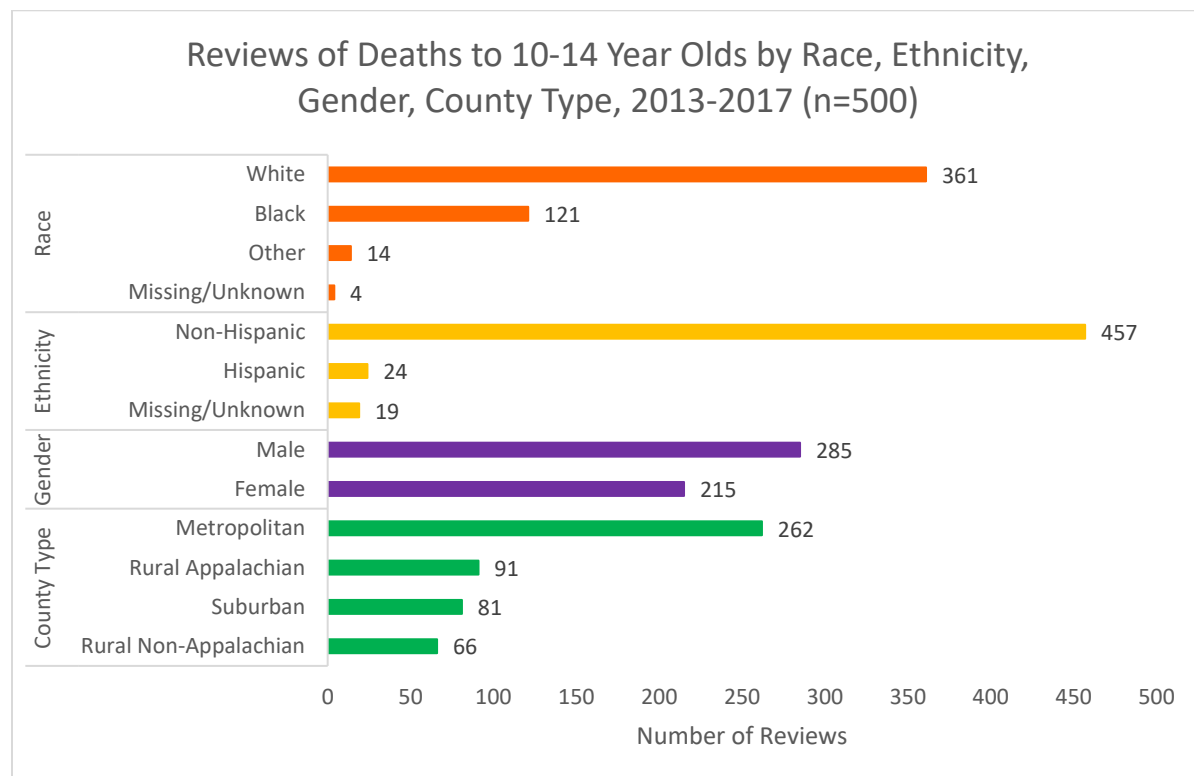
## Deaths to Children 10 to 14 Years Old

### Background

Children in early adolescence experience many physical, cognitive and social-emotional changes. As 10 to 14 year olds experience more independence, they also encounter strong peer pressure.<sup>10</sup> According to the National Center for Injury Prevention and Control, nationally the leading causes of death for 10 to 14 year olds are vehicular injuries, cancer, and suicide.<sup>11</sup>

### CFR Findings

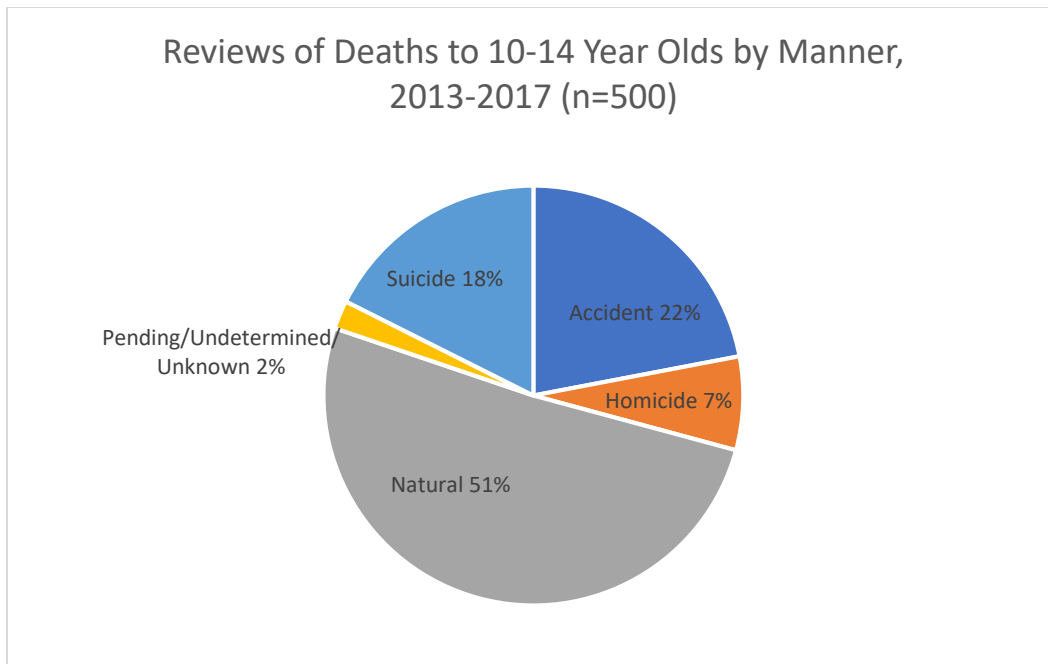
For the five-year period from 2013 through 2017, local CFR boards reviewed 500 deaths to children ages 10 to 14 years. These represent 7 percent of all 6,920 deaths reviewed.



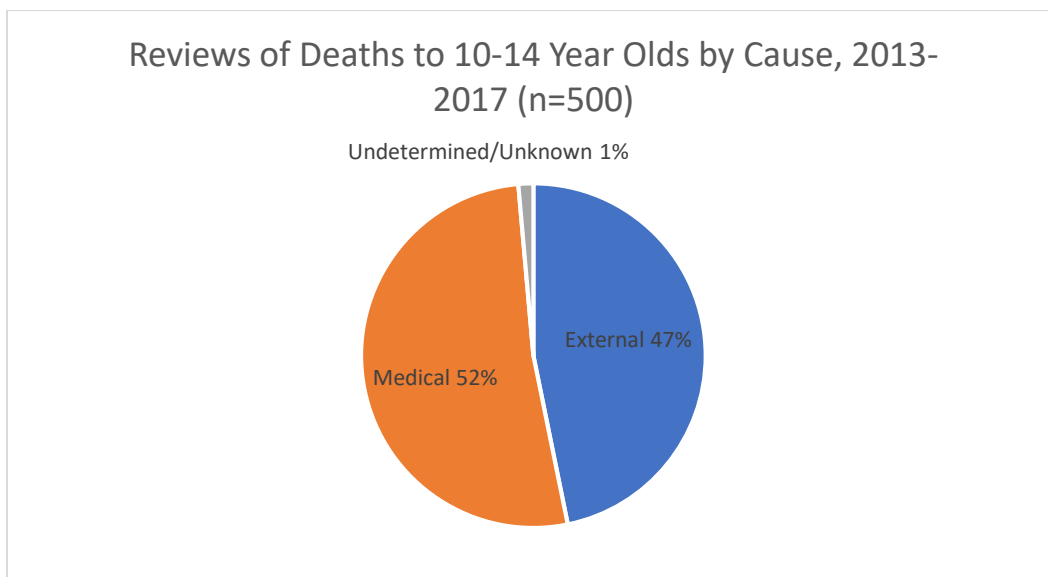
### Preventability in ages 10-14

Of the 500 deaths in this age group 44 percent were determined to be probably not preventable. Forty-three percent of the reviews were found to be probably preventable. Preventability could not be determined in 12 percent of the reviews.

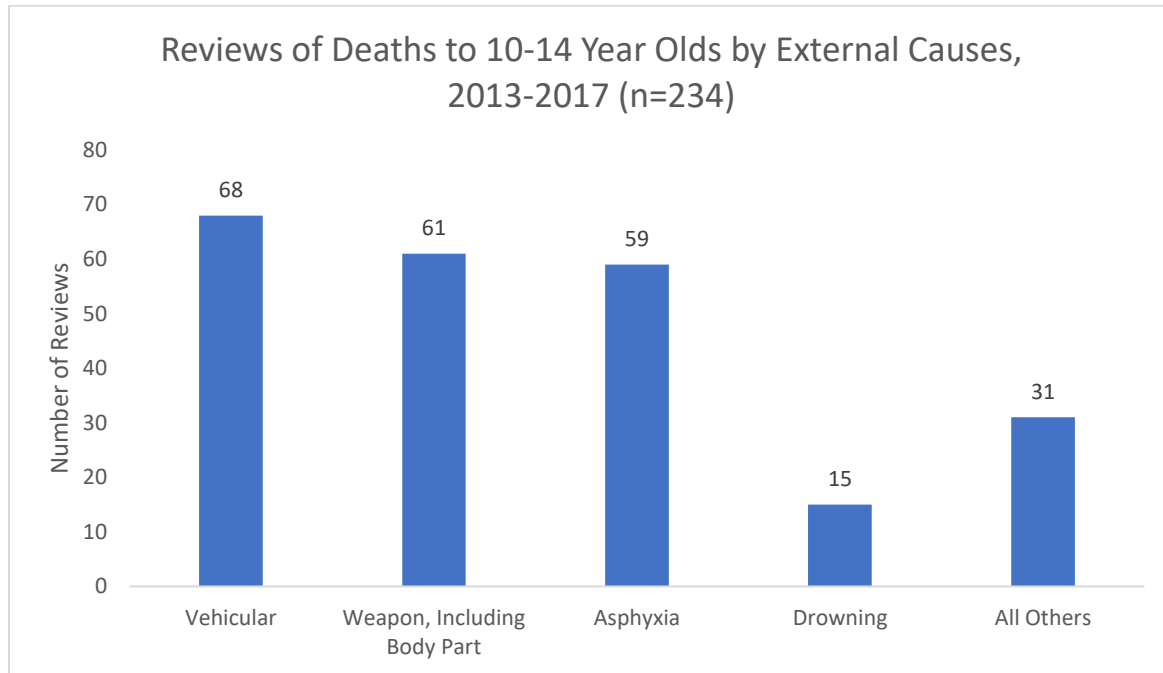
The following chart shows the percentage of death reviews by manner in ages 10-14.



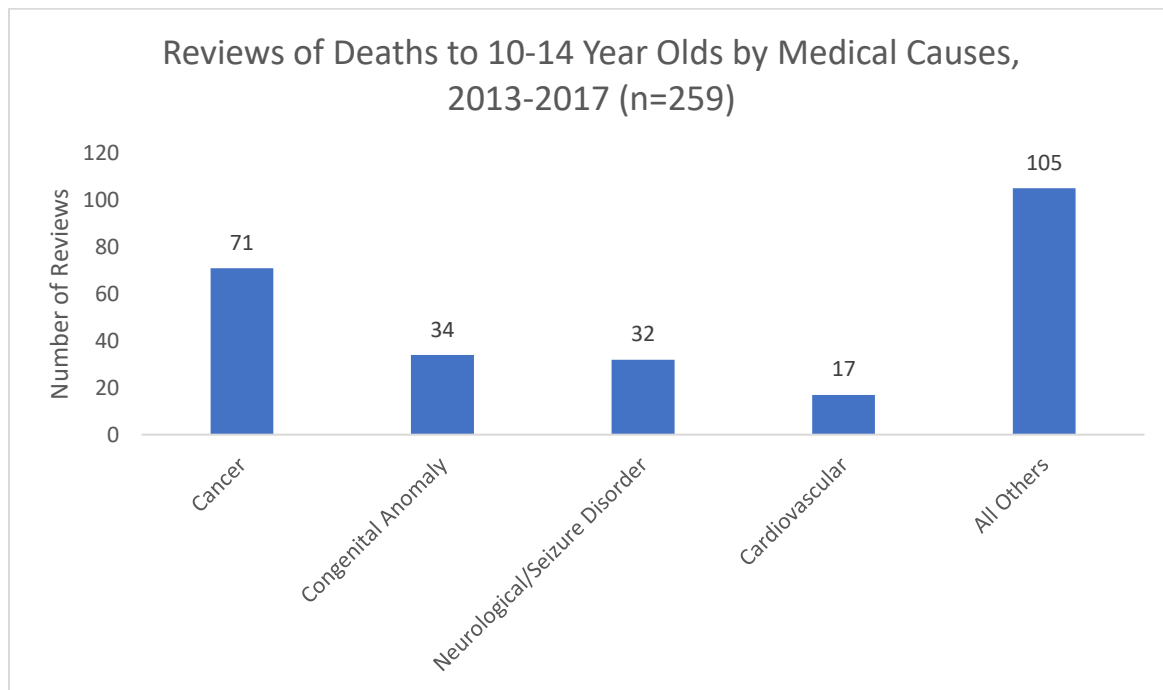
The following chart shows the percentage of reviews by cause in children ages 10-14.



The chart below shows external causes of death in children ages 10-14. The majority of external causes for this group are vehicular, weapon and asphyxia.



The chart below lists common medical causes of death in children ages 10-14.





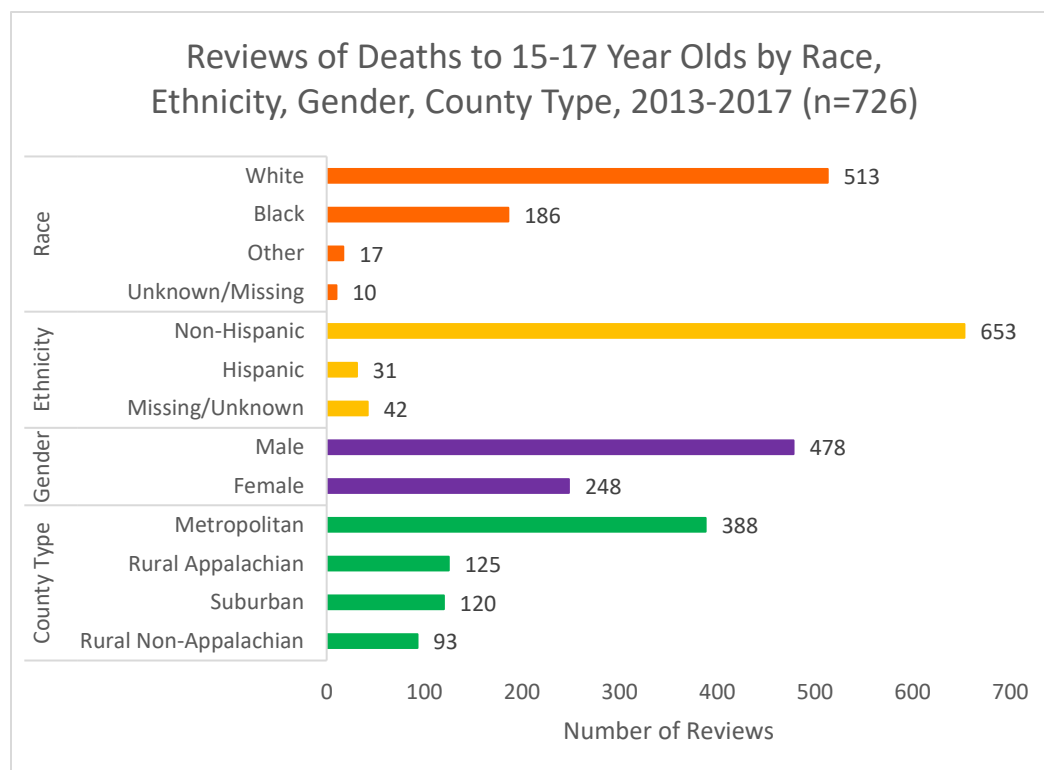
## Deaths to Children 15 to 17 Years Old

### Background

Known for challenging limits, teenagers enjoy more independence from their family and develop strong relationships with peers.<sup>10</sup> According to the National Center for Injury Prevention and Control, nationally the leading causes of death for 15 to 17 year olds are vehicular injuries, suicides and homicides.<sup>11</sup>

### CFR Findings

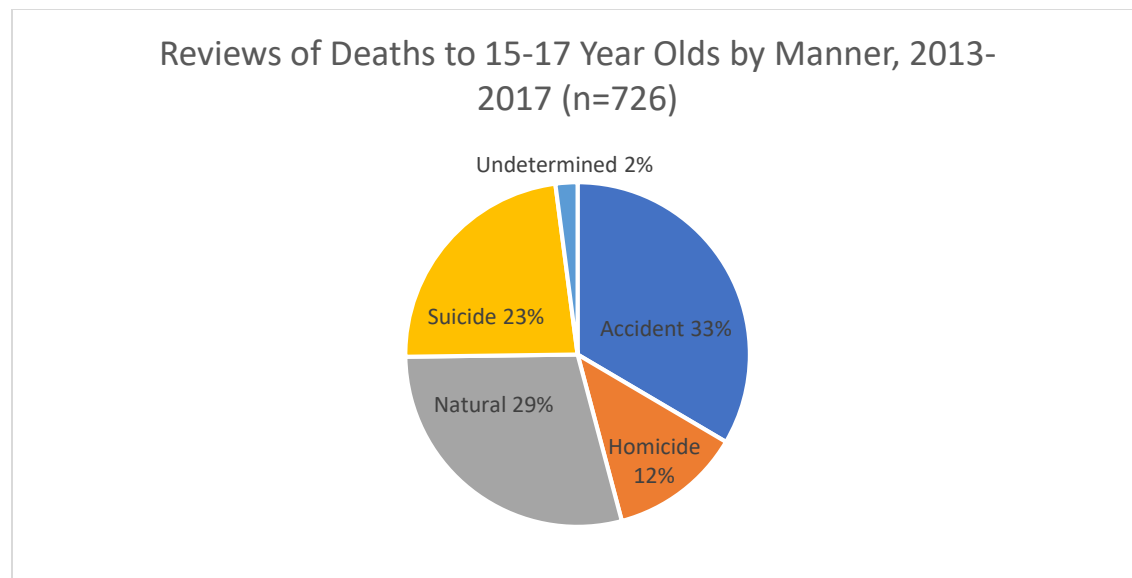
For the five-year period from 2013 through 2017, local CFR boards reviewed 726 deaths of children ages 15 to 17 years. These represent 10 percent of all 6,920 deaths reviewed.



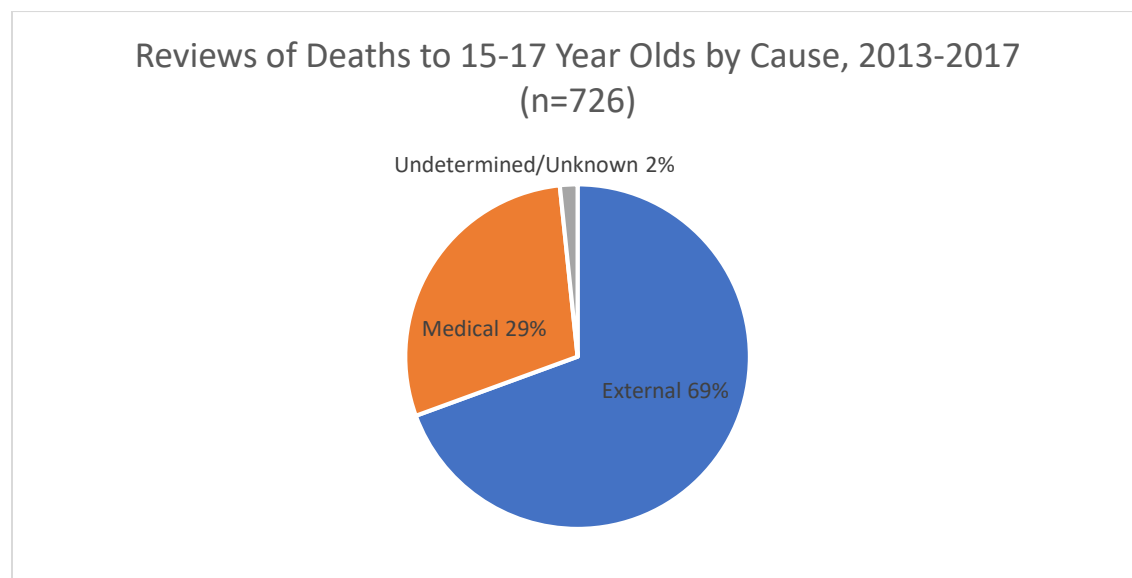
### Preventability in ages 15-17

Of the 726 deaths in this age group 60 percent were determined to be probably preventable. Twenty-eight percent of the reviews were found to be probably not preventable. Preventability could not be determined in 10 percent of the reviews and was missing in 2 percent of the reviews.

