

Ohio Child Fatality Review Ninth-annual Report

2009



This report includes reviews of deaths that occurred in 2007.





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Mission

To reduce the incidence of preventable child deaths in Ohio

Submitted September 30, 2009 to

Ted Strickland, Governor, State of Ohio

Armond Budish, Speaker, Ohio House of Representatives

Bill Harris, President, Ohio Senate

William G. Batchelder, Minority Leader, Ohio House of Representatives

Capri Cafaro, Minority Leader, Ohio Senate

Ohio Child Fatality Review Boards

Ohio Family and Children First Councils

Submitted by

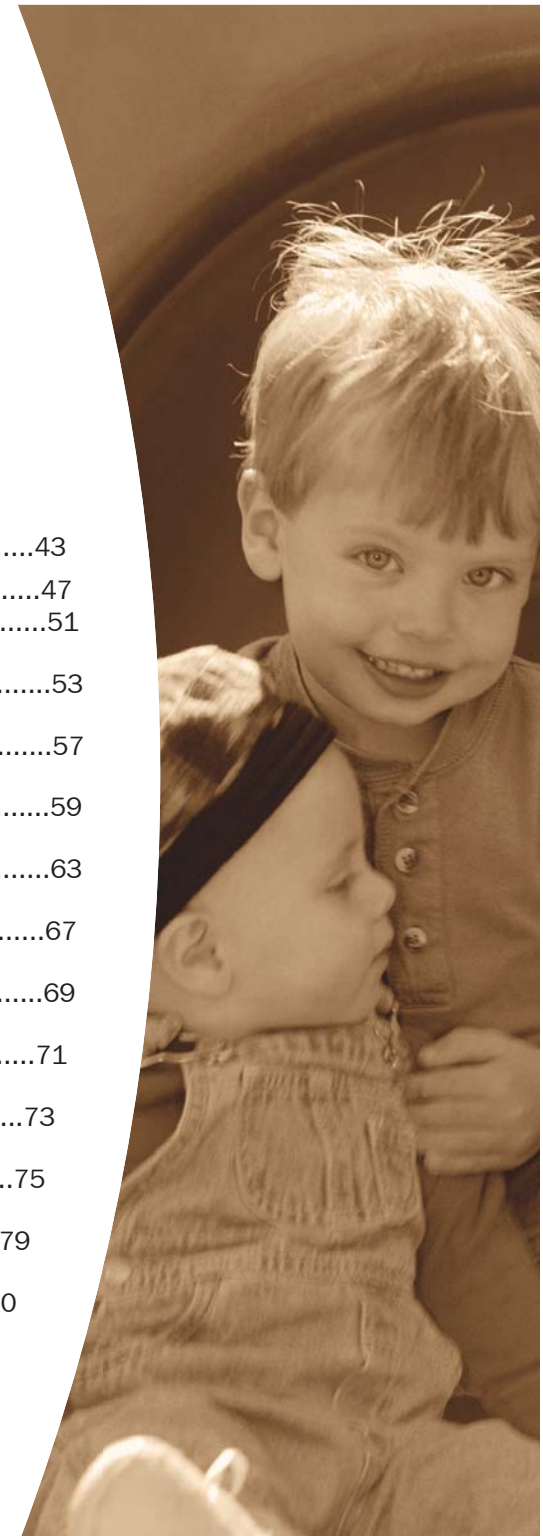
Ohio Department of Health and Ohio Children's Trust Fund