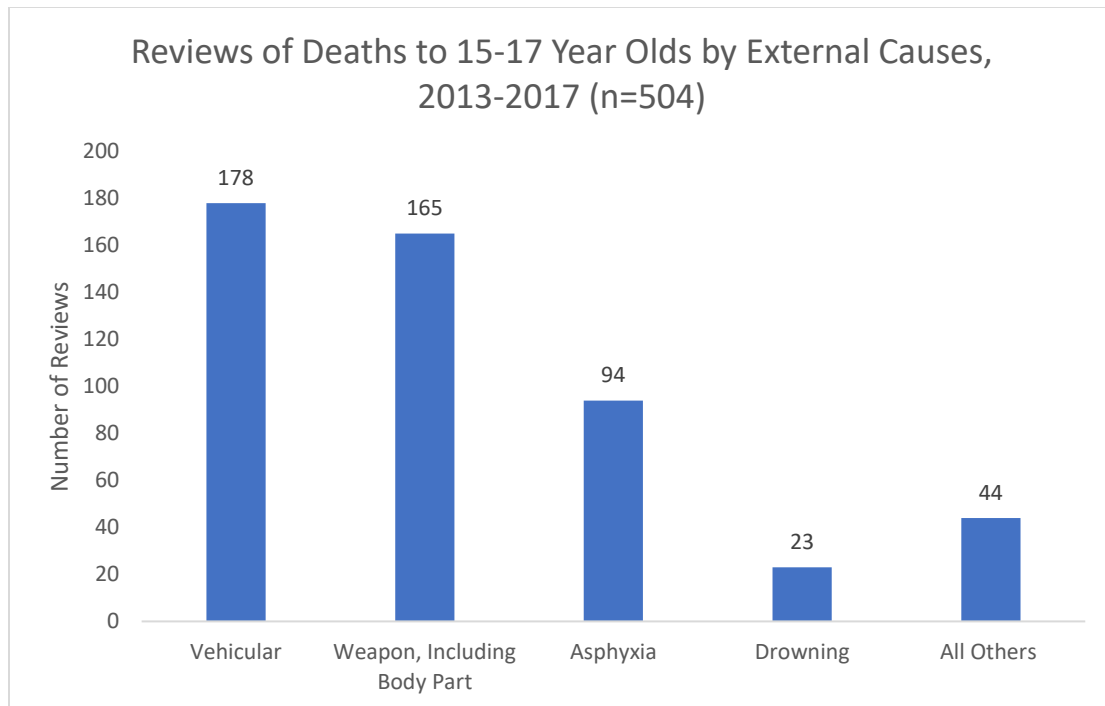
Reviews for deaths in ages 15-17 by manner show a more even distribution than previous age groups.



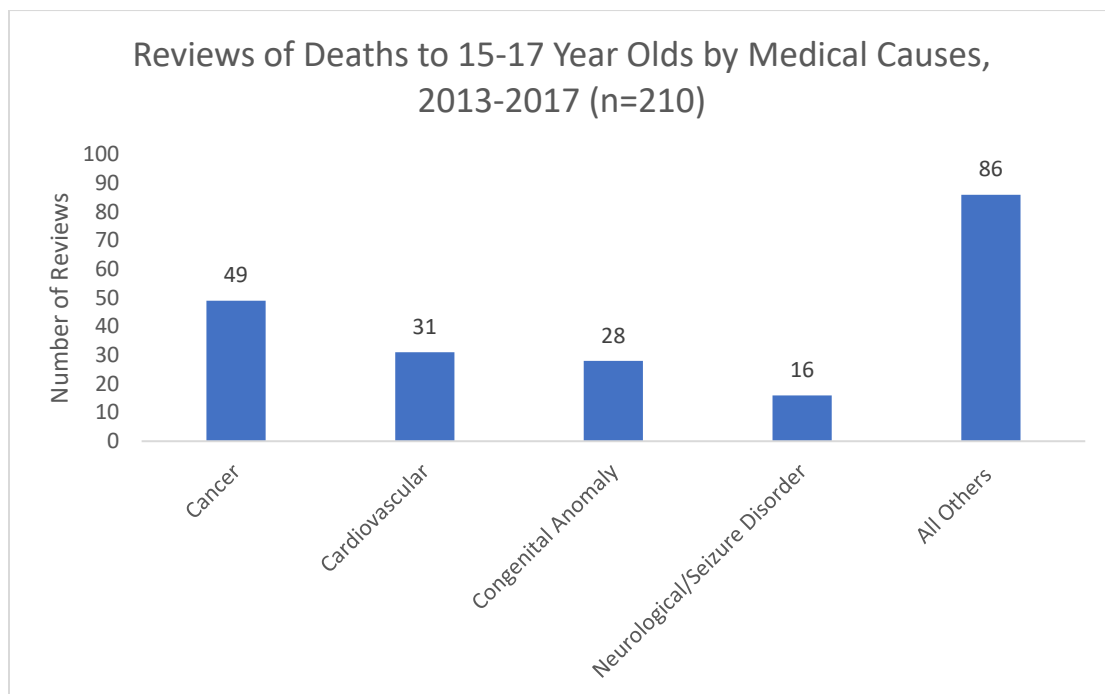
External causes of death account for the majority of reviews in children ages 15-17.



External causes by vehicular and weapon are prominent in reviews for children ages 15-17.



The chart below shows common medical causes of death in reviews of children ages 15-17



## Ohio's Teen Driving Laws

Graduated licensing allows young drivers to improve their skills and driving habits while restricting driving under circumstances that increase the risk of crashes. The Ohio Graduated Driver License law (GDL) was enhanced in H.B. 53 of the 131st General Assembly, effective July, 2015. The new provisions change the way the GDL-related passenger restrictions and hours of operation restrictions are applied to probationary drivers as well as moving violations. Ohio's law now mandates that teens younger than 18 must hold an intermediate license for one year before they are allowed more than one non-family member passenger, unless they are accompanied by a parent or guardian. If under 18, teens may not drive between midnight and 6 a.m. without a parent or guardian, unless they have held a probationary license for at least one year. Probationary license holders may not drive between 1 a.m. and 5 a.m. unless accompanied by a parent or guardian. Some exemptions may apply. The GDL still maintains a young driver receives a minimum of 24 hours of classroom instruction and eight hours of behind-the-wheel instruction in driver training. In addition to this requirement, they must receive at least 50 hours of in-car practice (10 of these at night) with a parent or legal guardian.

The GDL prohibits teen drivers under the age of 18 from using any electronic wireless communication device. Complete information on Ohio's GDL can be found at:

<http://bmv.ohio.gov/dl-gdl.aspx>

## Reviews by Manner of Death

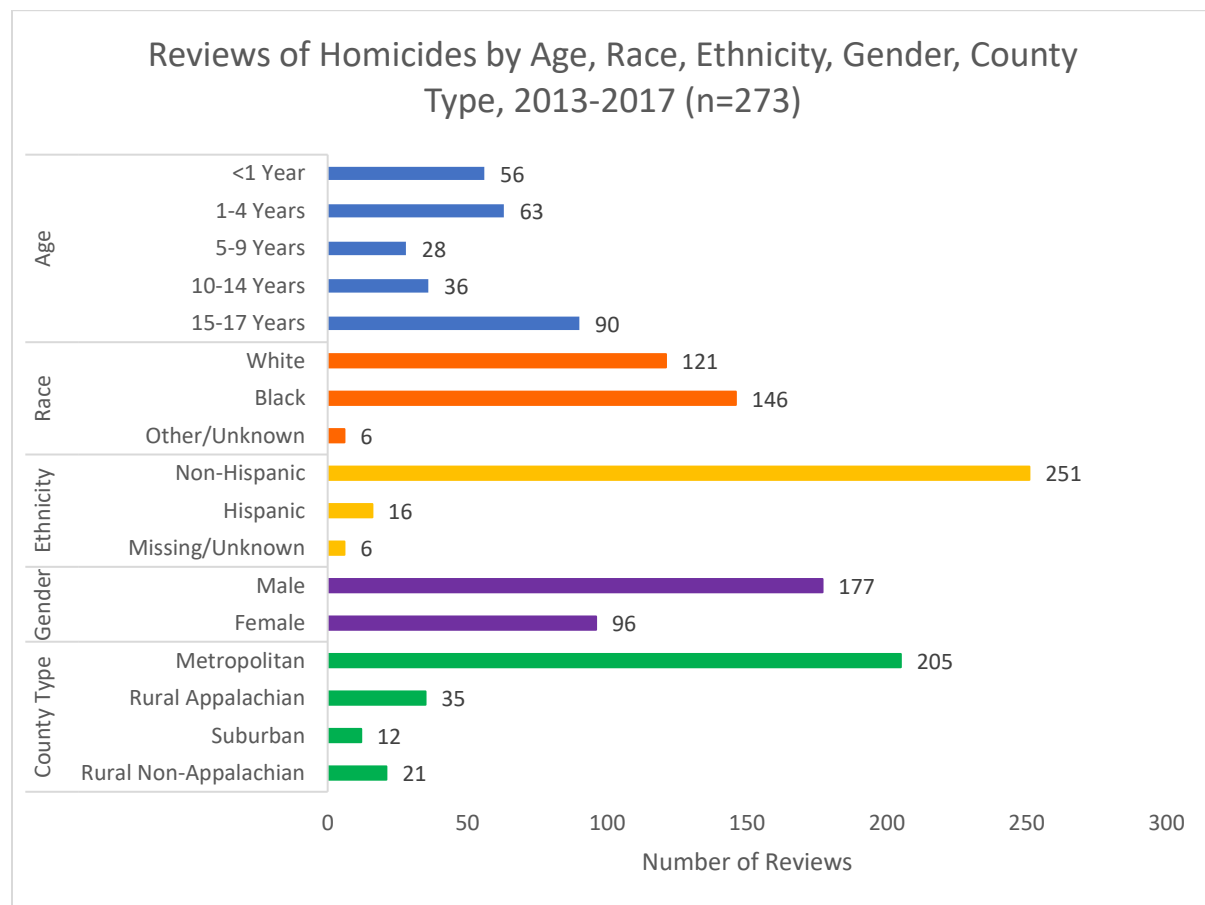
### Homicides

#### Background

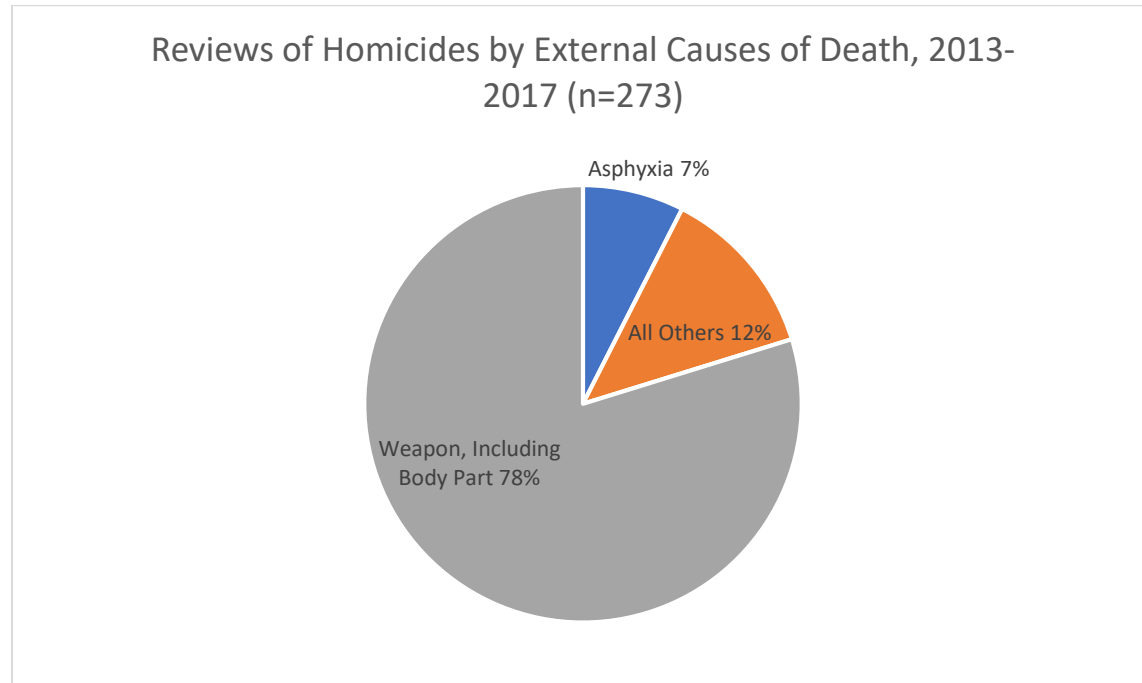
The CFR case report tool and data system capture information about homicide as a manner of death and as an act of commission, regardless of the cause of death. As homicide has unique risk factors and prevention strategies, homicide reviews from all causes of death have been combined for further analysis as a group.

#### CFR Findings

For the five-year period from 2013 through 2017, local CFR boards reviewed 273 deaths to children resulting from homicide. Homicides represent four percent of the total reviews and twelve percent of all reviews for children ages 15 to 17 years.



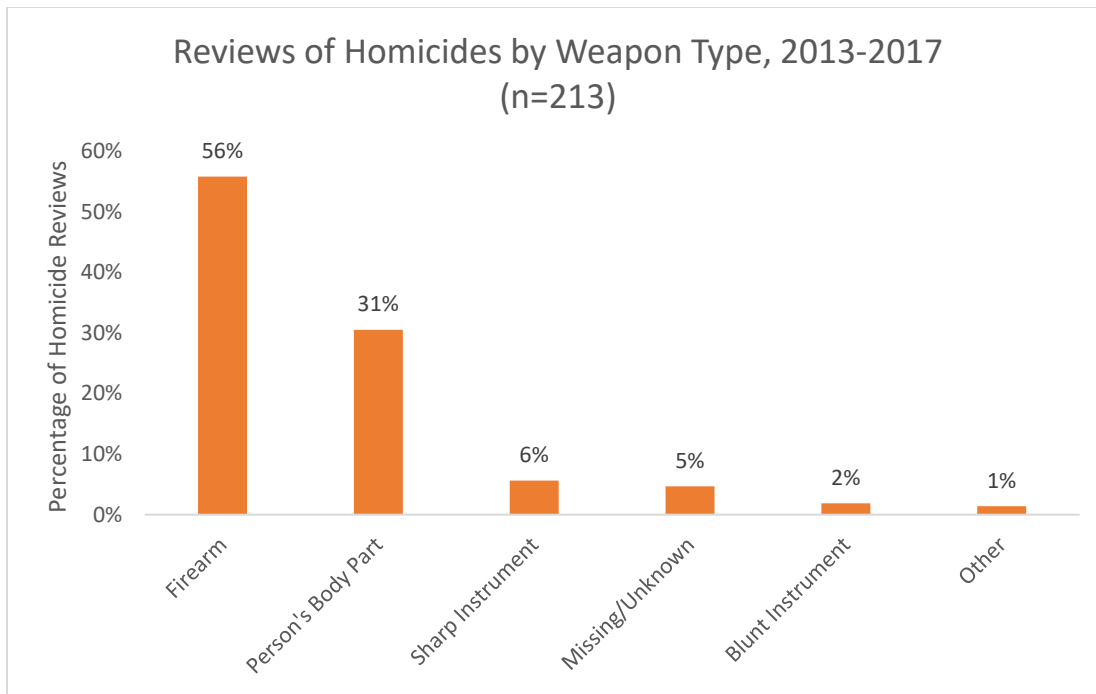
Reviews of homicides were classified by cause with 267 (98 percent) due to external causes. Weapons are the leading external cause of death, accounting for 78 percent of deaths. Other external causes of death in homicides include poison, vehicular injuries, fires, and drowning, among other causes.



Reviews of Homicides by Person Handling Weapon, 2013-2017 (n=213)

Person	#	%
Biological/Foster/Step Parent	36	17%
Mother's or Father's Partner	24	11%
Acquaintance	20	9%
Friend	19	9%
Other	15	7%
Stranger	14	7%
Rival Gang	9	4%
Sibling	8	4%
Other Relative	6	3%
Multiple People	5	2%
Child's Boyfriend/Girlfriend	4	2%
Missing/Unknown	53	25%

Firearms accounted for 56 percent of homicides by weapons type.



### Preventability in homicide deaths

Local CFR boards found that 94 percent of homicide deaths were preventable.

## Suicides

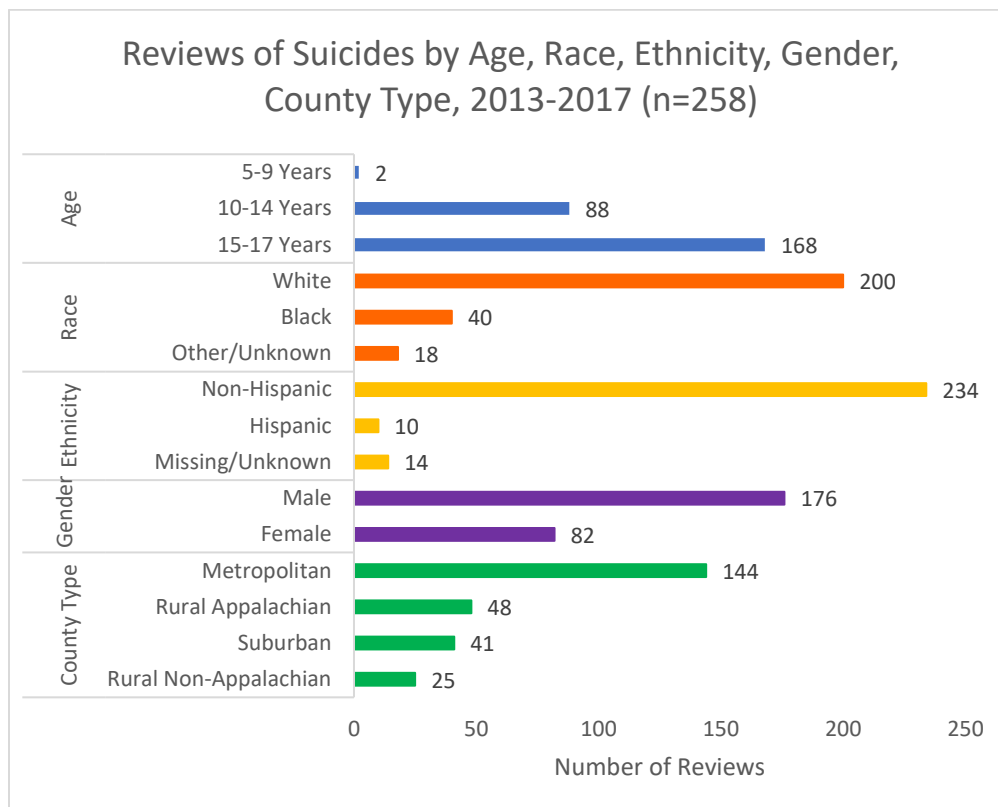
### Background

Suicide is death caused by self-directed injurious behavior with intent to die.<sup>12</sup> The CFR case report tool and data system capture information about suicide as a manner of death and as an act of commission, regardless of the cause of death. As suicide has unique risk factors and prevention strategies, suicide deaths from all causes have been combined for further analysis.

According to the National Center for Injury Prevention and Control, 1,528 suicides occurred for young people ages 10 to 17 years nationally in 2016.<sup>11</sup> This is approximately 19 percent of all deaths for children ages 10 to 17.

### CFR Findings

For the five-year period from 2013 through 2017, local CFR boards reviewed 258 deaths to children from suicide. These represent four percent of the total 6,920 reviews and 21 percent of all reviews for children ages 10 to 17.





#### Local Prevention Initiatives for 2017:

- The Alcohol, Drug Addiction and Mental Health Services (ADAMHS) Board of Cuyahoga County conducts a suicide prevention awareness campaign. The county campaign promotes the 24-hour Suicide Prevention Hotline, Crisis Text, Crisis Chat, and online behavioral health screenings. There is also a social media campaign that includes targeted ads to youth on Facebook and Twitter. The ADAMHS Board contracts with Frontline Services for the Children's Crisis Response Team to ensure that the unique needs of children are addressed in the community. It provides child-specific emergency service that responds to acute psychiatric, crisis situations, in addition to suicidal ideations.

<http://adamhsc.org/en-US/Suicide-Prevention-Help.aspx>

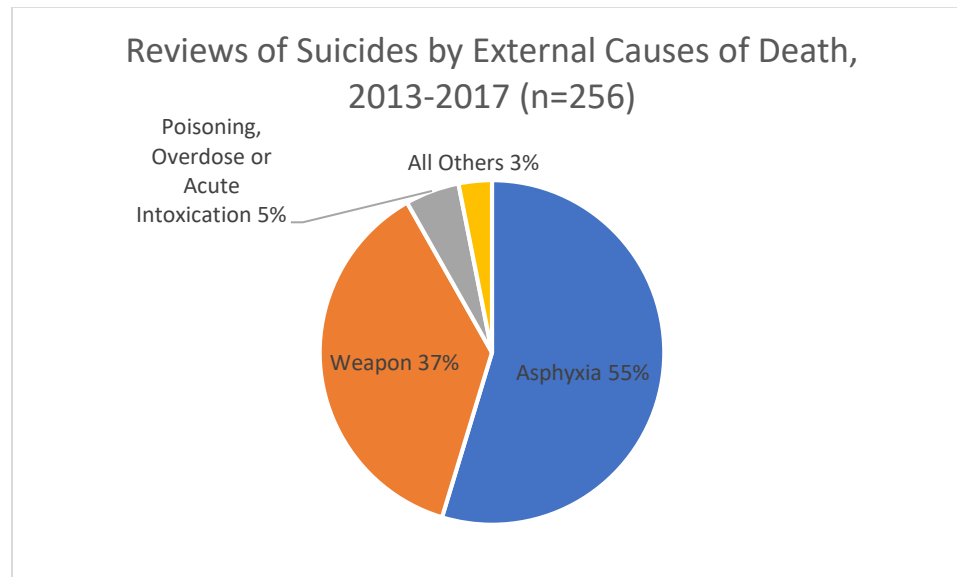
- Columbus City Schools has a partnership with Nationwide Children's Hospital to provide school based mental health services and suicide prevention through the "Signs of Suicide" program.

<https://www.nationwidechildrens.org/research/areas-of-research/center-for-innovation-in-pediatric-practice/suicide-prevention-and-research>

- Hamilton County hosted Child Focus to conduct a Suicide Training Course (QPR-Question, Persuade, Refer). At the training 33 individuals who work with communities, children, and families were trained in QPR. A second training is being discussed and will be held in mid-2018 to train additional individuals.

<https://www.child-focus.org/training/>

Of the 95 suicide deaths caused by weapons, 80 percent were male and 20 percent were female. Of the 13 suicide deaths caused by poisoning, 78 percent were female and 23 percent were male. Of the 140 suicide deaths caused by asphyxia, 66 percent were male and 34 percent were female.



Suicide Circumstances	Yes		No		Missing/Unknown	
	#	%	#	%	#	%
Child Talked About Suicide	61	24%	58	22%	139	54%
Prior Suicide Attempts Were Made	40	16%	80	31%	138	53%
Suicide Was Completely Unexpected	75	29%	33	13%	150	58%
Child Had a History of Substance Abuse	29	11%	105	41%	124	48%
Child Left a Suicide Note	65	25%	96	37%	97	38%

The child talked about suicide in 24 percent of suicides reviewed, and prior suicide attempts were made in 16 percent of suicides reviewed. Twenty-nine percent of reviews indicated the suicide was completely unexpected. Gender differences were apparent when examining causes of death.

### **Preventability in suicide deaths**

Local CFR boards found that 67 percent of suicide deaths were preventable.

### **The Northeast Ohio Youth Health Survey**

Between August 2017 and March 2018, the community of Stark County, Ohio experienced 12 suicides among middle and high school students. During this timeframe, the suicide rate among youth aged 10–19 years rose to more than 7 times the U.S. national rate and 11 times the 2011–2016 Stark County rate. In response to the rapid rise in suicides among adolescents in their community, Stark County Health Department (SCHD) and Ohio Department of Health (ODH) requested assistance from the Centers for Disease Control and Prevention (CDC) to examine factors contributing to increased suicidal behaviors among Stark County youth. To better understand the elements contributing to suicide among adolescents in Stark County, ODH and SCHD initiated the school-based Northeast Ohio Youth Health Survey (NOYHS) with assistance from the CDC, Stark County Mental Health & Addiction Recovery (Stark MHAR), and the Stark County Educational Service Center (SCESC).

In April 2018, public health officials administered an online survey to 7<sup>th</sup>–12<sup>th</sup> grade students at all SCESC-affiliated schools. The survey was anonymous and included questions about connectedness, social media, mental health, life experiences, friendships, suicidal ideation, suicide attempts, and resiliency. The survey included both novel questions created for the Stark County context and validated questions gathered from a number of well-respected survey tools. NOYHS questions were developed in extensive consultation with CDC scientists and local stakeholders. After completing the online survey, all students were provided with a list of locally available mental health resources and supports. Additionally, Stark MHAR staffed each school with supplemental mental health counselors to meet with students who self-identified as desiring help after the survey.

The goals of this survey were to identify factors contributing to risk and spread of suicidal behaviors and distinguish what activities, social supports, and other factors protect against suicide.

Results from the survey are forthcoming and Preliminary Recommended Suicide Prevention Strategies are noted below:

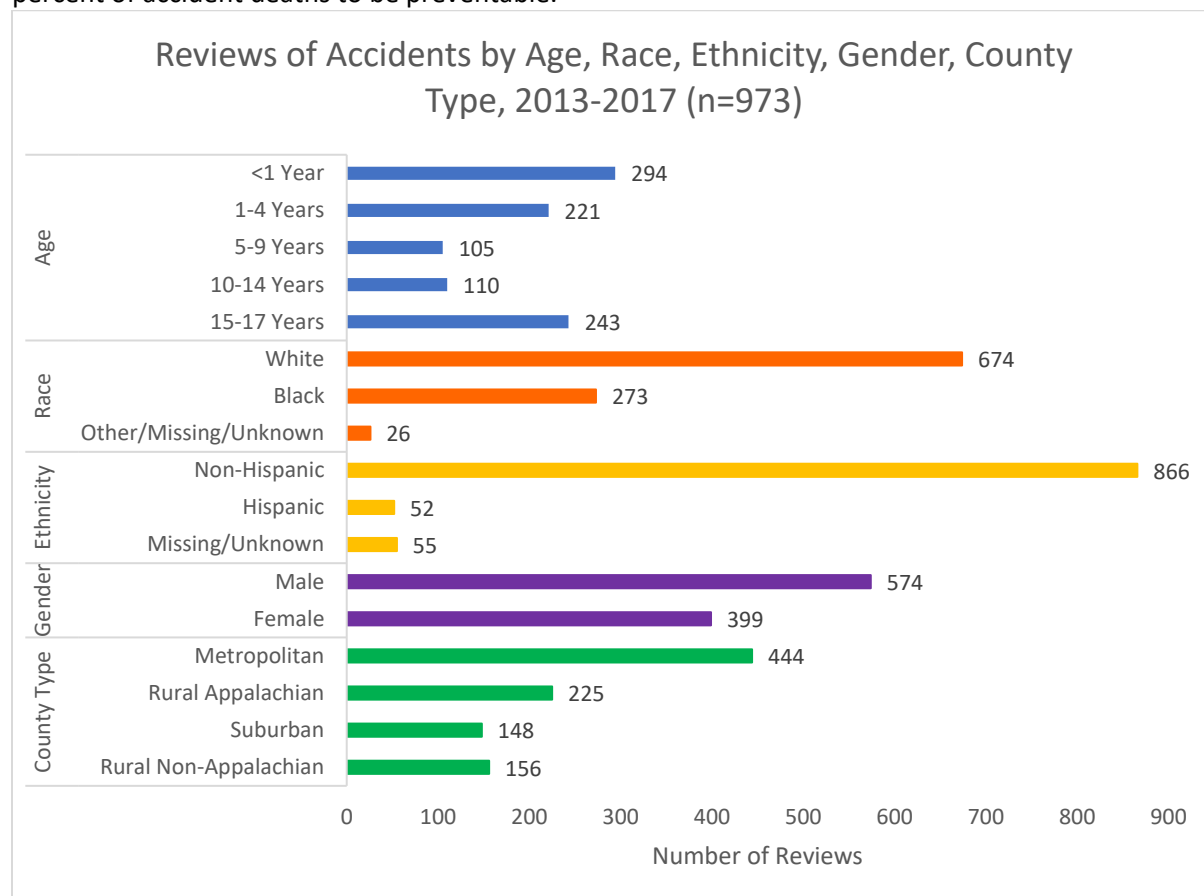
- developing a strategy to help students at risk of suicide
- developing a protocol to respond safely to a suicide death
- identifying students who are at risk of suicide
- integrating suicide awareness and prevention into curriculum for staff, students, and families
- enhancing protective factors
- For more information about the survey:

<https://www.odh.ohio.gov/health/vipp/ohvdrs>

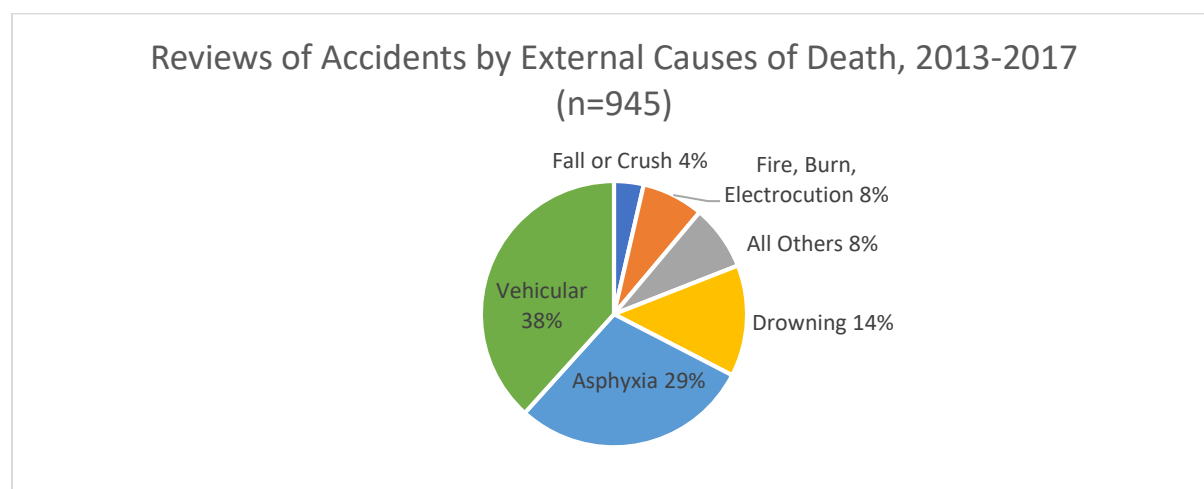
## Accidents

### CFR Findings

For the five-year period from 2013 through 2017, local CFR boards reviewed 973 deaths to children resulting from accidents. Accidents represent 14 percent of the total reviews. Local CFR boards found 89 percent of accident deaths to be preventable.



Of the 973 reviewed accident deaths, 945 (97 percent) were due to external causes.

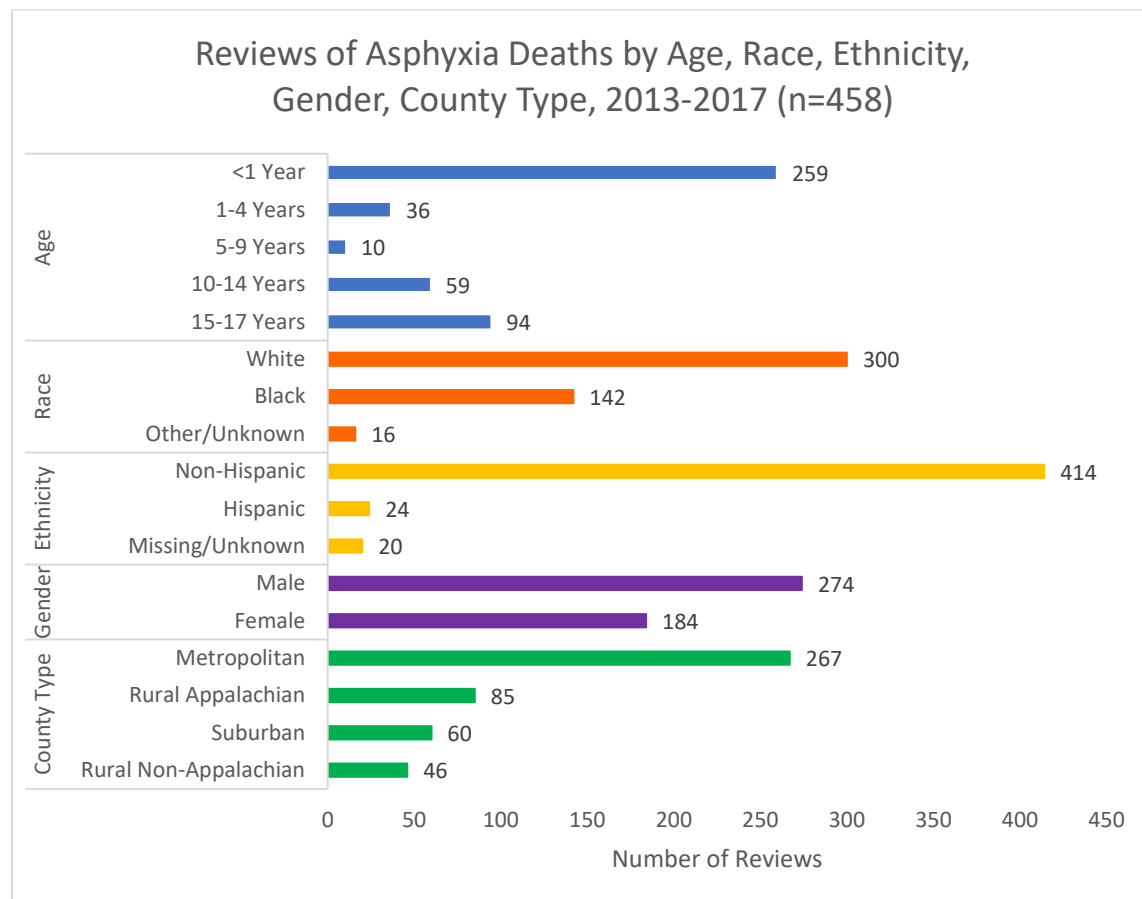


## Reviews by Cause of Death

In addition to grouping manners of death, regardless of cause, it is also important to group causes of death regardless of manner to better understand risk factors and prevention strategies. The following details the findings of reviews of deaths by the leading causes of death including asphyxia, vehicular injuries, weapon injuries, drowning, fire, burns, electrocution, and poisoning.

### Asphyxia

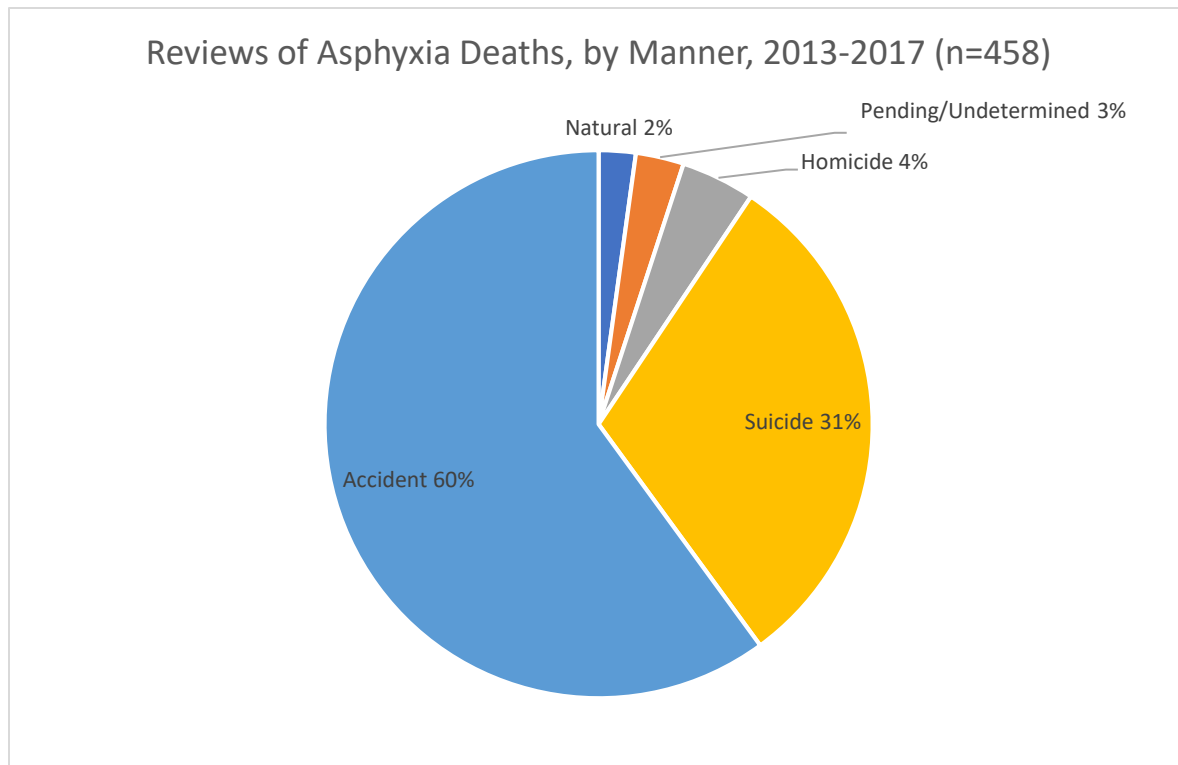
For the five-year period from 2013 through 2017, local CFR boards reviewed 458 deaths to children caused by asphyxia. During the five-year review period, asphyxia was the cause of death in 29 percent of deaths due to external causes reviewed.



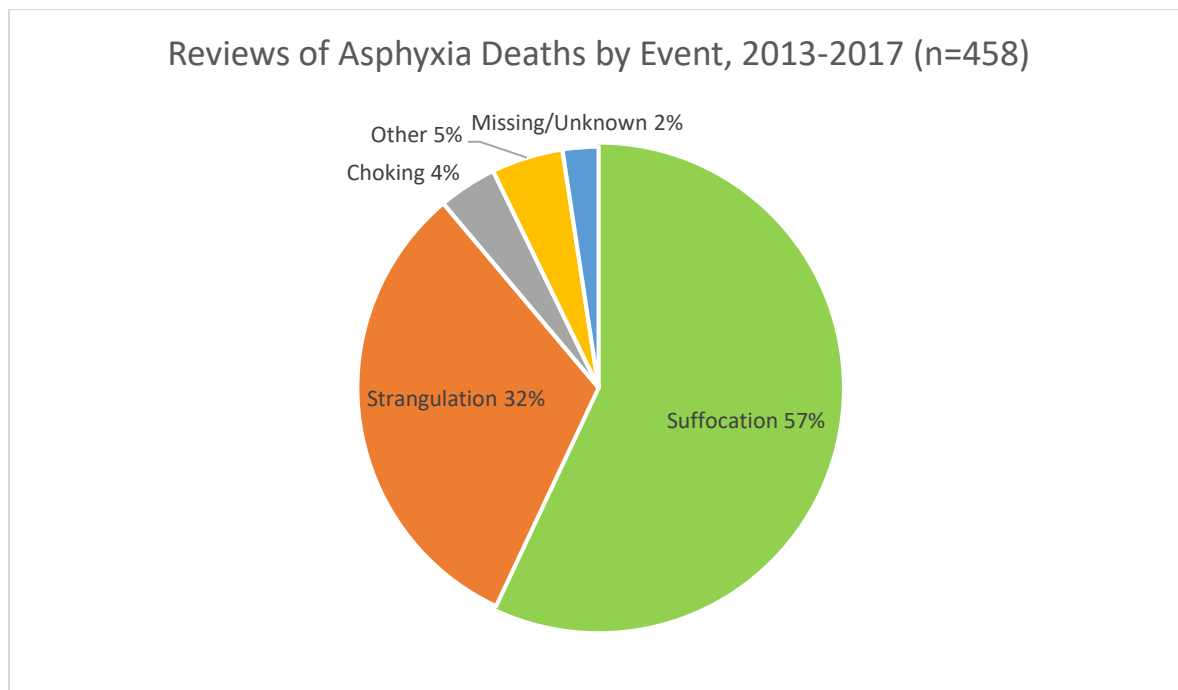
### Preventability in asphyxia deaths

Local CFR boards found that 81 percent of asphyxia deaths were preventable.

Ninety-one percent of asphyxia deaths were a result of an accident or suicide.