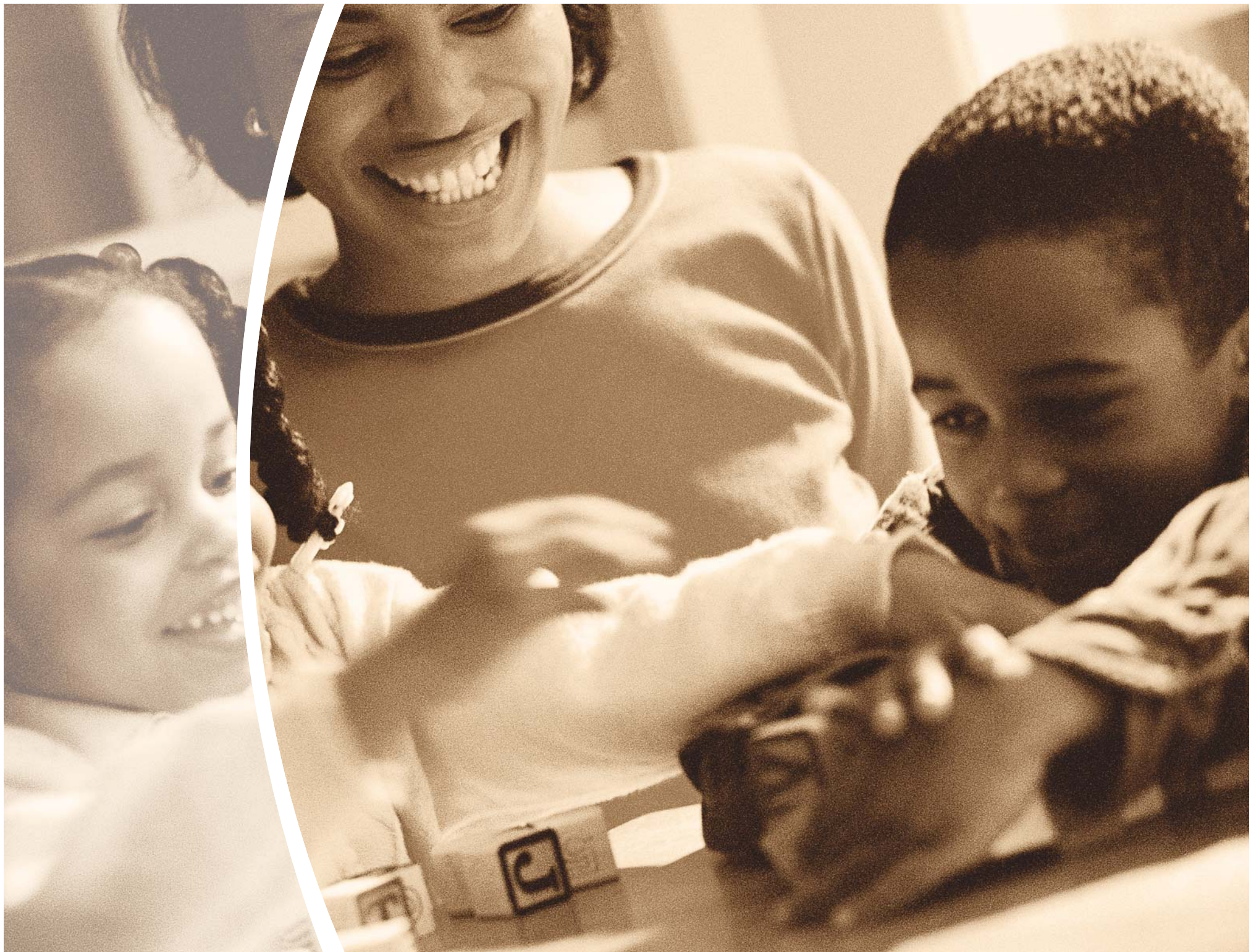




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Dedication and Acknowledgements

Dedication

This report on child fatalities in Ohio reflects the work of many dedicated professionals in every community throughout the state who have committed themselves to gaining a better understanding of how and why children die. Their work is driven by a desire to protect and improve the lives of young Ohioans. Each child's death represents a tragic loss for the family, as well as the community. We 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 the State of 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 generous contributions of other agencies in facilitating the CFR program, including the Ohio Department of Mental Health; the Ohio Children's Trust Fund; the Ohio Department of Health (divisions of Family and Community Health Services and Prevention, and Office of Healthy Ohio); state and local Vital Statistics registrars; and the National Center for Child Death Review.

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





Letter from the Directors

Dear Friends of Ohio Children:

We are pleased to present the 2009 Ohio Child Fatality Review (CFR) Annual Report containing information from reviews of child deaths that occurred in calendar year 2007. This report outlines the CFR program and the state of the untimely and preventable deaths of Ohio children. In facts and figures, it paints the picture of why children are dying and what is being done to prevent these deaths. We hope the data presented will lead to a reduction in the untimely deaths of Ohio's children.

Established by the Ohio General Assembly in July 2000, the CFR program works to examine the factors contributing to Ohio children's deaths. It is only through careful review of child deaths that we are better prepared to prevent future deaths. This report was created to raise awareness of preventable child deaths and understanding of prevention initiatives to ensure the health and well-being of our state's children.

In 2007, 1,760 Ohio children died and 94 percent of these deaths were reviewed by local CFR boards. The CFR process begins at the local level where local boards consisting of professionals from public health, children's services, recovery services, law enforcement and health care review the circumstances surrounding every child death in their county. Through their collective expertise

and collaborative assessment, solutions are identified and local prevention initiatives are created.

We need your help to prevent future child deaths. Throughout the year, you can:

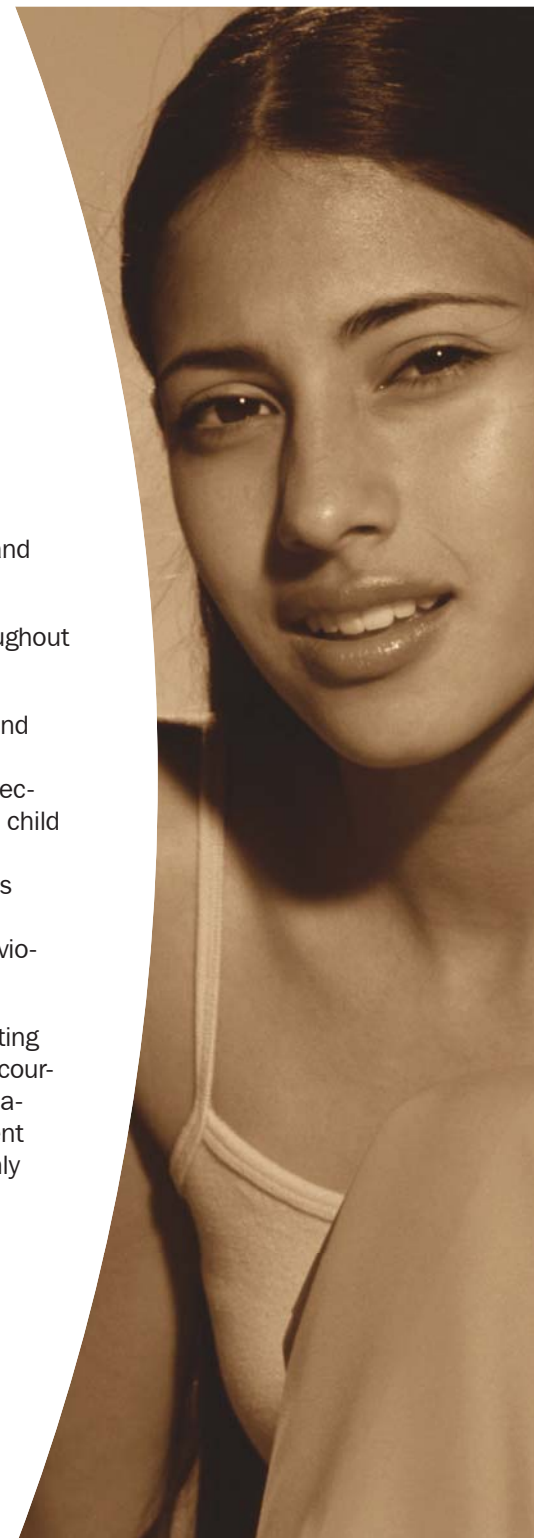
- Educate families, children, neighbors, organizations and communities on preventable child deaths.
- Encourage community and individual involvement in recognizing and preventing risk factors that contribute to child deaths.
- Assist families in achieving healthy parenting practices through education and resources.
- Empower individuals to intervene in situations where violence and neglect harm children.

Public awareness and advocacy are essential to preventing violence against children and accidental deaths. We encourage you to consider the facts, analysis and recommendations presented in this report and to make a commitment to create a safer and healthier Ohio for our children. Only together can we eliminate preventable child deaths.

Sincerely,

Alvin D. Jackson, M.D.
Director, Ohio
Department of Health

Candace L. Novak
Executive Director,
Ohio Children's Trust Fund





Executive Summary and Key Findings

Executive Summary

The 2009 Child Fatality Review (CFR) Annual Report presents information from the reviews of deaths that occurred in 2007.

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

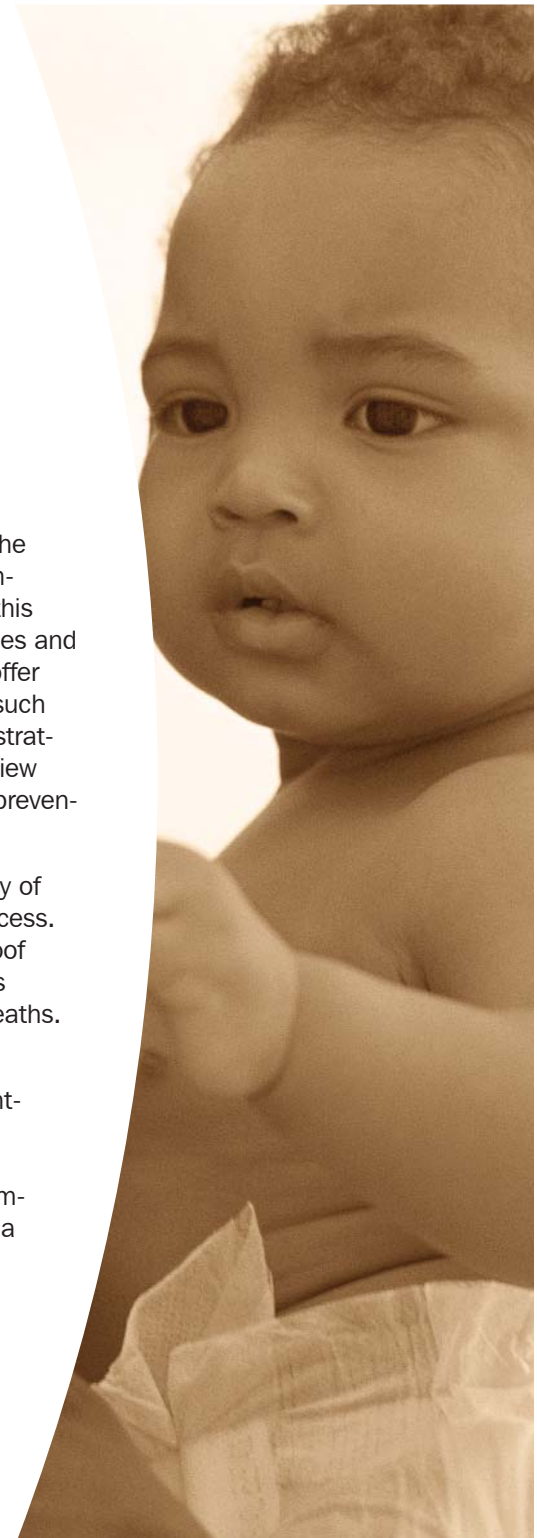
The Ohio CFR program was established in 2000 by the Ohio General Assembly in response to the need to better understand why children die. The law mandates CFR boards in each of Ohio's counties (or regions) to review the deaths of all children younger than 18. Ohio's CFR boards are comprised of multidisciplinary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

In 2005, Ohio CFR boards began using a new case report tool and data system developed by the National Center for Child Death Review. The tool and data system underwent slight revisions in early 2007, based on feedback from the two-year pilot. As a result, the revised tool more clearly captures information about the factors related to each child death and better documents the often complex conversations that happen during the review process.

The comprehensive nature of the case report tool and the functionality of the data system have allowed more complete analysis for all groups of deaths. Each section of this report contains detailed data regarding the circumstances and factors related to child deaths. Special-focus sections offer in-depth information about identified groups of deaths such as suicides, homicides and child abuse deaths, demonstrating the potential of data analysis combined with the review process to identify risk factors and to give direction for prevention activities.

CFR does make a difference. This report highlights many of the local initiatives that have resulted from the CFR process. 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. The knowledge must be put into action.

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 the circumstances involved in most child deaths are too complex and multidimensional for responsibility to rest with a single individual or agency. The CFR process has raised the collective awareness of all participants and has led to a clearer understanding of agency responsibilities and possibilities for collaboration on all efforts ad-



dressings child health and safety. It is only through continued collaborative work that we can hope to protect the health and lives of our children.

Key Findings

A total of 1,676 reviews of 2007 child deaths were reported by 88 local CFR boards. Of these, 1,656 reviews were complete for manner and cause of death and were used for analysis. This represents 94 percent of all 1,760 child deaths for 2007 reported in data from Ohio 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 reviews.

Black children and boys died at disproportionately higher rates than white children and girls for most causes of death. Thirty-two percent (525) of deaths reviewed were to black children and 59 percent (971) were to boys. Their representation in the general population is 51 percent for boys and 16 percent for black children.

Reviewed cases are categorized by manner and by 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 73 percent (1,209) of all deaths reviewed.
- Accidents (unintentional injuries) accounted for 15 percent (254) of the deaths.
- Homicide accounted for 5 percent (76) of the deaths.
- Suicides accounted for 2 percent (37) of the deaths.
- Five percent (80) of deaths reviewed were of an undetermined, pending or unknown manner.

Seventy-three percent (1,217) of the deaths reviewed were due to medical causes.

- Seventy-seven percent (936) of deaths due to medical causes were to infants less than 1 year of age.

- The most frequent medical cause of death was prematurity (523).

Twenty-three percent (385) of all deaths reviewed resulted from external causes.

- Vehicular deaths accounted for 8 percent (111) of all deaths reviewed. Of the 65 deaths that occurred in cars, trucks, vans or SUVs, only 32 percent (20) of the children killed were reported to be using appropriate restraints.
- Seven percent (110) of all deaths reviewed were from asphyxiation, including suffocation, strangulation and choking. More than half of the deaths (62 percent) occurred to children less than 1 year of age, many of which occurred in a sleep environment. Of the 26 asphyxia deaths to children 10-17 years old, 73 percent (19) were suicides.
- Weapons, including body parts used as weapons, accounted for 5 percent (76) of all deaths reviewed. Fifty-five percent (42) were youth 15-17 years old and 51 percent (39) were black chil-

dren. The manner of death was accident for only 5 percent (four) of the weapons deaths.

- Two percent (29) of all deaths reviewed were from drowning and submersion. Fifty-two percent (15) of the drowning deaths were to children under 5 years of age.
- Fire, burn and electrocution accounted for 1 percent (21) of all deaths reviewed. Twenty-nine percent (six) of fire, burn and electrocution deaths were homicides.
- Poisoning deaths represented less than 1 percent (10) of all deaths reviewed. All of the poisoning deaths occurred to children older than 10 years. Ninety percent (nine) of poisoning deaths were accidental deaths.

Deaths to infants younger than 1 year accounted for 65 percent (1,086) of the reviews.