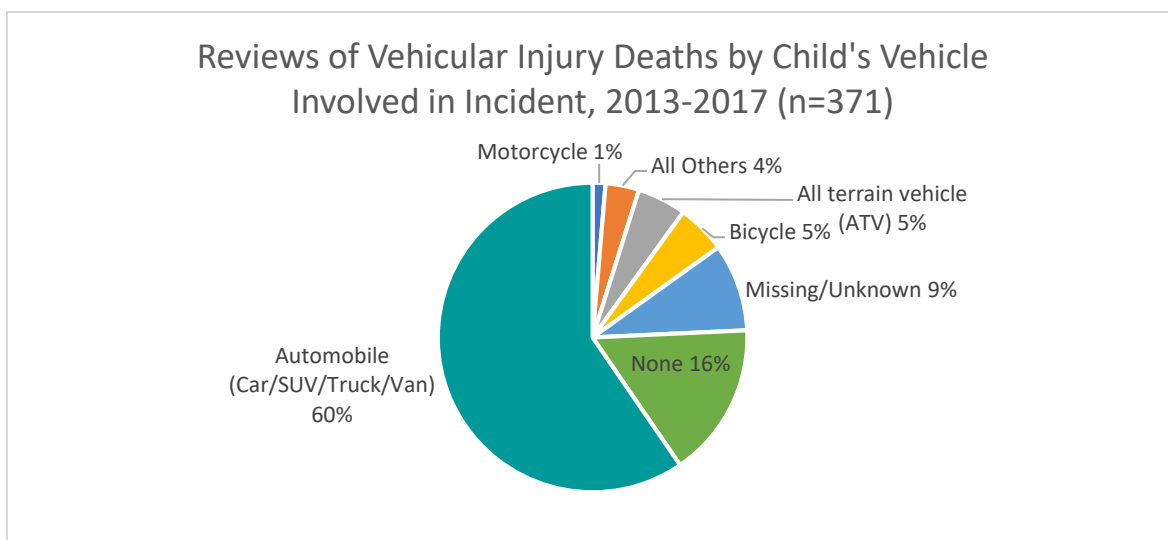
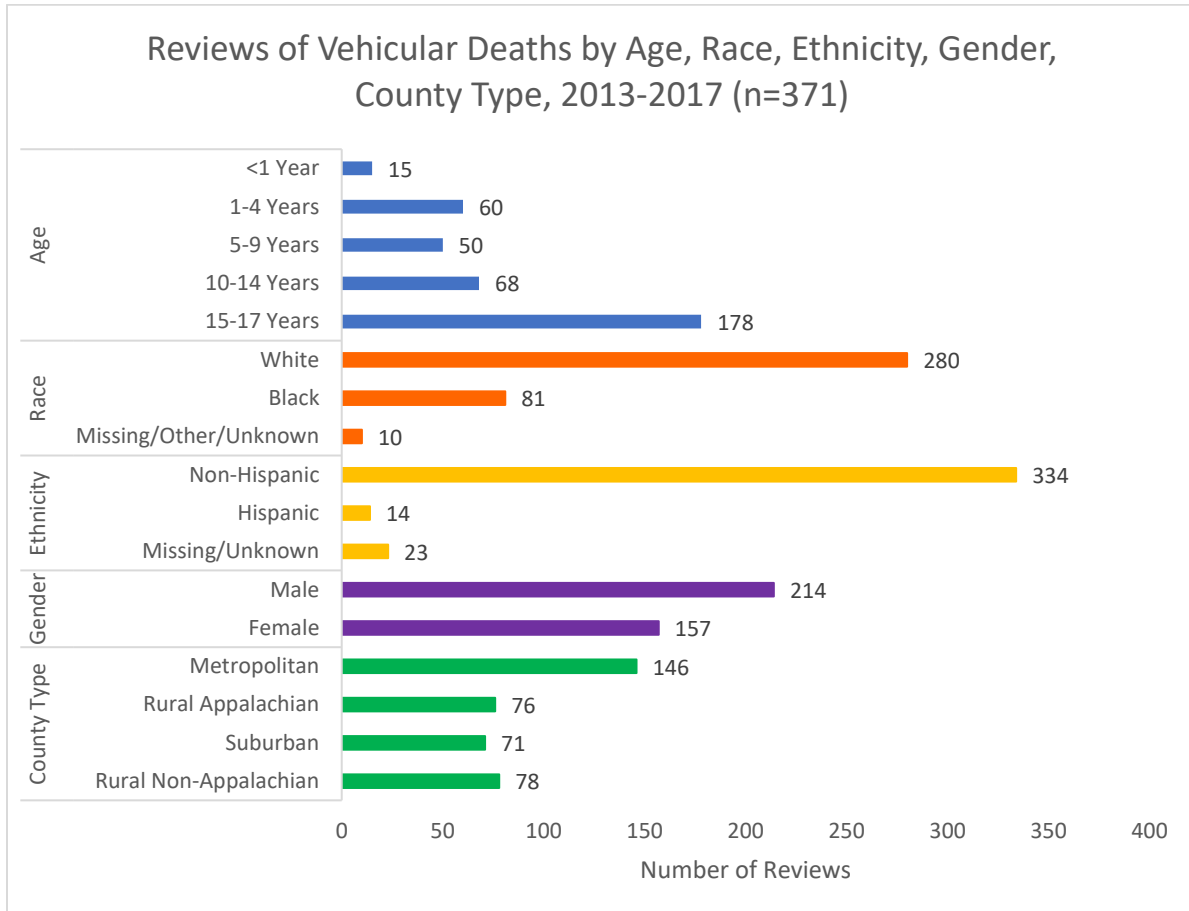


Suffocation and strangulation accounted for 89 percent of asphyxia deaths by event type.

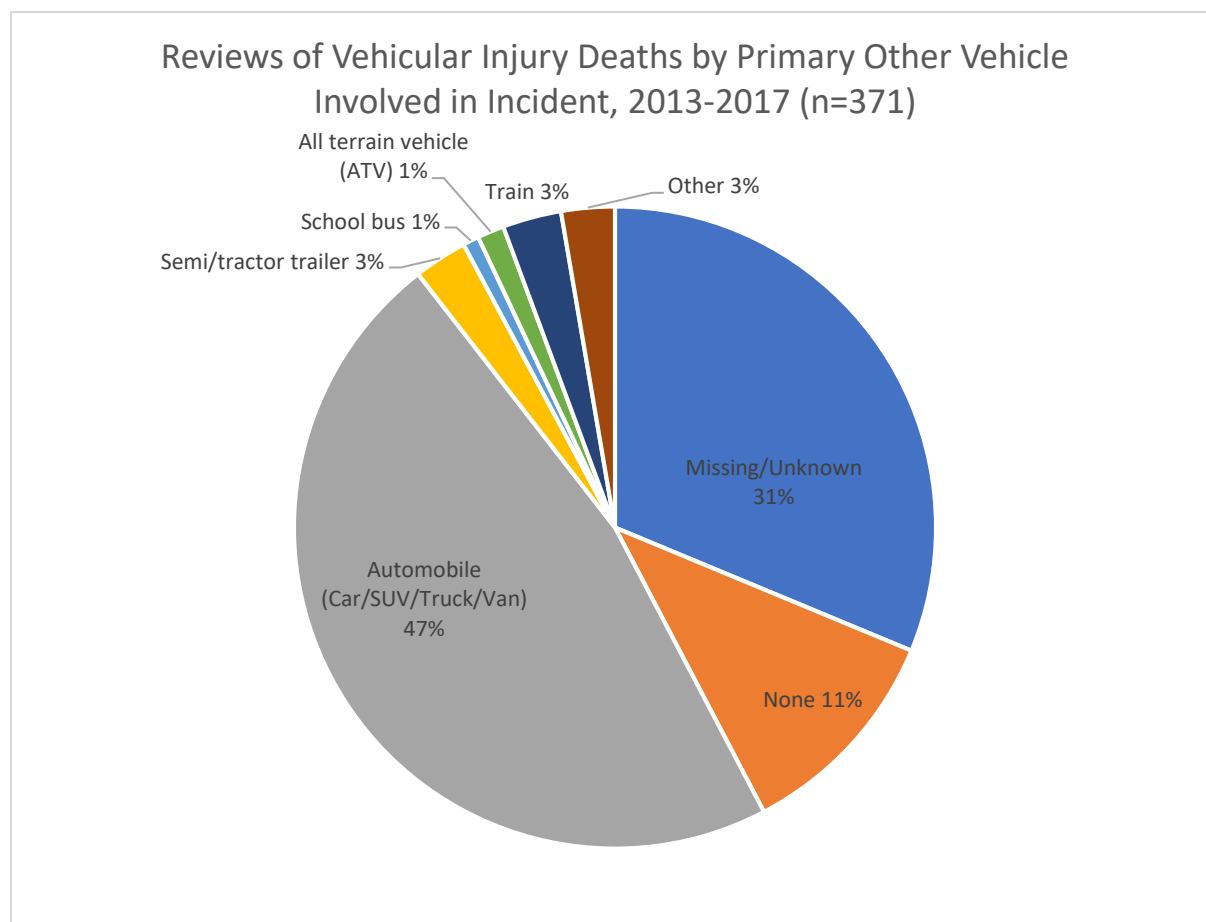


## Vehicular Injuries

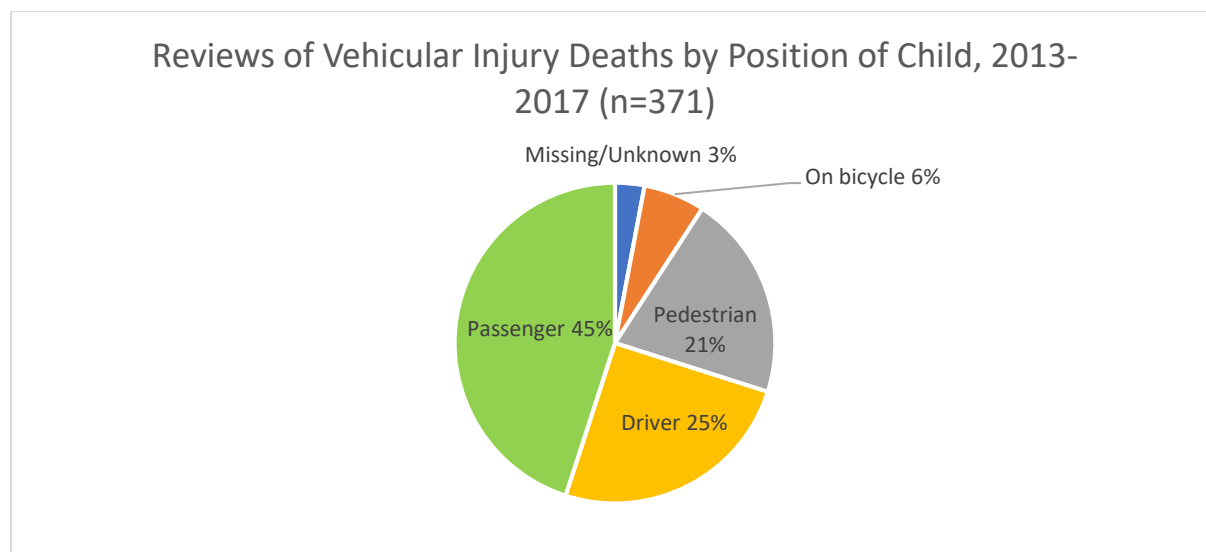
For the five-year period from 2013 through 2017, local CFR boards reviewed 371 deaths to children caused by vehicular injuries. Vehicular injuries were the cause of death in 23 percent of deaths due to external causes reviewed over the five-year period.



From 2013 – 2017 the majority of vehicular deaths occurred in an automobile.



The chart below shows the position of the child in vehicular deaths.



#### Preventability in vehicular deaths

Local CFR boards found that 87 percent of vehicular deaths were preventable.



#### Local Initiatives:

The Lima-Allen County Safe Community Coalition is a federally funded Ohio grant initiative that is locally implemented by the Lima-Allen County Regional Planning Commission. The goal of the Safe Community Coalition is to reduce traffic crashes, especially those resulting in serious injuries and fatalities. Federal oversight agencies analyze national crash data to determine the traffic safety messaging that should result in greatest crash reduction nationwide. Those include initiatives to increase seat belt use and motorcycle safety as well as eliminate impaired and distracted driving. Local crash data analyses determine local goals, resulting in multi-pronged countermeasures that complement those of federal sponsors, as well as target specific locally identified problems. The Coalition seeks to reduce the incidence of crashes through enforcement and roadway engineering as well as media and educational campaigns. Partners include law enforcement, hospitals, EMS providers, schools, businesses, local citizens, public health, and many more.

<http://www.lacrpc.com>

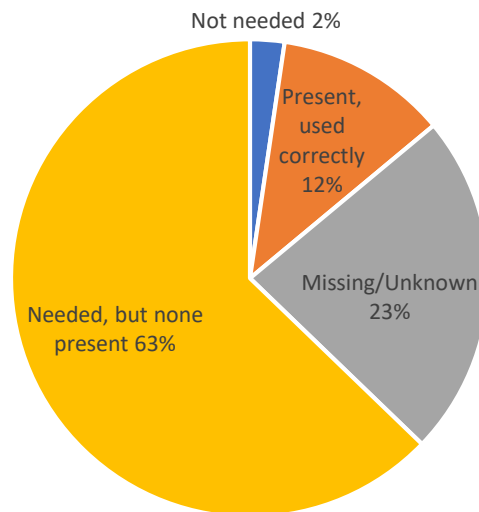
Reviews of Vehicular Injury Deaths in Which Child is a Passenger by Protective Measure, 2013-2017  
(n=167)

Protective Measure	Present, not used		Present, used incorrectly		Needed, but none present		Present, used correctly		Not needed		Missing/Unknown	
	#	%	#	%	#	%	#	%	#	%	#	%
Lap Belt	58	35%	2	1%	2	1%	41	25%	12	7%	52	31%
Shoulder Belt	51	31%	3	2%	2	1%	35	21%	14	8%	62	37%
Child Seat	0	0%	7	4%	7	4%	9	5%	106	63%	38	23%
Booster Seat	1	1%	3	2%	8	5%	5	3%	107	64%	43	26%

Reviews of Vehicular Injury Deaths in Which Child is a Driver by Protective Measure, 2013-2017 (n=93)

Protective Measure	Present, not used		Present, used incorrectly		Needed, but none present		Present, used correctly		Not needed		Missing/Unknown	
	#	%	#	%	#	%	#	%	#	%	#	%
Lap Belt	20	22%	2	2%	2	2%	38	41%	8	9%	23	25%
Shoulder Belt	21	23%	1	1%	4	4%	40	43%	9	10%	18	19%

Reviews of Vehicular Injury Deaths in Which Child's Vehicle is an ATV, Bicycle or Motorcycle by Helmet Use, 2013-2017  
(n=43)



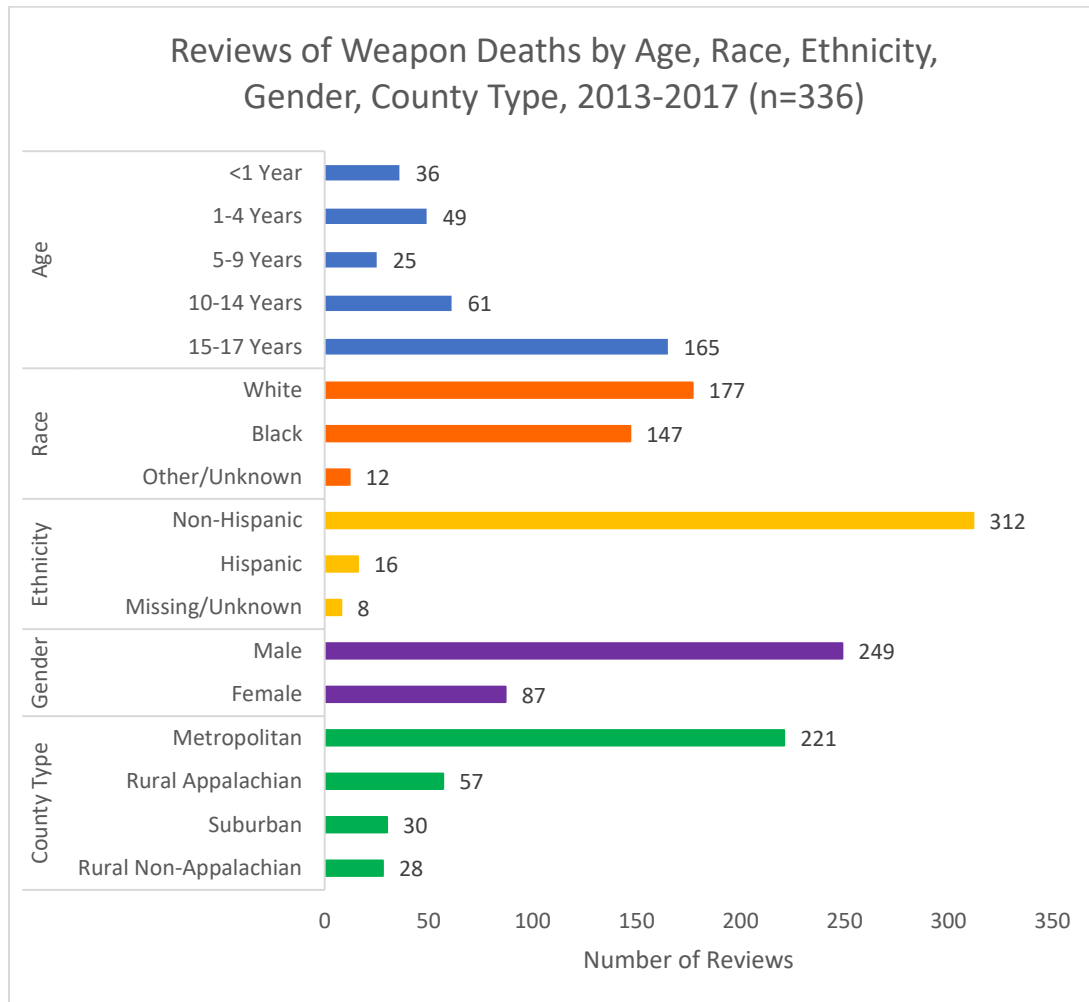
Local Prevention Initiatives:

In a effort to reduce accidental deaths from injuries Clermont County Public Health received seventy-six bike helmets from the Ohio Chapter of the American Academy of Pediatrics through their Put a Lid on It Program. Each child had their helmet fitted and adjusted by staff. Staff also educated each family on the importance of wearing a bike helmet.

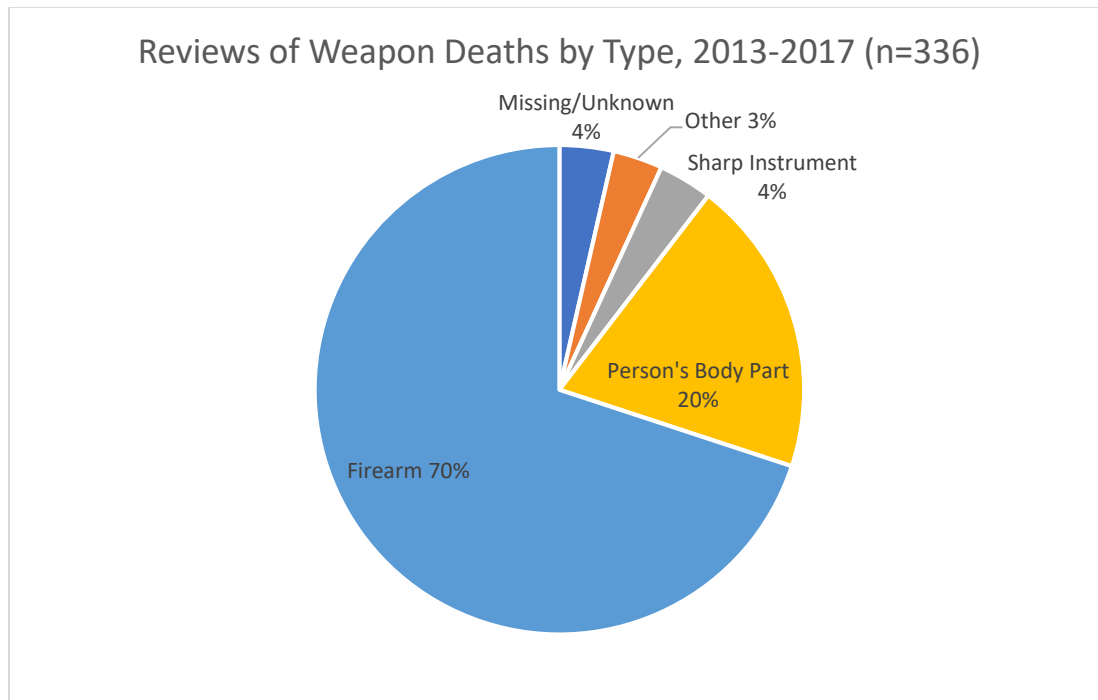
<http://ohioaap.org/PutALidOnIt>

## Weapon Injuries

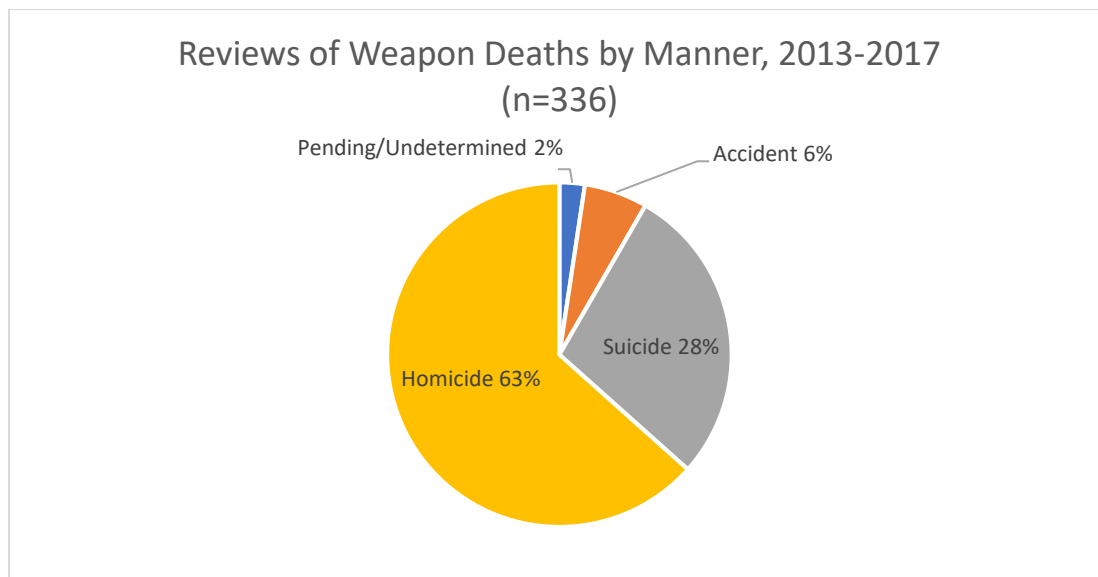
For the five-year period 2013 through 2017, local CFR boards reviewed 320 deaths to children caused by weapons. Weapons were the cause of death in 21 percent of deaths due to external causes reviewed. Seventy percent of the weapons deaths were caused by a firearm.