- Infants less than 1 month old accounted for 68 percent (734) of all infant deaths and 44 percent of all deaths reviewed.
- Prematurity was the most frequent cause of infant deaths,

- accounting for 48 percent (520).
- For 782 reviews where gestational age was known, 73 percent (569) of the infants were born preterm (before 37 weeks gestation).
- Sleep-related deaths (including sudden infant death syndrome or SIDS) accounted for 16 percent (175) of the 1,086 total reviews for infant deaths in 2007, more than any single cause of death except prematurity. Twenty-nine percent (51) of sleep-related deaths were to black infants. Sixty percent (105) of the sleep-related deaths occurred in locations considered unsafe such as in adult beds and on couches. Forty-nine percent (86) occurred to infants who were sharing a sleeping surface (bedsharing) with someone else at the time of death.
- SIDS accounted for 5 percent (53) of the 1,086 total reviews for infant deaths. Fifty-eight percent (31) of all SIDS deaths were to girls.

Five percent (76) of all deaths reviewed resulted from homicide.

- Homicide deaths to boys (68 percent) and black children (55 percent) were disproportionately higher than their representation in the general population (51 percent for boys and 16 percent for black children).
- Forty-two percent (32) of homicide deaths were to children ages 15-17.
- The perpetrator was a parent, stepparent or parent's partner in 45 percent (25) of homicide deaths reviewed.
 - For children less than 10 years old, the perpetrator was a parent, stepparent or parent's partner in 74 percent of reviews.
 - For children ages 10-17, the most commonly reported perpetrator was a stranger (32 percent).

Two percent (37) of all deaths reviewed resulted from suicide.

- Suicides represent 12 percent of all reviews for children ages 10-17.
- Suicide deaths among boys (78 percent) were disproportionately higher than their representation in the general population (51

percent).

- Thirty-two percent (12) of the suicide deaths reviewed were from suburban counties, which is disproportionately higher than the proportion of children living in suburban counties (17 percent).

Local CFR boards reviewed 31 deaths to children resulting from child abuse and neglect in 2007. These represent 2 percent of all 1,656 deaths reviewed.

- Nineteen of the 31 reviews indicated that physical abuse caused or contributed to the death, while 12 reviews indicated that neglect caused or contributed to the death.
- All but one of the reviews were for children younger than 10 years.
- Twenty-three percent (seven) of the child abuse and neglect deaths reviewed were from rural, non-Appalachian counties, which is disproportionately higher than the proportion of children living in those counties (15 percent).

Of the 1,656 deaths reviewed,

CFR boards determined 25 percent (359) were probably preventable.

- Eighty-nine percent (210) of accidental deaths were deemed probably preventable.
- Sixty-two percent (121) of deaths to children 15-17 years of age were deemed probably preventable.

Local CFR boards continue to make numerous recommendations for prevention and to share their recommendations and findings with others in the community. More than half of the 88 counties shared information about local prevention initiatives and activities that have resulted from the CFR process.



Overview of Child Fatality Review

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, then Gov. Bob Taft in July 2000, signed the bill 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 (ODH) Web site at <http://www.odh.ohio.gov/rules/final/f3701-67.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:

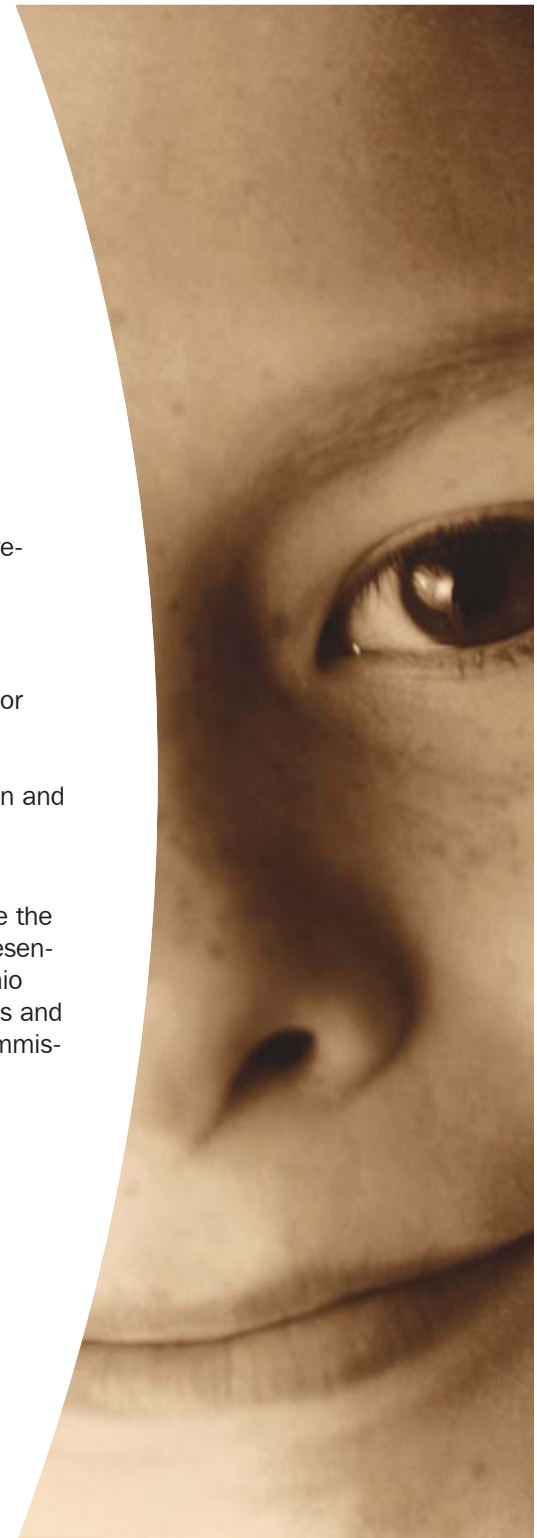
- County coroner or designee.
- Chief of police or sheriff or designee.
- Executive director of a public children service agency or designee.
- Public health official or designee.
- Executive director of a board of alcohol, drug addiction and mental health services or designee.
- Pediatrician or family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