From 2013 – 2017 the majority of weapon deaths were as a result of a firearm.



From 2013 – 2017 homicides and suicides combined accounted for 91 percent of weapon deaths.



### Preventability in weapon deaths

CFR boards determined that 89 percent of weapon deaths were probably preventable.

#### Reviews of Weapon Deaths by Person Handling Weapon, 2013-2017 (n=336)

Person	#	%
Self	105	31%
Biological/Foster/Step Parent	36	11%
Mother's or Father's Partner	24	7%
Friend	21	6%
Acquaintance	20	6%
Other	15	4%
Stranger	14	4%
Sibling	11	3%
Rival Gang	9	3%
Multiple People	9	3%
Other Relative	8	2%
Child's Boyfriend/Girlfriend	4	1%
Missing/Unknown	60	18%
Total	336	100%

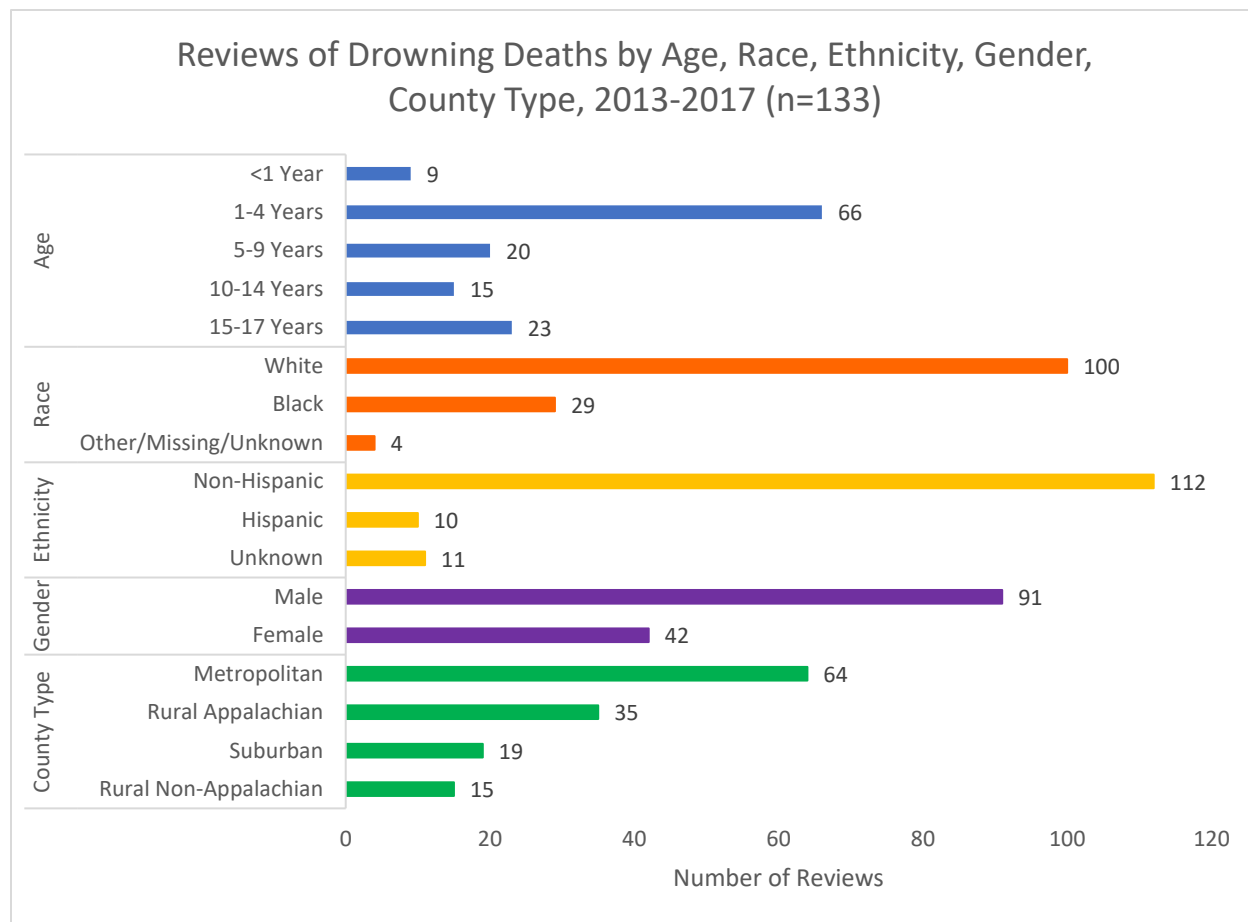
#### Drowning

During the five-year review period from 2013 through 2017, local CFR boards reviewed 133 deaths caused by drowning. During the five-year period, drowning deaths accounted for 8 percent of deaths due to external causes reviewed.

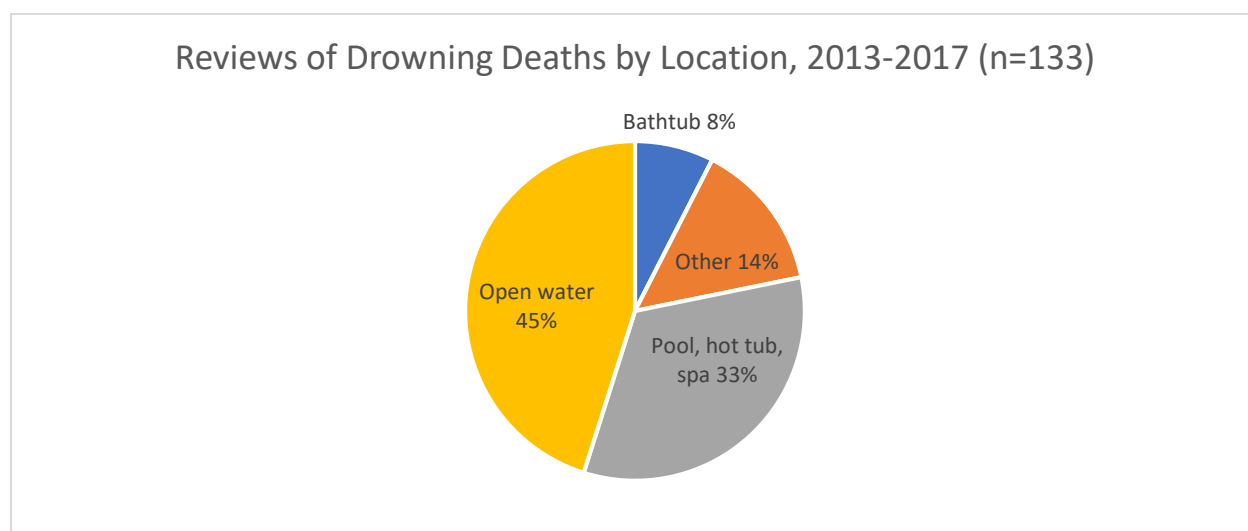
#### Preventability in drowning deaths

Local CFR boards found that 89 percent of drowning deaths were probably preventable.

The following chart shows the 133 drowning deaths by age, race, ethnicity, gender and county type.

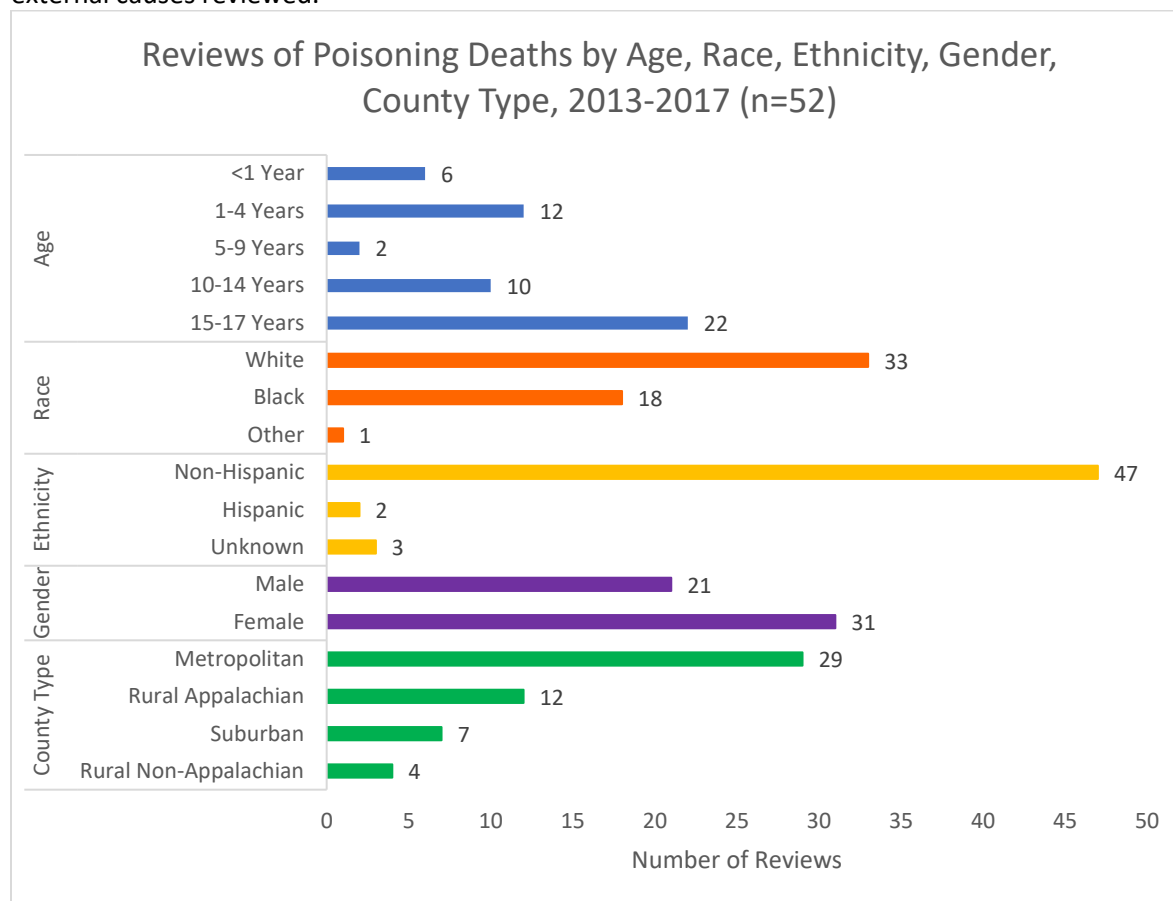


Among drowning deaths occurring in pools, hot tubs and spas, 82 percent were in privately owned locations.



## Poisoning

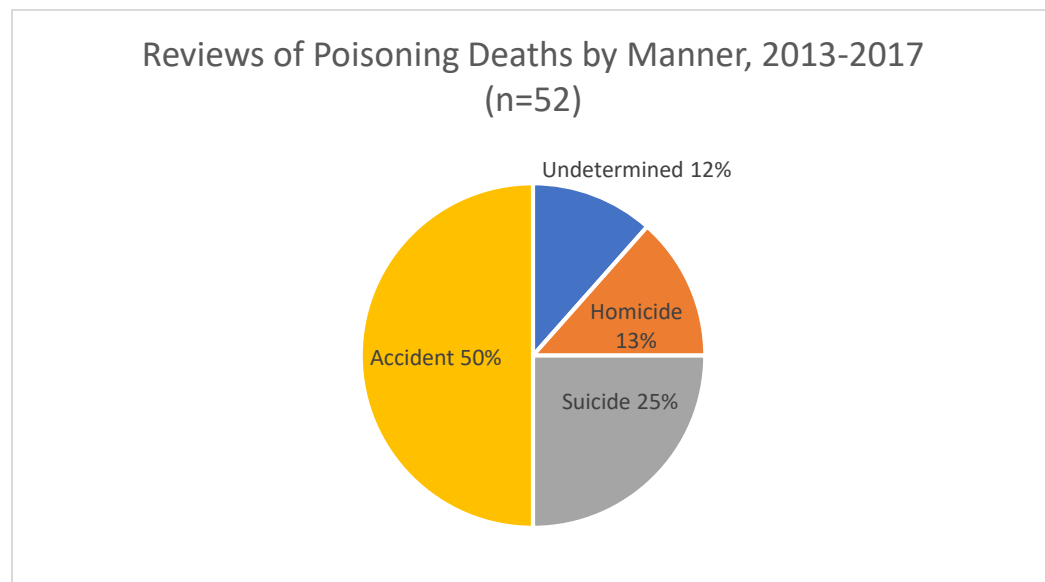
During the five-year review period from 2013 through 2017, local CFR boards reviewed 52 deaths caused by poison. During the five-year period, poison deaths accounted for 3 percent of deaths due to external causes reviewed.



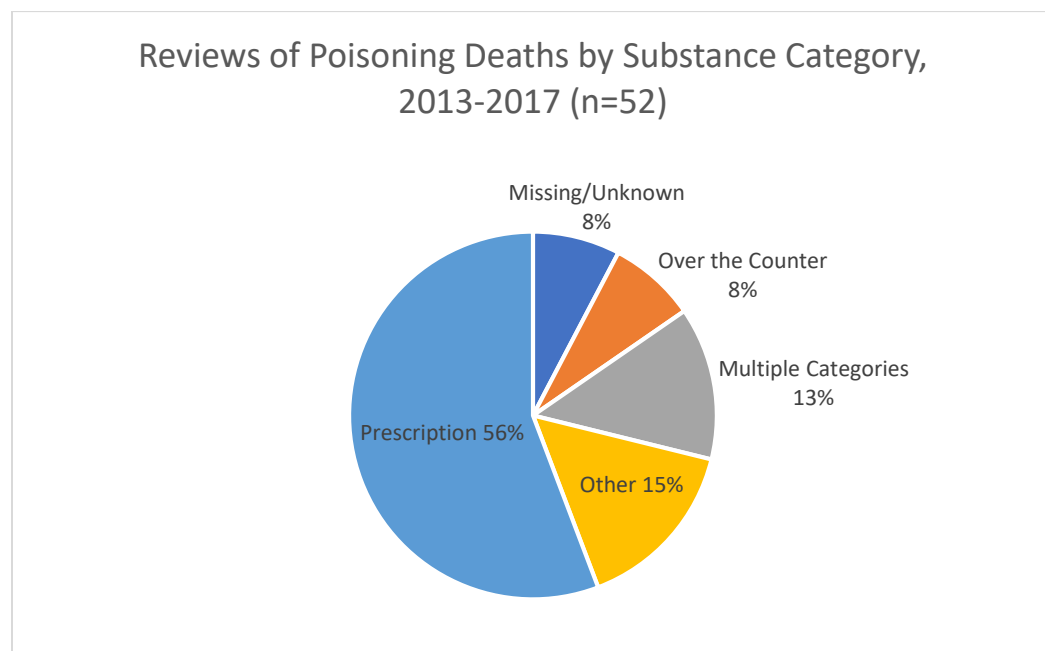
Prescription drugs alone caused 56 percent of poisoning deaths, and opiates accounted for 62 percent of those deaths. Prescription drugs alone, or in combination with another substance, accounted for 69 percent of poisoning deaths, and opiates accounted for 53 percent of those deaths. Other includes carbon monoxide poisoning, street drugs, and alcohol. Multiple categories indicates two or more categories of drugs were the poisoning substance.



From 2013 – 2017 half of the poisoning deaths were accidents.



The chart below shows the categories of poisoning deaths by the substance involved.

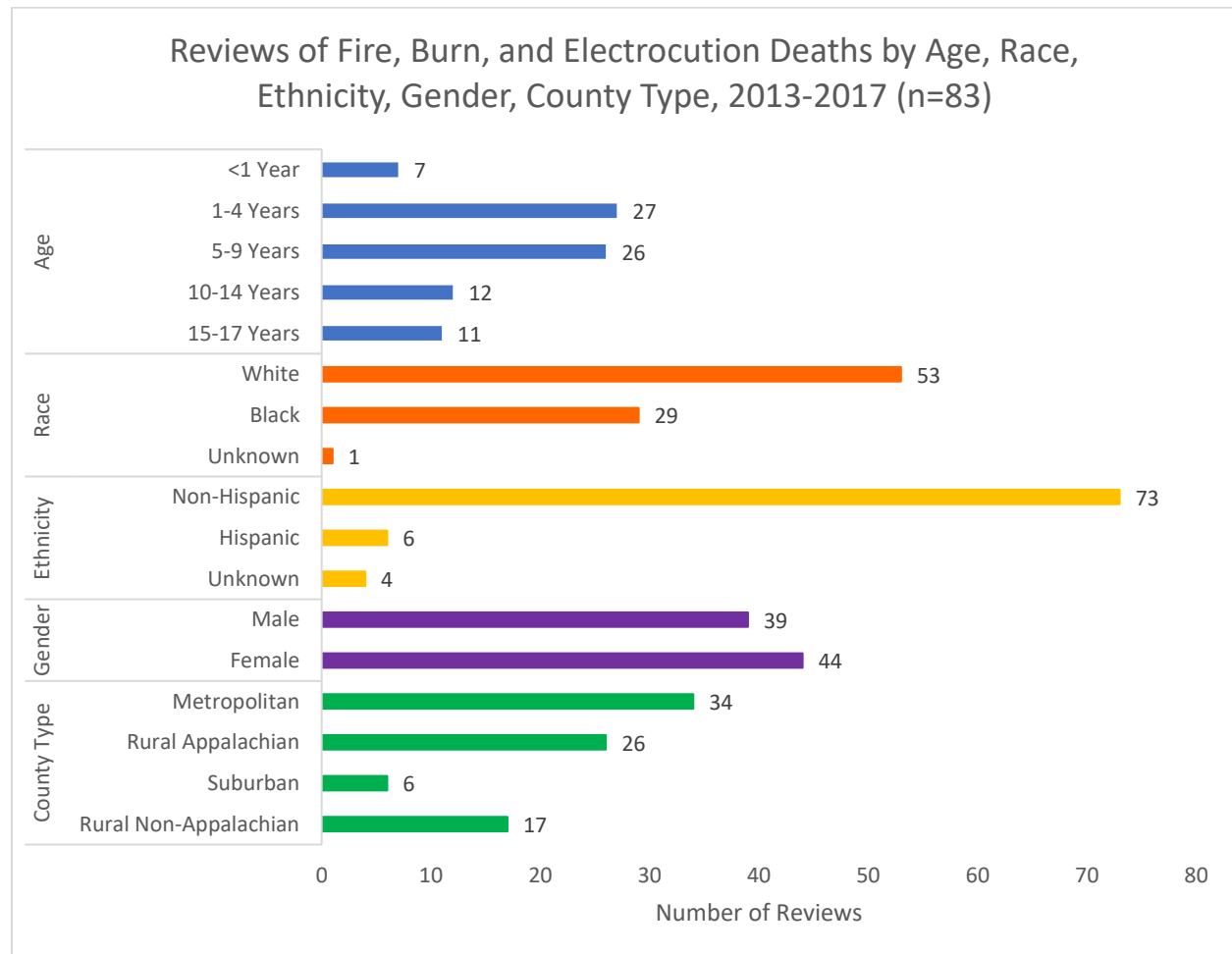


### Preventability in poisoning deaths

Local CFR boards found that 83 percent of poisoning deaths were preventable.