ings and all discussion and work products are confidential.

Each local CFR board provides data to ODH by recording data on a case report tool and entering the data into a national Web-based data system. To ensure confidentiality, no case-identifying information is provided to the state. The report tool and data system were developed by the National Center for Child Death Review (NCCDR) with a grant 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 NCCDR data system.

ODH is responsible for providing technical assistance and annual training to the CFR boards. ODH offered two training sessions in 2008: a new board chair/coordinator orientation and a facilitated discussion on determining preventability. Several NCCDR

webinars provided additional training opportunities for Ohio's local boards. ODH staff also 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.

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.

This report presents information from the reviews of deaths that occurred in 2007. 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 table 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's 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. Because of 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.

Prevention Initiatives

Since the establishment of Ohio Child Fatality Review (CFR) in 2000, local CFR boards have made recommendations for prevention of future deaths. Recommendations become initiatives only when resources, priorities and authority converge to make changes happen. This year, more than half of the counties reported examples of successful implementation of CFR recommendations. This means that CFR boards have shared their findings and recommendations and engaged partners for change.

Countywide collaborations and partnerships produced many programs to increase the general health and safety of children.

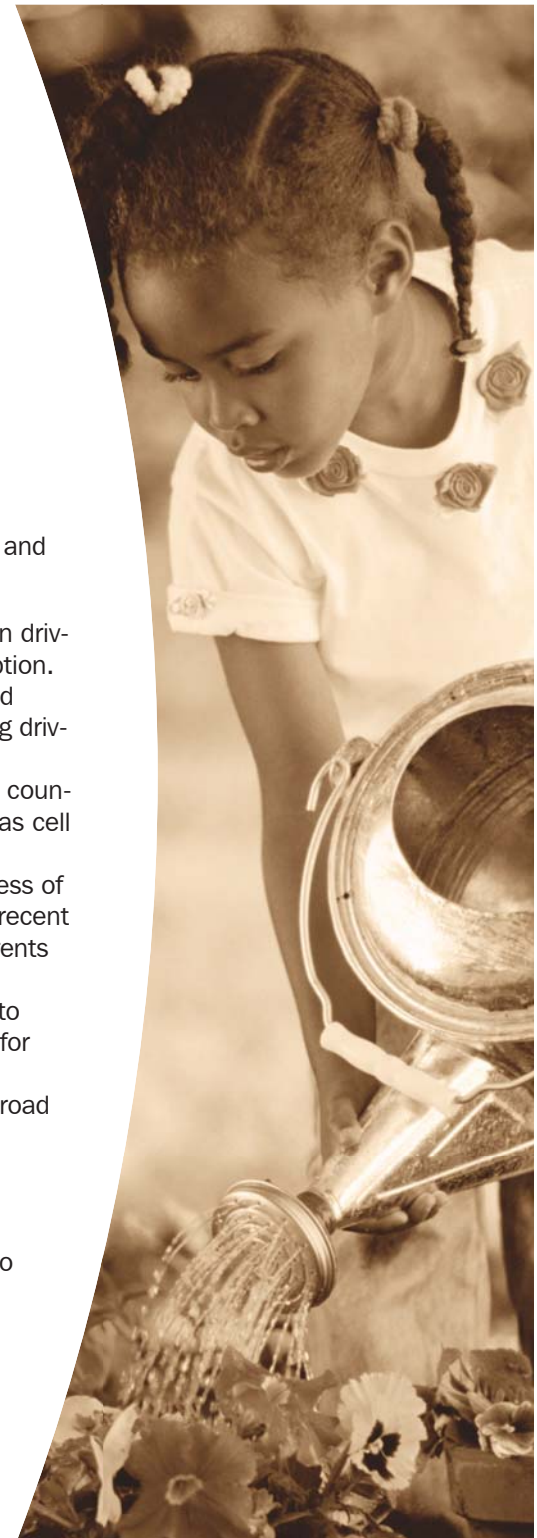
- In **Coshocton** County, a county fair Health and Safety Day featured bicycle and buggy safety and health screenings.
- Free parenting classes are offered in **Jefferson** County through a partnership between CFR, the Family and Children First Council and the Cooperative Extension.
- To celebrate Safe Kids Week, the **Montgomery** County CFR worked with the area hospitals and Safe Kids to release information on accidental injuries and deaths as well as injury prevention tips.
- Many agencies joined forces in **Trumbull** County to finalize plans for a permanent Safety Town.

Concern about vehicular deaths has resulted in many

counties taking action to improve teen driver education and to address other issues specific to their communities.

- **Henry** County established a task force to address teen driving issues such as inexperience and alcohol consumption.
- **Hardin** County is encouraging the use of seatbelts and warning of the dangers of late-night and early-morning driving for teens.
- During a prom season promotion, **Athens** and **Vinton** counties stressed the dangers of driving distractions such as cell phones, texting and other passengers.
- Many CFR boards remain active in promoting awareness of Ohio's Graduated Driver License law by broadcasting recent changes and advocating for strict enforcement by parents and law enforcement.
- **Brown** County is encouraging parents and guardians to have clean driving records themselves before signing for their teens' driving permits.
- In **Lawrence** County, railroad personnel promoted railroad safety at a local basketball tournament.
- **Paulding** County held a bike safety rodeo.
- **Portage** County is investigating ways to increase the safe use of car booster seats.
- Free or low-cost infant car seats are made available to needy families in **Ross** and other counties.

The number of counties addressing sudden infant death syndrome (SIDS) and other sleep-related deaths



continues to increase each year. A variety of programs target minority families, grandparents, caregivers, health professionals and the whole community with risk reduction messages that include Back to Sleep and the risks of inappropriate bedding and bedsharing.

- CFR boards in **Allen, Clark, Hamilton, Lake, Montgomery, Sandusky** and **Summit** counties have shared their findings with health care providers, child advocates, prevention programs and social service agencies to enlist communitywide partners and obtain funding for Safe Sleep campaigns.
- **Lake** County organized a city-wide, door-to-door SIDS Walk to increase risk awareness.
- **Franklin** County's infant safe sleep task force completed its hospital intervention process and is holding events for child care providers.
- Other counties such as **Lucas** and **Stark** are involved in providing free or low-cost cribs to families in need.
- Most counties are using existing programs such as Help Me Grow

(HMG), Special Supplemental Nutrition Program for Women, Infants and Children (WIC), Head Start and perinatal clinics to distribute the safe sleep message.

The CFR process reveals the need for youth suicide prevention in many counties. CFR findings are shared with county suicide prevention coalitions and task forces to focus on awareness of suicide and develop strategies to reduce the factors that increase the risk of suicide, identify youth at risk and increase the availability of mental health services.

- **Union** County convened a suicide task force.
- **Clermont** County partnered with the Mental Health and Recovery Board and the Family and Children First Council to expand a bullying prevention program in several local schools and increased advertisement of the suicide prevention hotline.
- **Franklin** County assisted the suicide prevention coalition in development of Facebook and bus advertisements to increase awareness of suicide risk factors

and the suicide hotline.

- **Cuyahoga** County continues its coordinated suicide prevention awareness campaign.

In response to needs identified through the reviews of infant deaths, collaborative groups have been organized in many counties, such as Allen and Franklin, to promote early prenatal care and healthy lifestyles for pregnant women and to educate women to be as healthy as possible before becoming pregnant. Typical partners include HMG, WIC, Child and Family Health Services projects, local physicians, schools and other health and social service providers.

- **Van Wert** County's group is developing strategies to provide more parent education to high-risk and teen parents on all aspects of newborn care, SIDS, nutrition and safety.
- The MomsFirst project in **Cuyahoga** County uses many strategies to support childbearing women by addressing medical and social conditions that place them at risk for poor birth outcomes.

- **Lucas** County's low birth weight initiative offers intensive case management to pregnant women at highest risk for giving birth to a low birth weight infant.
- To gain more information on risk factors and behaviors leading to premature births, **Trumbull** County developed a questionnaire that was sent to local delivering physicians.
- **Mercer** County sent folic acid recommendations and nutritional data to obstetricians, gynecologists, general and family practitioners.
- **Muskingum** County secured funding to provide new parents with booklets outlining baby safety tips.

Some CFR boards have approached local governments to promote child safety.

- Members of the **Franklin** CFR board met with city council to discuss the need for code changes to require fencing around retention ponds in residential areas.
- **Trumbull** County drafted a resolution that was endorsed by the

county commissioners raising awareness of water and pool safety.

- **Wyandot** County engaged local law enforcement to promote gun safety education.

The CFR process continues to have a positive impact on participating agencies. Many boards report an increase in cooperation and understanding between participating agencies and some have developed written policies to facilitate communication. The review process stimulates discussion about existing services in communities, identifying gaps in services, access to service barriers, the need to maximize use of existing services and opportunities for increased collaboration.