## Fire, Burn, Electrocutation

During the five-year review period from 2013 through 2017, local CFR boards reviewed 83 deaths caused by fire, burns and electrocution. Fires accounted for 89 percent of deaths in this category, with 84 percent of fire deaths due to smoke inhalation. Among reviews where a smoke detector was present, it was not working in 73 percent of reviews. During the five-year period, fire, burn and electrocution deaths accounted for 5 percent of deaths due to external causes reviewed.



## Preventability in fire, burn, electrocution deaths

Local CFR boards found that 86 percent of fire, burn, electrocution deaths were preventable.

### Action Items from Reviews

From 2013 – 2017 A total of 1,895 prevention initiatives were initiated by local CFR boards as a direct result of CFR data. These initiatives are categorized by agency, education, environment, law and others.

Actions Resulting From Reviews	# Recommendations	# Planning	# Implemented
Agency - New policy(ies)	14	5	2
Agency - Revised policy(ies)	11	4	5
Agency - New program	18	6	22
Agency - New services	8	5	12
Agency - Expanded services	36	18	13
Education - Media campaign	104	25	37
Education - School program	67	9	18
Education - Community safety project	188	20	31
Education - Provider education	111	13	24
Education - Parent education	339	23	56
Education - Public forum	19	7	8
Education - Other education	74	6	13
Environment - Modify a consumer product	2	0	0
Environment - Modify a public space	4	0	1
Environment - Modify a private space	3	0	2
Law - New law/ordinance	10	0	1
Law - Amended law/ordinance	6	1	1
Law - Enforcement of law/ordinance	18	1	0
Other	469	1	4
Total	1,501	144	250

#### Agency – New program

Medina County: In 2013 the suicide coalition sponsored a video contest for students to promote resources and that it is acceptable to reach for help. The county also implemented a program that funds mental health professionals in all middle and high school buildings.

#### Education - Community safety project

Delaware County: In 2016 the fire department went to 900 homes to hand out information about fire safety and delivered 100 smoke detectors to homes in the area.

#### Environment - Modify a public space

Franklin County: As a result of a 2016 death, cables were installed in the median of a highway section. DUI checkpoints were also recommended from the same review.

#### Law - Amended law/ordinance

Preble County: As a result of a 2017 death, a decision was made to lower the speed limit at an intersection.

## CONCLUSION

---

The mission of CFR is the prevention of child deaths in Ohio. CFR treats each child's death as a tragic story, not a simple statistic. Individually, these deaths are often sudden, unexpected and shocking, for both the family and the community. Many deaths seem to happen "out of the blue," but as the facts about the circumstances of all the deaths are compiled and analyzed, certain risks to children become clear, including:

- Prematurity, which accounts for nearly half of all infant deaths
- Unsafe sleep environments, which place healthy infants at risk of sudden death
- Riding unrestrained in vehicles, which puts children at greater risk of death in the event of a crash
- Racial disparity that results in black children dying from homicide at more than three times the expected rate
- Homicides were most carried out using a weapon, the weapon was most often a firearm, and the person responsible for the homicide was most often someone the child knew

While there is no way to predict most child deaths, we are able to identify some groups of children who are at increased risk of death. The analysis of the data leads to difficult questions: What community systems are in position to identify children at risk? Are systems available and accessible to all? Were opportunities for interventions missed? Why were attempted interventions ineffective? How can these tragic deaths be prevented?

This report summarizes the process of local reviews by multi-disciplinary boards of community leaders, which results in data regarding the circumstances related to each death. It is intended to be a vehicle to share the findings with the wider community to engage others in concern about these and other risks. Partners are needed to develop recommendations and implement policies, programs and practices that can have a positive impact in reducing the risks and improving the lives of Ohio's children. We encourage you to use the information in this report and to share it with others who can influence changes to benefit children. We invite you to collaborate with local CFR boards to prevent child deaths in Ohio.

For more information on this report or the Child Fatality Review program, please contact:

Ohio Department of Health  
Child Fatality Review Program  
246 N. High St., 6th Floor  
Columbus OH 43215  
Phone: 614-728-0773  
Fax: 614-564-2442  
[matthew.slanoc@odh.ohio.gov](mailto:matthew.slanoc@odh.ohio.gov)

## APPENDIX I: OVERVIEW OF OHIO CHILD FATALITY REVIEW PROGRAM

---

Child deaths are often regarded as indicators of the health of a community. While mortality data provide us with an overall picture of child deaths by number and cause, it is from a careful study of each and every child's death that we can learn how best to respond to a death and how best to prevent future deaths.

Recognizing the need to better understand why children die, Governor Bob Taft signed a bill in July 2000 mandating child fatality review (CFR) boards in each of Ohio's counties to review the deaths of children under 18 years of age. For the complete law and administrative rules pertaining to CFR, refer to the Ohio Department of Health website at [www.odh.ohio.gov/odhprograms/cfhs/cfr/cfrrule.aspx](http://www.odh.ohio.gov/odhprograms/cfhs/cfr/cfrrule.aspx)

The mission of these local review boards, as described in the law, is to reduce the incidence of preventable child deaths. To accomplish this, it is expected that local review teams will:

- Promote cooperation, collaboration and communication among all groups that serve families and children.
- Maintain a database of all child deaths to develop an understanding of the causes and incidence of those deaths.
- Recommend and develop plans for implementing local service and program changes and advise ODH of data, trends and patterns found in child deaths.

While membership varies among local boards, the law requires that minimum membership include:

- County coroner or designee.
- Chief of police or sheriff or designee.
- Executive director of a public children service agency or designee.
- Public health official or designee.
- Executive director of a board of alcohol, drug addiction and mental health services or designee.
- Pediatrician or family practice physician.

Additional members are recommended and may include the county prosecutor, fire/emergency medical service representatives, school representatives, representatives from Ohio Family and Children First Councils, other child advocates and other child health and safety specialists. The health commissioner serves as board chairperson in many counties.

CFR boards must meet at least once a year to review all deaths of child residents of that county. The basic review process includes:

- The presentation of relevant information.
- The identification of contributing factors.
- The development of data-driven recommendations.

Local CFR board review meetings are not open meetings and all discussion and work products are confidential.

Each local CFR board provides data to the Ohio Department of Health by recording information on a case report tool before entering it into a national Web-based data system. The report tool and data system were developed by the National Center for Fatality Review and Prevention (NCFRP) with a cooperative agreement from the federal Maternal and Child Health Bureau. The tool captures information about the factors related to the death and the often-complex conversations that happen during the review process in a format that can be analyzed on the local, state or national level. This report is based on the analysis of data from the NCFRP data system.

The Ohio Department of Health is responsible for providing technical assistance and annual training to the CFR boards. In 2017, the Ohio Department of Health provided a new board chair/coordinator orientation session. Throughout the year, conference calls and NCFRP webinars provided additional training opportunities for Ohio's local boards.

Ohio Department of Health staff coordinate the data collection, assure the maintenance of a Web-based data system and analyze the data reported by the local boards. The annual state report is prepared and published jointly with the Ohio Children's Trust Fund. As the value of CFR has been promoted widely, Ohio Department of Health staff receive many requests for data reports on specific topics or for specific geographic regions.

To assist moving CFR forward in Ohio, an advisory committee was established in 2002. The purpose of the advisory committee is to review Ohio's child mortality data and CFR data to identify trends in child deaths; to provide expertise and consultation in analyzing and understanding the causes, trends and system responses to child deaths in Ohio; to make recommendations in law, policy and practice to prevent child deaths in Ohio; to support CFR and recommend improvements in protocols and procedures; and to review and provide input for the annual report.

By reporting the information by year of death, it is possible to compare CFR data with data from other sources such as vital statistics. In making such comparisons, it is important to use caution and acknowledge the unique origins and purposes for each source of data. CFR data included in this report are the outcome of thoughtful inquiry and discussion by a multi-disciplinary group of community leaders who consider all the circumstances surrounding the death of each child. They bring to the review information from a variety of agencies, documents and areas of expertise. Their careful review process results in a thorough description of the factors related to child deaths.

Despite their best efforts, CFR boards are not able to review every child death. Some reviews must be delayed until all legal investigations and prosecutions are completed. Some deaths occur outside the county of residence or outside the state, resulting in long delays in notification to the CFR board. Due to these variables, it is usually impossible to find an exact number-for-number match between CFR data and data from other sources such as vital statistics. The unique role of CFR data is to provide a comprehensive depth of understanding to augment other, more one-dimensional data sources.

## APPENDIX II: FETAL INFANT MORTALITY REVIEW (FIMR)

---

Health throughout one's lifetime is influenced by the interplay of risk and protective factors, such as socioeconomic status, environmental exposures, health behaviors, stress, and nutrition. Deaths across the lifespan often have intertwined risk factors. Using the Life Course Framework and building on the successful model of Child Fatality Review, the Ohio Department of Health initiated an additional review program in 2014 to fully understand the issues of fetal and infant mortality.

Fetal Infant Mortality Review (FIMR) is a multi-disciplinary, multi-agency, community based program that identifies local infant mortality issues through the review of fetal and infant deaths and develops recommendations and initiatives to reduce infant deaths.

The FIMR Process includes the following:

- Identification of cases based on the infant mortality issues of the community
- Collection of appropriate records from medical, social service and other providers
- Maternal interview
- Abstraction of available records to produce a de-identified case summary
- Presentation of de-identified case summary to review team
- Development of data-driven recommendations
- Implementation of recommendations to prevent future deaths

The classic FIMR includes two components: a case review team (CRT) and a community action team (CAT).

- Case Review Team (CRT) – reviews case summaries and develops recommendations
  - Diversity and community involvement in the CRT is key.
  - CRT members should have influence and commitment to improvement of services.
  - Members should be those who provide services for families as well as community advocates. Recommended professionals include: representatives from local health department, OB/GYN, social services, SIDS agencies, Medicaid, WIC, minority advocacy, child care providers, drug treatment centers, and hospital administrators.
- Community Action Team (CAT) – reviews the recommendations presented by the CRT and develops a plan to implement these interventions
  - It is recommended that an existing community group serve as the CAT, rather than creating a new team.
  - Examples of possible CAT teams: Healthy Mothers/Healthy Babies program, Prenatal/Perinatal Regional Consortium, Community Advisory Board, mayor's or county commissioner's blue ribbon panel on infant mortality.
  - The CAT coordinates their plan with the CRT and shares their interventions.

Key roles for local FIMR programs include coordinator, abstractor, and interviewer. These positions can be all one person, or three different, coordinated staff members. Most of the FIMR budget is spent on salaries for these positions.

- Coordinator
  - Oversees the FIMR process including: selection of cases to review, monitoring case preparation, coordination of CRT and CAT teams, meetings and activities, preparation and summarization of data for local teams and the Ohio Department of Health.
- Abstractor
  - Requests medical/social services records, enters appropriate information (including maternal interview) into the database system, and prepares case summary.
- Interviewer
  - Tracks, contacts, and engages the mother/family of the infant who died, conducts interview, and provides information to abstractor.

#### Similarities of FIMR and CFR:

- Both are local systems, with local control and determination
- Both are public health focused
- Both are prevention focused
- Neither is a medical peer review system
- Neither is investigative or prosecutorial
- Neither is research

#### Differences between FIMR and CFR:

- CFR is mandated by the Ohio Revised Code, FIMR is not.
- FIMR has two teams; a CRT and a CAT.
- Number and type of cases reviewed – FIMRs usually review a relevant sample of cases, which includes fetal deaths and infant deaths up to a year of age. CFR in Ohio reviews all child deaths from birth through age 17.
- Anonymity – FIMR is de-identified whereas CFR is confidential.
- Family Participation – FIMR includes a maternal/family interview.
- Community Participation – FIMR includes lay community members on the Case Review Team.
- Membership – FIMR teams usually include more OB/GYN, maternal-fetal medicine and neonatology representatives than CFR.

#### Ohio currently has nine FIMR teams:

- Butler
- Columbus
- Cuyahoga
- Hamilton
- Mahoning
- Montgomery
- Stark
- Summit
- Toledo-Lucas County



### APPENDIX III: 2017 LOCAL CHILD FATALITY REVIEW BOARD CHAIRS

---

**Adams**

William E. Hablitzel, MD  
Adams County Health Department  
937-544-5547  
[whablitzel@adamscountyhealth.org](mailto:whablitzel@adamscountyhealth.org)

**Allen**

Kathleen Luhn  
Allen County Public Health  
419-228-4457  
[kluhn@allenhealthdept.org](mailto:kluhn@allenhealthdept.org)

**Ashland**

Sarah Goodwill Humphrey  
Ashland Health Department  
419-282-4226  
[shumphrey@ashlandhealth.com](mailto:shumphrey@ashlandhealth.com)

**Ashtabula**

Raymond J. Saporito  
Ashtabula County Health Department  
440-576-6010  
[rsaporito@ashtabulacountyhealth.com](mailto:rsaporito@ashtabulacountyhealth.com)

**Athens**

James R. Gaskell, MD  
Athens City-County Health Department  
740-592-4431  
[jamesgaskell2000@yahoo.com](mailto:jamesgaskell2000@yahoo.com)

**Auglaize**

Oliver Fisher  
Auglaize County Health Department  
419-738-3410  
[ofisher@auglaizehealth.org](mailto:ofisher@auglaizehealth.org)

**Belmont**

Linda Mehl  
Belmont County Health Department  
740-695-1202  
[lmehl@belmontcountyhealth.com](mailto:lmehl@belmontcountyhealth.com)

**Brown**

Harold Vermillion  
Brown County Health Department  
937-378-6892  
[hvermillion@browncountyhealth.org](mailto:hvermillion@browncountyhealth.org)

**Butler**

Jennifer Bailer  
Butler County Health Department  
513-887-5236  
[bailerj@butlercountyohio.org](mailto:bailerj@butlercountyohio.org)

**Carroll**

Amy Campbell  
Carroll County General Health District  
330-627-4866  
[acampbell@carroll-lhd.org](mailto:acampbell@carroll-lhd.org)

**Champaign**

Stacey A. Thomas  
Champaign Health District  
937-484-1619  
[stthomas@champaignhd.com](mailto:stthomas@champaignhd.com)

**Clark**

Charles Patterson  
Clark County Combined Health District  
937-390-5600  
[cpatterson@ccchd.com](mailto:cpatterson@ccchd.com)

**Clermont**

Julianne Nesbit  
Clermont County Public Health  
513-732-7499  
[jnesbit@clermontcountyohio.gov](mailto:jnesbit@clermontcountyohio.gov)

**Clinton**

Pamela Walker-Bauer  
Clinton County Health Department  
937-382-3829  
[pbauer@clincohd.com](mailto:pbauer@clincohd.com)

**Columbiana**

Wesley J. Vins  
Columbiana County Health Department  
330-424-0272  
[wvins@columbiana-health.org](mailto:wvins@columbiana-health.org)

**Coshocton**

Rebecca J. Beiter  
Coshocton County Health Department  
740-295-7307  
[beckybeiter@coshoctoncounty.net](mailto:beckybeiter@coshoctoncounty.net)

**Crawford**

Kate Siefert  
Crawford County Public Health  
419-562-5871  
[kate.siefert@crawfordhealth.org](mailto:kate.siefert@crawfordhealth.org)

**Cuyahoga**

Jackie Lambert  
Cuyahoga County Juvenile Court  
216-443-5493  
[jlambert@cuyahogacounty.us](mailto:jlambert@cuyahogacounty.us)

**Darke**

Terrence L. Holman, DVM  
Darke County Health Department  
937-548-4196  
[terrence.holman@darkecountyhealth.org](mailto:terrence.holman@darkecountyhealth.org)

**Defiance**

Jamie Gerken  
Defiance County General Health District  
419-784-3818  
[healthcommish@defiancecohealth.org](mailto:healthcommish@defiancecohealth.org)

**Delaware**

Lissie Krull  
Delaware General Health District  
740-203-2018  
[lkrull@delawarehealth.org](mailto:lkrull@delawarehealth.org)

**Erie**

Peter T. Schade  
Erie County Health Department  
419-626-5623  
[pschade@ecghd.org](mailto:pschade@ecghd.org)

**Fairfield**

Gwen Shafer  
Fairfield Department of Health  
740-652-2827  
[gshafer@fairfieldcountyohio.gov](mailto:gshafer@fairfieldcountyohio.gov)

**Fayette**

Robert G. Vanzant, DVM  
Fayette County Health District  
740-335-5910  
[drvanzant@aol.com](mailto:drvanzant@aol.com)

**Franklin**

Olivia Bossell  
Columbus Public Health  
614-645-5261  
[ojbossell@columbus.gov](mailto:ojbossell@columbus.gov)

**Fulton**

Kimberly Cupp  
Fulton County Health Department  
419-337-0915  
[kcupp@fultoncountyoh.com](mailto:kcupp@fultoncountyoh.com)

**Gallia**

Melissa Conkle  
Gallia County Health Department  
740-441-2960  
[melissa.conkle@galliacohealth.org](mailto:melissa.conkle@galliacohealth.org)

**Geauga**

Robert Weisdack  
Geauga County Health District  
440-279-1902  
[bweisdack@geaugacountyhealthdistrict.org](mailto:bweisdack@geaugacountyhealthdistrict.org)

**Greene**

Melissa Howell  
Green County Combined Health District  
937-374-5630  
[mbranum@gcph.info](mailto:mbranum@gcph.info)

**Guernsey**

Angela Gray  
Cambridge-Guernsey County Health Dept.  
740-439-3577  
[agray@guernseycountyhd.org](mailto:agray@guernseycountyhd.org)

**Hamilton**

Thomas Boeshart  
Hamilton County Public Health  
513-946-7980  
[thomas.boeshart@hamilton-co.org](mailto:thomas.boeshart@hamilton-co.org)

**Hancock**

Karim Baroudi  
Hancock Public Health  
419-424-7870  
[kbaroudi@hancockpublichealth.com](mailto:kbaroudi@hancockpublichealth.com)

**Hardin**

Kalyan Das, MD  
Kenton-Hardin Health Department  
419-673-6230  
[khhd@co.hardin.oh.us](mailto:khhd@co.hardin.oh.us)

**Harrison**

Teresa Koniski  
Harrison County General Health District  
740-942-2616  
[tkoniski@harrisoncountyohio.org](mailto:tkoniski@harrisoncountyohio.org)

**Henry**

Julie Lauf  
Henry County Health Department  
419-599-5545  
[jlauf@henrycohd.org](mailto:jlauf@henrycohd.org)

**Highland**

Jared Warner  
Highland County Health Department  
937-393-1941  
[jwarner@highlandcountyhealth.org](mailto:jwarner@highlandcountyhealth.org)

**Hocking**

Emily Norris  
Hocking County Health Department  
740-385-3030  
[enorrishchd@gmail.com](mailto:enorrishchd@gmail.com)

**Holmes**

Jessica Boal  
Holmes County Health District  
330-674-8444  
[jboal@holmeshealth.org](mailto:jboal@holmeshealth.org)

**Huron**

Tim Hollinger  
Huron County General Health District  
419-668-1652  
[thollinger@huroncohealth.com](mailto:thollinger@huroncohealth.com)

**Jackson**

Kevin Aston  
Jackson County Health Department  
740-286-5094  
[kaston@jchd.us](mailto:kaston@jchd.us)

**Jefferson**

Frank J. Petrola, MD  
Jefferson County General Health District  
740-283-8530  
[frank@jchealth.com](mailto:frank@jchealth.com)

**Knox**

Julie Miller  
Knox County Health Department  
740-392-2200  
[jemiller@knoxhealth.com](mailto:jemiller@knoxhealth.com)

**Lake**

Tara Perkins  
Lake County General Health District  
440-350-2443  
[tperkins@lcghd.org](mailto:tperkins@lcghd.org)

**Lawrence**

Dr. Kurt Hofmann, DO  
Lawrence County Health Department  
740-532-3962  
[khofmann@lawcohd.org](mailto:khofmann@lawcohd.org)

**Licking**

R. Joseph Ebel  
Licking County Health Department  
740-349-6477  
[jebel@lickingcohealth.org](mailto:jebel@lickingcohealth.org)

**Logan**

Boyd C. Hoddinott, MD  
Logan County Health District  
937-592-9040  
[bhoddinott@co.logan.oh.us](mailto:bhoddinott@co.logan.oh.us)

**Lorain**

Dave Covell  
Lorain County General Health District  
440-322-6367  
[dcovell@loraincountyhealth.com](mailto:dcovell@loraincountyhealth.com)

**Lucas**

David Grossman, MD  
Toledo-Lucas County Health Department  
419-213-4101  
[grossmad@co.lucas.oh.us](mailto:grossmad@co.lucas.oh.us)

**Madison**

Chris Cook  
Madison County-London City Health District  
740-852-3065  
[ccook@madisonpublichealth.org](mailto:ccook@madisonpublichealth.org)

**Mahoning**

Patricia Sweeney  
District Board of Health, Mahoning County  
330-270-2855  
[psweeney@mahoninghealth.org](mailto:psweeney@mahoninghealth.org)

**Marion**

Thomas Quade  
Marion Public Health  
740-692-9185  
[tquade@marionpublichealth.org](mailto:tquade@marionpublichealth.org)

**Medina**

Krista Wasowski  
Medina County Health Department  
330-723-9511  
[kwasowski@medinahealth.org](mailto:kwasowski@medinahealth.org)

**Meigs**

Marc Barr  
Meigs County Health Department  
740-992-6626  
[marc.barr@meigs-health.com](mailto:marc.barr@meigs-health.com)

**Mercer**

Amy Poor  
Mercer County - Celina City Health Department  
419-586-3251  
[apoor@mccchd.org](mailto:apoor@mccchd.org)

**Miami**

Dennis Propes  
Miami County Health District  
937-573-3505  
[dpropes@miamicountyhealth.net](mailto:dpropes@miamicountyhealth.net)

**Monroe**

Linda Dick  
Monroe County Health Department  
740-472-1677  
[linda.dick@monroecountyohio.com](mailto:linda.dick@monroecountyohio.com)

**Montgomery**

Jeffery A. Cooper  
Public Health - Dayton and Montgomery County  
937-224-8090  
[jacooper@phdmc.org](mailto:jacooper@phdmc.org)

**Morgan**

Richard D. Clark, MD  
Morgan County Health Department  
740-962-4572  
[richard.clark.mchd@gmail.com](mailto:richard.clark.mchd@gmail.com)

**Morrow**

Pamela Butler  
Morrow County Health Department  
419-947-1545  
[pamela.butler@morrowcountyhealth.org](mailto:pamela.butler@morrowcountyhealth.org)

**Muskingum**

Carrie Williamson  
Zanesville Muskingum County Health Department  
740-454-9741  
[carriew@zmchd.org](mailto:carriew@zmchd.org)

**Noble**

Shawn E. Ray  
Noble County Health Department  
740-732-4958  
[shawn.ray@noblecohd.org](mailto:shawn.ray@noblecohd.org)

**Ottawa**

Nancy C. Osborn  
Ottawa County Health Department  
419-734-6800  
[nosborn@cros.net](mailto:nosborn@cros.net)

**Paulding**

Joseph M. Kuhn  
Paulding County Health Department  
419-399-3921  
[jkhun@pauldingcountyhospital.com](mailto:jkhun@pauldingcountyhospital.com)

**Perry**

Angela DeRolph  
Perry County Health Department  
740-342-5179  
[aderolphpchd@gmail.com](mailto:aderolphpchd@gmail.com)

**Pickaway**

Elaine Miller  
Pickaway County General Health District  
740-474-8922  
[emiller@pchd.org](mailto:emiller@pchd.org)

**Pike**

Matthew Brewster  
Pike County General Health District  
740-947-7221  
[mbrewster@pike-health.org](mailto:mbrewster@pike-health.org)

**Portage**

Joseph Diorio  
Portage County Health Department  
330-296-9919  
[jdiorio@portageco.com](mailto:jdiorio@portageco.com)

**Preble**

Mark Vosler, DO  
Preble County Health District  
937-472-0087  
[pcdh@preblecountyhealth.org](mailto:pcdh@preblecountyhealth.org)

**Putnam**

Kimberly Rieman  
Putnam County General Health District  
419-523-5608  
[Kim.rieman@putnamhealth.com](mailto:Kim.rieman@putnamhealth.com)

**Richland**

Tina Picman  
Mansfield/Richland County Health Department  
419-774-4570  
[tpciman@richlandhealth.org](mailto:tpciman@richlandhealth.org)

**Ross**

Ben Avery  
Ross County Health District  
740-779-9652  
[bavery@rosscountyhealth.com](mailto:bavery@rosscountyhealth.com)

**Sandusky**

Bethany Brown  
Sandusky County Health Department  
419-334-6379  
[bbrown@sanduskycohd.org](mailto:bbrown@sanduskycohd.org)

**Scioto**

Michael Martin, MD  
Scioto County Health Department  
740-355-8358  
[michael.martin@sciotocounty.net](mailto:michael.martin@sciotocounty.net)

**Seneca**

Beth Schweitzer  
Seneca County Health Department  
419-447-3691  
[bschweitzer@senecahealthdept.org](mailto:bschweitzer@senecahealthdept.org)

**Shelby**

Steven Tostrick  
Sidney-Shelby County Health Department  
937-498-7249  
[steven.tostrick@shelbycountyhealthdept.org](mailto:steven.tostrick@shelbycountyhealthdept.org)

**Stark**

Kirkland Norris  
Stark County Health Department  
330-493-9904  
[norrisk@starkhealth.org](mailto:norrisk@starkhealth.org)

**Summit**

Dawn Glenny  
Greenleaf Family Center  
330-376-9494  
[gdawn@greenleafctr.org](mailto:g dawn@greenleafctr.org)

**Trumbull**

Frank Migliozi  
Trumbull County Combined Health District  
330-675-7805  
[hemiiglio@co.trumbull.oh.us](mailto:hemiiglio@co.trumbull.oh.us)

**Tuscarawas**

Katie Seward  
Tuscarawas County Health Department  
330-343-4928  
[sewardkatie@gmail.com](mailto:sewardkatie@gmail.com)

**Union**

Susie Knox  
Union County Health Department  
937-642-2059  
[susie.knox@uchd.net](mailto:susie.knox@uchd.net)

**VanWert**

Paul A. Kalogerou, MD  
Van Wert County Health Department  
419-238-0808  
[pkalogerou@vanwertcountyhealth.org](mailto:pkalogerou@vanwertcountyhealth.org)

**Vinton**

Susan Crapes, MD  
Vinton County Health District  
740-596-5233  
[scrapes@vintonohhealth.org](mailto:scrapes@vintonohhealth.org)

**Warren**

Duane Stansbury  
Warren County Combined Health District  
513-695-1566  
[dstansbury@wcchd.com](mailto:dstansbury@wcchd.com)

**Washington**

Richard Wittberg  
Washington County Health Department  
740-374-2782  
[rwittberg@wcgov.org](mailto:rwittberg@wcgov.org)

**Wayne**

Nicholas Cascarelli  
Wayne County Combined General Health District  
330-264-9590  
[ncascarelli@wayne-health.org](mailto:ncascarelli@wayne-health.org)

**Williams**

James Watkins  
Williams County Health Department  
419-485-3141  
[jim.watkins@williamscountyhealth.org](mailto:jim.watkins@williamscountyhealth.org)

**Wood**

Benjamin Batey  
Wood County Health Department  
419-354-2311  
[bbatey@co.wood.oh.us](mailto:bbatey@co.wood.oh.us)

**Wyandot**

Rachel Niederkohr  
Wyandot County General Health District  
419-294-3852  
[rniederkohr@co.wyandot.oh.us](mailto:rniederkohr@co.wyandot.oh.us)

## APPENDIX IV: PREVENTABILITY TABLES

Preventability by Manner of Death, 2013-2017 (n=6,920)

Preventability	Natural	Accident	Homicide	Suicide	Pending/Undetermined/Unknown
Yes, Probably	4%	89%	94%	67%	54%
No, Probably Not	83%	4%	2%	9%	9%
Could Not Determine	12%	5%	3%	22%	35%
Missing	1%	1%	1%	2%	1%

Preventability by Age, 2013-2017 (n=6,920)

Preventability	0-28 Days	29-364 Days	1-4 Years	5-9 Years	10-14 Years	15-17 Years
Yes, Probably	5%	39%	42%	31%	43%	60%
No, Probably Not	81%	43%	45%	57%	44%	28%
Could Not Determine	12%	17%	12%	10%	12%	10%
Missing	2%	1%	1%	1%	1%	2%

Preventability by County Type, 2013-2017 (n=6,920)

Preventability	Metropolitan	Rural Appalachian	Rural Non-Appalachian	Suburban
Yes, Probably	23%	33%	27%	25%
No, Probably Not	61%	55%	61%	64%
Could Not Determine	15%	10%	11%	9%
Missing	1%	2%	1%	1%

Preventability by Race, 2013-2017 (n=6,920)

Preventability	White	Black	Other	Missing/Unknown
Yes, Probably	26%	25%	21%	20%
No, Probably Not	61%	59%	59%	70%
Could Not Determine	12%	14%	19%	10%
Missing	2%	1%	1%	0%

Preventability by Cause of Death, 2013-2017 (n=6,920)

Preventability	External	Medical	Undetermined	Unknown
Yes, Probably	86%	4%	46%	19%
No, Probably Not	5%	83%	10%	56%
Could Not Determine	8%	12%	43%	23%
Missing	2%	1%	1%	2%

Preventability by Race and County Type, 2013-2017 (n=6,920)

Race & Preventability	Metropolitan		Rural Appalachian		Rural Non-Appalachian		Suburban		Total	
White	#	%	#	%	#	%	#	%	#	%
Yes, Probably	437	22%	287	32%	190	28%	177	25%	1,091	26%
No, Probably Not	1,200	62%	497	56%	415	61%	464	65%	2,576	61%
Could Not Determine	274	14%	90	10%	65	10%	68	9%	497	12%
Missing	34	2%	15	2%	8	1%	10	1%	67	2%
Total White	1,945	100%	889	100%	678	100%	719	100%	4,231	100%
Black	#	%	#	%	#	%	#	%	#	%
Yes, Probably	526	24%	59	41%	11	22%	28	29%	624	25%
No, Probably Not	1,299	60%	69	48%	29	57%	59	61%	1,456	59%
Could Not Determine	315	15%	12	8%	10	20%	7	7%	344	14%
Missing	25	1%	4	3%	1	2%	2	2%	32	1%
Total Black	2,165	100%	144	100%	51	100%	96	100%	2,456	100%
Other	#	%	#	%	#	%	#	%	#	%
Yes, Probably	23	18%	4	33%	1	9%	8	38%	36	21%
No, Probably Not	76	59%	5	42%	8	73%	13	62%	102	59%
Could Not Determine	28	22%	3	25%	2	18%	0	0%	33	19%
Missing	2	2%	0	0%	0	0%	0	0%	2	1%
Total Other	129	100%	12	100%	11	100%	21	100%	173	100%
Unknown	#	%	#	%	#	%	#	%	#	%
Yes, Probably	5	19%	0	0%	2	29%	2	29%	9	19%
No, Probably Not	20	74%	7	100%	3	43%	4	57%	34	71%
Could Not Determine	2	7%	0	0%	2	29%	1	14%	5	10%
Total Unknown	27	100%	7	100%	7	100%	7	100%	48	100%
Missing	#	%	#	%	#	%	#	%	#	%
Yes, Probably	3	38%	0	0%	0	-	0	0%	3	25%
No, Probably Not	4	50%	1	100%	0	-	3	100%	8	67%
Could Not Determine	1	13%	0	0%	0	-	0	0%	1	8%
Total Missing	8	100%	1	100%	0	-	3	100%	12	100%

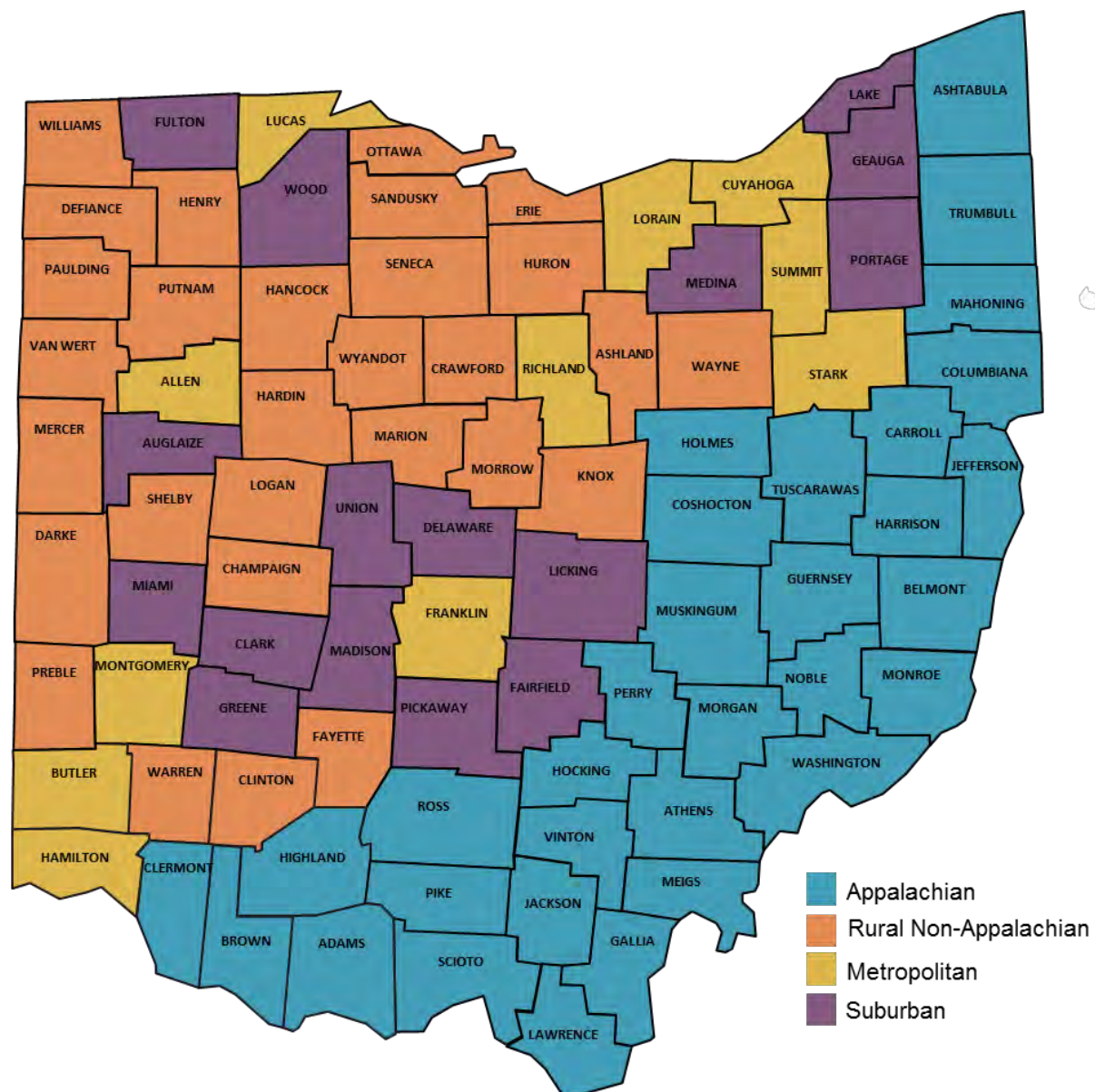
Reviews of Infant Deaths by County Type, Race and Preventability, 2013-2017 (n=4,610)

Race & Preventability	Metropolitan		Rural Appalachian		Rural Non-Appalachian		Suburban		Grand Total	
White	#	%	#	%	#	%	#	%	#	%
Yes, Probably	160	12%	110	21%	59	15%	63	14%	392	15%
No, Probably Not	917	71%	354	66%	288	73%	329	76%	1,888	71%
Could Not Determine	186	14%	60	11%	40	10%	37	9%	323	12%
Missing	21	2%	10	2%	6	2%	6	1%	43	2%
White Total	1,284	100%	534	100%	393	100%	435	100%	2,646	100%
Black	#	%	#	%	#	%	#	%	#	%
Yes, Probably	241	15%	42	40%	7	18%	7	11%	297	16%
No, Probably Not	1,106	69%	53	51%	23	59%	46	75%	1,228	68%
Could Not Determine	243	15%	8	8%	8	21%	6	10%	265	15%
Missing	20	1%	1	1%	1	3%	2	3%	24	1%
Black Total	1,610	100%	104	100%	39	100%	61	100%	1,814	100%
Other	#	%	#	%	#	%	#	%	#	%
Yes, Probably	9	10%	2	40%	0	0%	1	10%	12	10%
No, Probably Not	61	65%	2	40%	5	71%	9	90%	77	66%
Could Not Determine	23	24%	1	20%	2	29%	0	0%	26	22%
Missing	1	1%	0	0%	0	0%	0	0%	1	1%
Other Total	94	100%	5	100%	7	100%	10	100%	116	100%
Unknown	#	%	#	%	#	%	#	%	#	%
Yes, Probably	2	11%	0	0%	0	0%	0	0%	2	7%
No, Probably Not	15	83%	3	100%	1	33%	3	75%	22	79%
Could Not Determine	1	6%	0	0%	2	67%	1	25%	4	14%
Unknown Total	18	100%	3	100%	3	100%	4	100%	28	100%
Missing	#	%	#	%	#	%	#	%	#	%
No, Probably Not	2	67%	1	100%	0	-	2	100%	5	83%
Could Not Determine	1	33%	0	0%	0	-	0	0%	1	17%
Missing Total	3	100%	1	100%	0	-	2	100%	6	100%



Reviews of Infant Sleep-Related Deaths by County Type, Race and Preventability, 2013-2017 (n=691)

Race	Metropolitan		Rural Appalachian		Rural Non-Appalachian		Suburban		Total	
White	#	%	#	%	#	%	#	%	#	%
Yes, Probably	116	64%	67	76%	39	68%	45	74%	267	69%
No, Probably Not	16	9%	9	10%	8	14%	7	11%	40	10%
Could Not Determine	45	25%	10	11%	10	18%	9	15%	74	19%
Missing	4	2%	2	2%	0	0%	0	0%	6	2%
Total White	181	100%	88	100%	57	100%	61	100%	387	100%
Black	#	%	#	%	#	%	#	%	#	%
Yes, Probably	188	73%	19	86%	4	57%	2	40%	213	73%
No, Probably Not	7	3%	0	0%	0	0%	0	0%	7	2%
Could Not Determine	62	24%	3	14%	2	29%	3	60%	70	24%
Missing	1	<1%	0	0%	1	14%	0	0%	2	1%
Total Black	258	100%	22	100%	7	100%	5	100%	292	100%
Other/Unknown	#	%	#	%	#	%	#	%	#	%
Yes, Probably	5	63%	2	67%	0	0%	1	100%	8	67%
Could Not Determine	3	38%	1	33%	0	0%	0	0%	4	33%
Total Other/Unknown	8	100%	3	100%	0	0%	1	100%	12	100%

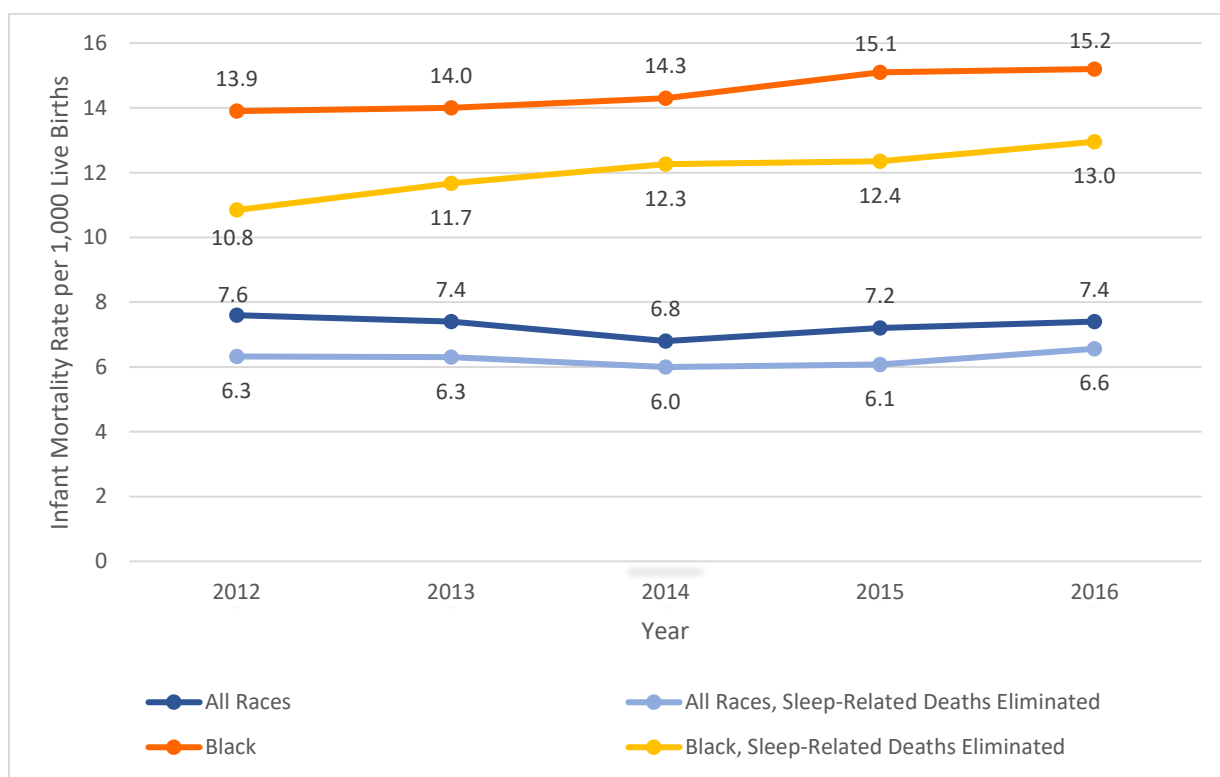


## APPENDIX VI: REPORT TO THE GOVERNOR JULY 1, 2018 ON INFANT SAFE SLEEP

### Background

Every week in Ohio, three babies die in unsafe sleep environments. As reported in The Ohio Child Fatality Review 17<sup>th</sup> Annual Report, among infant death reviews from 2012 through 2016, 714 were related to sleeping or the sleep environment. This accounted for 15 percent of the 4,680 infant death reviews. If all sleep-related deaths were eliminated, the Ohio infant mortality rate for 2016 would have been reduced by 1.2, from 7.4 to 6.6 deaths per 1,000 live births. If the sleep-related deaths of black infants were eliminated, the black infant mortality rate for 2016 would have been reduced by 2.2, from 15.2 to 13.0 deaths per 1,000 live births (Figure 1).

**Figure 1: Ohio Infant Mortality Rates, Actual and with Sleep-Related Deaths Eliminated, 2012-2016**



Sources: Ohio Department of Health, Bureau of Vital Statistics, 2016 Ohio Infant Mortality Report data; Ohio Child Fatality Review (CFR), 2016 Ohio Child Fatality Review Seventeenth Annual Report data

### Summary of Requirements and Implementation

The Ohio Infant Safe Sleep Law was enacted by Am. Sub. S. B. 276 of the 130th Ohio General Assembly in May 2015. Ohio Revised Code 3701.67 requires birthing centers and hospitals, excluding critical access hospitals, to screen new parents and caregivers prior to discharge to determine if the infant has a safe sleep environment at their residence. If the infant is determined not to have a safe sleep environment, per this screening, the facility must assist the family in obtaining a safe crib at no charge. The Ohio Department of Health (ODH) developed a model screening form for facilities to use to identify parents and caregivers who do not have a safe sleep environment for their infants. Beginning January 1, 2017, a new tab was added within the state's Integrated Perinatal Health Information System (IPHIS)

to capture infant safe sleep environment screening data. ODH conducted six regional trainings between November and December 2016 in Akron, Athens, Cincinnati, Cleveland, Columbus, and Toledo on the topic of infant safe sleep and entering safe sleep environment screening data into the new IPHIS tab. Facilities with IPHIS access are expected to report safe sleep environment screening data in IPHIS. These data, along with demographic data, are extracted by ODH to monitor the need for safe sleep environments and appropriate action taken by facilities to connect families in need with a safe crib. Facilities without access to IPHIS (e.g. children's hospitals) will continue to submit an annual report to ODH that indicates aggregate safe sleep environment screening and accompanying demographic data.

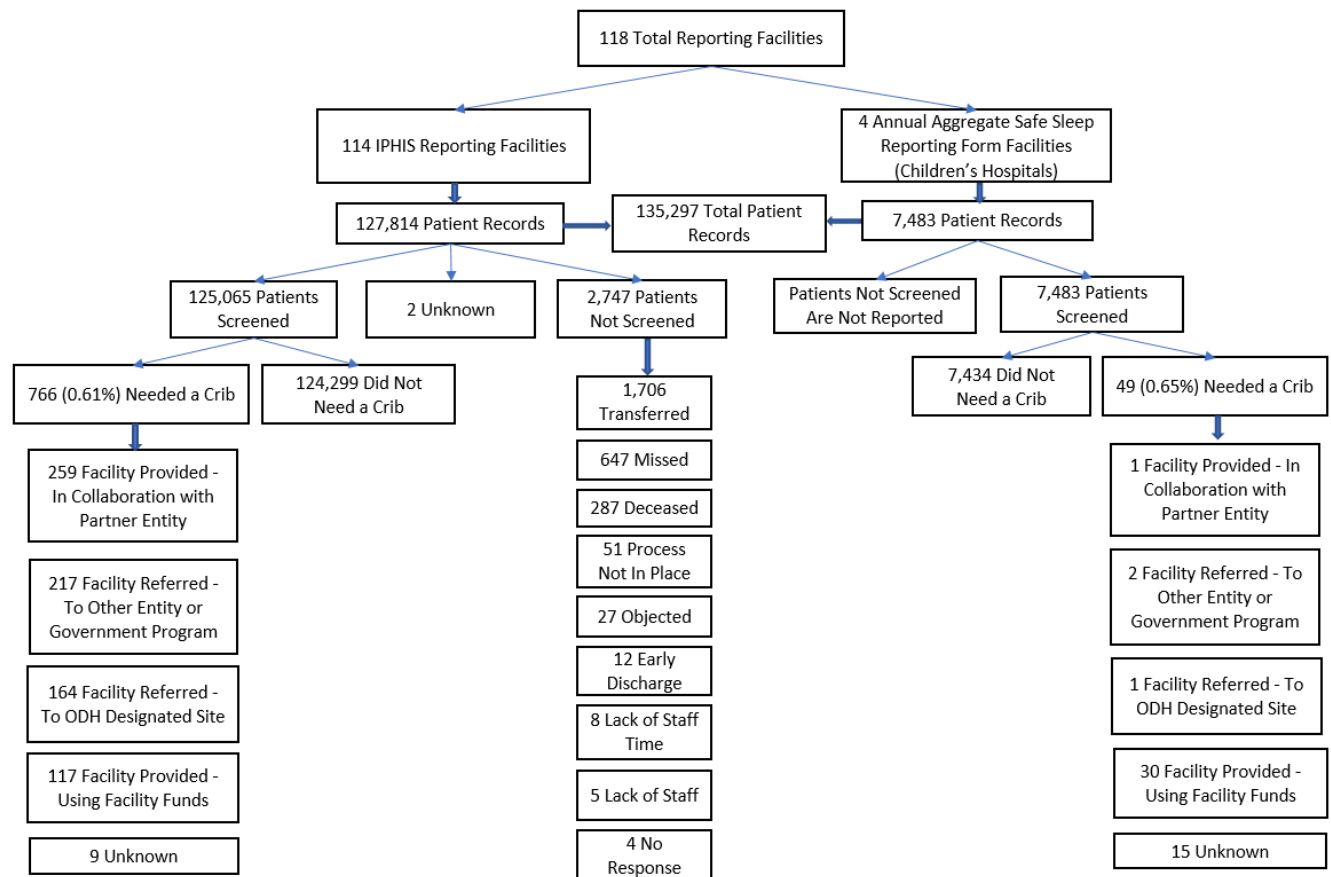
### **Limitations of the Data**

- There is variation in how facility staff ask the screening questions. In December 2017, ODH conducted a survey with hospitals to better understand how screening questions are asked (n=64; 43% response rate).
  - 31% of hospitals reported asking 2 questions; 30% of hospitals reported asking 3 or more questions
  - The most common question asked was “Do you have a safe place for your baby to sleep?” (asked by 64% of hospitals)
  - The second most common question asked was “Do you have a crib for your baby to sleep?” (asked by 55% of hospitals)
  - Additional questions asked by <30% of hospitals:
    - Where will the baby sleep?
    - Do you need a crib for your baby?
    - Do you have a separate sleep environment for your baby to sleep?
- Facilities that report data via the Annual Aggregate Safe Sleep Reporting Form do not report data on patients that are not screened.
- Data from sealed birth records, due to adoption, are not available.
- Screening is not required for home births.
- Data were extracted from IPHIS on March 9, 2018.
- Data received by non-IPHIS reporting facilities by April 6, 2018 were included in the report.

### **Summary of Hospital Data**

In 2017, 118 facilities provided ODH with data, 41 more facilities than the 2016 reporting period. The increase is primarily because facilities, other than children's hospitals and birthing centers, now have the capability to report safe sleep environment screening data directly into the IPHIS electronic birth record, rather than a paper form. Of the 118 reporting facilities, 114 provided ODH data via IPHIS, accounting for 127,814 patient records, and four facilities provided ODH data via the Annual Aggregate Safe Sleep Reporting Form, accounting for 7,483 patient records (Figure 2).

**Figure 2: Safe Sleep Environment Screening Reporting Flow Chart**



Sources: Ohio Department of Health, Bureau of Vital Statistics and Annual Aggregate Safe Sleep Reporting Form

The results indicate that 132,548 caregivers of newborns were screened; of them, 131,733 (99.4%) reported having a safe sleeping crib for their infant at home, and 815 (0.6%) reported not having a safe sleeping crib for their infant at home. Among the 815 caregivers that reported they needed a crib, 260 (31.9%) were facility provided in collaboration with a partner entity, 219 (26.9%) were facility referred to another entity or government program, 165 (20.2%) were facility referred to an ODH designated site, 147 (18.0%) were facility provided, using facility funds, and 24 (2.9%) were not specified. Based on IPHIS reporting facility data, 97.8 percent of caregivers were screened for a safe sleep environment; eliminating caregivers that were not screened for a safe sleep environment due to the death of the child or transfer to another facility, 99.4 percent of caregivers were screened. In addition, 25.9 percent of unscreened caregivers were missed due to reasons that should be addressed and prevented (i.e. missed, process not in place, lack of staff time, or lack of staff) (Figure 2). All screened caregivers answered they have access to a safe sleep environment for their infant in 35.6 percent of facilities, whereas 64.4 percent of facilities identified between one and 69 caregivers who did not have a safe sleep environment.

### Demographics Among Screened Caregivers that Needed a Crib

Among caregivers screened for a safe sleep environment, mothers who identified as a minority race, Hispanic, or resided in large metropolitan counties disproportionately reported needing a safe crib compared to all mothers screened for a safe sleep environment by IPHIS reporting facilities (Tables 1 through 4).

Mothers who identified as black or African American, Asian, multiple races, unspecified race, or Native Hawaiian or Other Pacific Islander disproportionately reported needing a safe crib (Table 1).

**Table 1: IPHIS Reported Screened Caregivers and All Caregivers in Need of a Crib, by Race**

Mother's Race	% IPHIS Reported Screened Caregivers	% All Caregivers in Need of a Crib
Black or African American	15.4%	46.0%
White	74.8%	29.4%
Asian	3.3%	8.2%
Other	3.2%	7.4%
Multiple	2.9%	5.5%
Unspecified	0.3%	2.5%
Native Hawaiian or Other Pacific Islander	0.1%	0.9%
American Indian or Alaska Native	0.1%	0.1%

Sources: Ohio Department of Health, Bureau of Vital Statistics and Annual Aggregate Safe Sleep Reporting Form

Mothers who identified as Hispanic disproportionately reported needing a crib. For all mothers screened for a safe sleep environment by IPHIS reporting facilities, 5.5 percent were Hispanic, whereas 10.3 percent of mothers who reported needing a crib were Hispanic (Table 2).

**Table 2: IPHIS Reported Screened Caregivers and All Caregivers in Need of a Crib, by Ethnicity**

Mother's Ethnicity	% IPHIS Reported Screened Caregivers	% All Caregivers in Need of a Crib
Non-Hispanic	94.4%	87.7%
Hispanic	5.5%	10.3%
Unknown	0.1%	2.0%

Sources: Ohio Department of Health, Bureau of Vital Statistics and Annual Aggregate Safe Sleep Reporting Form

Over 55 percent of mothers that reported needing a crib resided in large metro counties, which is disproportionate to all mothers screened for a safe sleep environment among IPHIS reporting facilities, 31.9 percent (Table 3).

**Table 3: IPHIS Reported Screened Caregivers and All Caregivers in Need of a Crib, by Centers for Medicare and Medicaid Services (CMS) Megarule County Designation**

CMS Megarule County Type (Mother's Residence County)	% IPHIS Reported Screened Caregivers	% All Caregivers in Need of a Crib
Large Metro	31.9%	55.8%
Metro	54.3%	36.2%
Micro	10.4%	5.9%
Unspecified Ohio County or Out of State	2.7%	1.6%
Rural	0.7%	0.5%

Sources: Ohio Department of Health, Bureau of Vital Statistics and Annual Aggregate Safe Sleep Reporting Form

Seventy-six percent of mothers that reported needing a crib resided in metropolitan counties, compared to only 55.6 percent of all mothers screened for a safe sleep environment by IPHIS reporting facilities (Table 4).

**Table 4: IPHIS Reported Screened Caregivers and All Caregivers in Need of a Crib, by ODH County Type**

ODH County Type (Mother's Residence County)	% IPHIS Reported Screened Caregivers	% All Caregivers in Need of a Crib
Metropolitan	55.6%	76.0%
Appalachian	14.0%	10.4%
Suburban	15.2%	6.7%
Rural, Non-Appalachian	12.4%	5.3%
Unspecified Ohio County or Out of State	2.7%	1.6%

Sources: Ohio Department of Health, Bureau of Vital Statistics and Annual Aggregate Safe Sleep Reporting Form

### Next Steps

In completing a safe sleep environment screening, facilities must indicate whether a crib or referral was provided for families in need, including whether the facility made referrals to an ODH designated site. ODH funds a network of Cribs for Kids® (CFK) partners to provide free Graco Cribettes to families who would otherwise be unable to afford safe cribs for their infants. At the time this report was written, 44 ODH-funded partners are implementing CFK programs in 59 Ohio counties. This includes 15 infant vitality partners that are implementing programs in infant mortality priority areas; these partners are charged with ensuring that at least 25 percent of the cribs distributed in those areas are delivered through home visiting programs. Additionally, the Ohio Commission on Fatherhoods' New Beginnings for New Fathers Program also provides CFK Cribettes in Clark, Cuyahoga, Franklin, Hamilton, and Montgomery counties. ODH is considering developing an online referral portal for CFK partners to enter and track data while reducing duplication. CFK Cribettes are available to all in need of a safe sleep environment and education for their newborn. Funded agencies collaborate with hospitals and other organizations to distribute education and Cribettes. In 2017, ODH Maternal Child Health Program funded agencies distributed over 4,600 Cribettes and reached over 11,000 individuals with education. In 2018, we intend to improve tracking of education and Cribettes with non-funded agencies, include smoke free environment messages in our media campaign, improve our annual Safe Sleep training to an online format, and improve the provision of technical assistance to funded agencies to improve outreach and collaboration efforts.

Furthermore, Sub. S. B. 332 of the 131<sup>st</sup> Ohio General Assembly requires ODH to provide annual training classes at no cost to individuals who provide safe sleep education to parents and infant caregivers who reside in the infant mortality priority areas. ODH is in the process of developing the training, which will be made available to enrollees by June 30, 2018 in an online format.

A full-time safe sleep coordinator position is dedicated to aligning the work with the safe sleep requirements outlined in Sub. S. B. 332 of the 131<sup>st</sup> Ohio General Assembly. Part of this work includes providing facilities with safe sleep resources and updates through partnerships with the Ohio Hospital Association and the Ohio Injury Prevention Partnership Child Injury Action Group Safe Sleep Subcommittee. The position provides technical assistance to facilities that provide ODH safe sleep screening data, monitors safe sleep data, and follows up with facilities that submit incomplete data. The safe sleep coordinator also oversees the sleep-related deliverables that ODH funds through the Maternal and Child Health Program's Cribs for Kids® Safe Sleep grant. This includes defining the program requirements, funding structure, and reporting and monitoring requirements for subgrantees and coordinating ODH-funded CFK programs.

The safe sleep coordinator also coordinates the safe sleep media campaign. In 2017 there were over 46 million television and radio impressions, over 26 million billboard and transportation ads impressions (viewings), and 18 million social media type (mobile display, digital radio, Native Ad, Facebook, Instagram, and Twitter) impressions and over 69,000 engagements/clicks. In 2018 the media campaign continues, and includes smoke-free environment messages, targeting mothers and fathers ages 16-45 years old, and grandparents in the 42 high risk Ohio counties. We will also continue to leverage other ODH programs for outreach.

## **Conclusion**

ODH anticipates the full implementation of this law will result in a decrease in preventable sleep-related deaths, which is a significant contributor to infant mortality in Ohio. We look forward to continuing collaborations with partners, stakeholders, the legislature and the state enterprise to reduce infant mortality in Ohio. In response to the safe sleep screening data, we have noted the improvements needed (as addressed in the section above) to address the need for more access to safe sleep environments and education in metropolitan counties and among African American women.



## APPENDIX VII: GLOSSARY

---

Cause of Death: The disease or injury that initiated the train of events leading directly to death, or the circumstances of the accident or violence which produced the fatal injury.

Congenital Anomaly: Category of cause of death includes deaths caused by congenital malformations, deformations, and chromosomal anomalies, and congenital disorders.

County Type: Ohio's 88 counties have been categorized into four county types. This report divides counties into Appalachian, Rural Non-Appalachian, Metropolitan and Suburban.

Ethnicity: Ethnicity determines whether a person is of Hispanic origin or not.

Infant Death: The death of a live-born baby before his or her first birthday.

Infant Mortality Rate: The number of infant deaths in a specific year divided by the number of live births within that same year, multiplied by 1,000.

Manner of Death: Manner of death is a classification of deaths based on the circumstances surrounding a cause of death and how the cause came about. The five manner of death categories on the Ohio death certificate are natural, accident, homicide, suicide, or undetermined/ pending/ unknown.

OEI: The Ohio Institute for Equity in Birth Outcomes is a partnership between ODH and 9 urban communities to improve birth outcomes and reduce racial disparities in infant deaths.

Prematurity: Category of infant cause of death comprised of short gestation and low birth weight as well as several other causes.

Preventability: The community or an individual could reasonably have changed the circumstances that led to a death.

SIDS: Sudden Infant Death Syndrome and is a category for infant cause of death. The sudden death of an infant under one year of age that cannot be explained after a thorough case investigation, including a complete autopsy, examination of the death scene, and review of the clinical history.

Vital Statistics: The statewide system for the registration of births, deaths, fetal deaths, and other vital events that happen within the State of Ohio.

WIC: The Special Supplemental Nutrition Program for Women, Infants, and Children is a Federal program administered by the state to income eligible women and their children up to age 5. The program improves pregnancy outcomes by providing or referring to support services.

## APPENDIX VIII: REFERENCES

---

1. National Center for Health Statistics and U.S. Census Bureau data. Processed through Ohio Department of Health, Bureau of Vital Statistics, May 21, 2015. Note: For the Census data used in this report, persons with multiple races indicated were assigned by a complex algorithm including geographic area and proportions of all races in that area and other factors.
2. Program Manual for Child Death Review. Ed. Covington T, Foster V, Rich S. The National Center for Child Death Review, 2005.
3. U.S. Department of Health and Human Services. Strengthening Families and Communities: Resource Guide, 2009. Available at <https://www.childwelfare.gov/pubpdfs/2009guide.pdf> Accessed 6 Sept. 2018.
4. Ohio Department of Health. *Ohio Child Fatality Review Seventh Annual Report. September 2007.* Available at <http://www.odh.ohio.gov/~media/ODH/ASSETS/Files/cfhs/child%20fatality%20review/ohiochildfatalityreviewannualreport2007-1.ashx> Accessed 6 Sept. 2018.
5. Centers for Disease Control and Prevention. Division of Violence Prevention, Child Maltreatment Prevention. Available at <http://www.cdc.gov/ViolencePrevention/childmaltreatment/> Accessed 6 Sept. 2018.
6. Willinger M, James LS, Catz C. Defining the sudden infant death syndrome (SIDS): Deliberations of an expert panel, convened by the National Institute of Child Health and Human Development. *Pediatric Pathology*. 1991; 11:677-684.
7. National Center for Health Statistics. *Deaths: Final Data for 2016*. Available at [https://www.cdc.gov/nchs/data/nvsr/nvsr67/nvsr67\\_05.pdf](https://www.cdc.gov/nchs/data/nvsr/nvsr67/nvsr67_05.pdf) Accessed 6 Sept. 2018.
8. Ohio Department of Health. *2016 Ohio Infant Mortality Data: General Findings*. Available at <https://www.odh.ohio.gov/-/media/ODH/ASSETS/Files/cfhs/OEI/2016-Ohio-Infant-Mortality-Report-FINAL.pdf?la=en> Accessed 6 Sept. 2018.
9. Centers for Disease Control and Prevention. National Prematurity Awareness Month page. Available at <http://www.cdc.gov/features/prematurebirth/> Accessed 6 Sept. 2018.
10. National Center on Birth Defects and Developmental Disabilities. *Child Development*. Available at <http://www.cdc.gov/ncbddd/childdevelopment/facts.html> Accessed 6 Sept. 2018.
11. National Center for Injury Prevention and Control: Data & Statistics (WISQARS™). Leading Causes of Death Charts 2016. Available at <http://www.cdc.gov/injury/wisqars/leadingcauses.html> Accessed 6 Sept. 2018.
12. Centers for Disease Control and Prevention. Self-directed Violence Surveillance: Uniform Definitions and Recommended Data Elements, 2011. Available at <https://www.cdc.gov/violenceprevention/pdf/Self-Directed-Violence-a.pdf> Accessed 6 Sept. 2018.