- In **Allen** County, a task force was successful in obtaining funding to reopen a clinic.
- In **Montgomery** County, the prosecutor chairs a quarterly roundtable for community agencies to discuss issues and barriers to child protection.
- Collaboration between CFR, the Family and Children First Council

and other agencies resulted in a grant for a maternal depression conference in **Trumbull** County.

- The member agencies of the **Geauga** County CFR are cooperating to collect information and complete reviews as soon as possible after the death.

CFR boards use a variety of means to share their findings with others in the community to accomplish the goal of preventing child deaths.

- Many CFR boards, such as **Wood** and **Preble** counties, are actively sharing with the Family and Children First councils and the Child and Family Health Services consortia.
- **Licking** and **Morgan** counties mail CFR findings and recommendations to local physicians and clinics.
- Several counties publish local CFR reports or include information in agency newsletters and annual reports.
- **Lucas** County presented CFR findings to high school child development classes.
- **Franklin** County used hospital

grand rounds to present information about identifying and reporting child abuse.

- **Summit** County provides ongoing professional education on child abuse and neglect, shaken baby syndrome, failure to thrive and infant safe sleep.



2009 Data Reporting

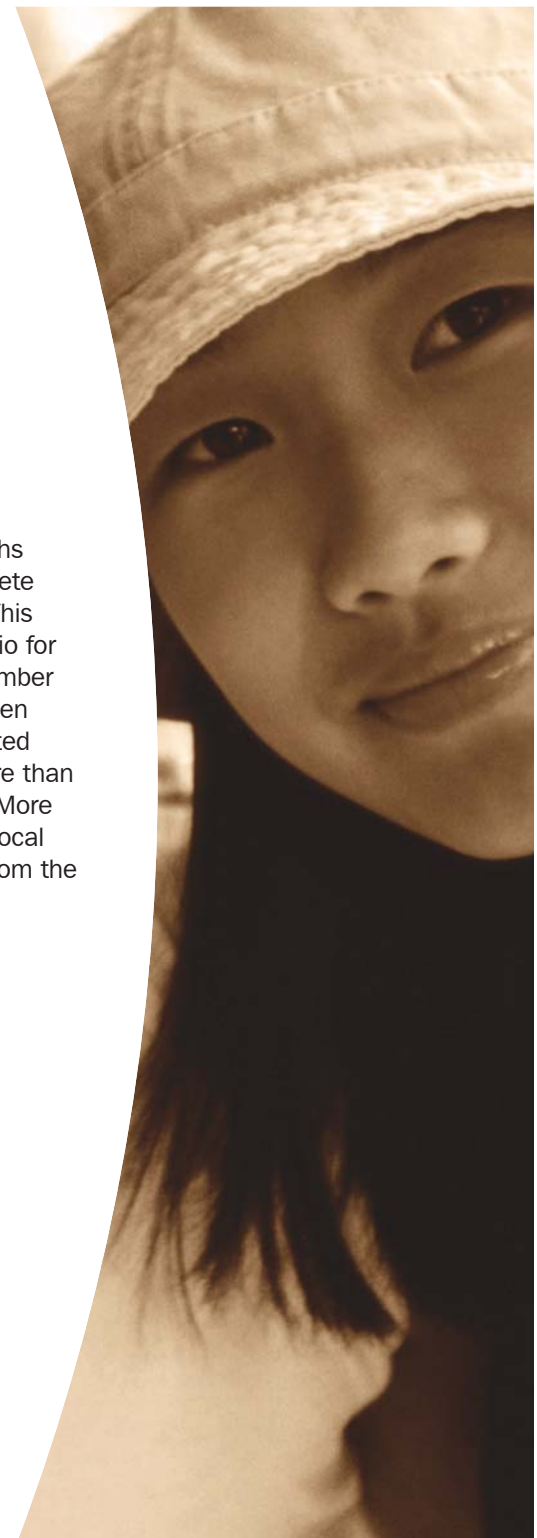
By April 1 of each year, local Child Fatality Review (CFR) boards must submit a report to the Ohio Department of Health (ODH) that includes the following information with respect to each child death reviewed:

- Cause of death.
- Factors contributing to death.
- Age.
- Gender.
- Race.
- Geographic location of death.
- Year of death.

In addition, the local boards submit recommendations for actions that might prevent future deaths.

Except where noted, this report includes only information from reviews of deaths that occurred in 2007. Reporting the information by the year the death occurred will allow for easier identification of trends and for comparison with other data sources.

There were a total of 1,676 reviews of 2007 child deaths reported by April 1, 2009. Of these, 1,656 were complete for manner and cause of death and used for analysis. This represents 94 percent of all child deaths (1,760) in Ohio for 2007, based on data from Ohio Vital Statistics. The number of child deaths has decreased from 1,800 in 2006, when 1,692 reviews were completed. All 88 counties submitted reports, although not all counties reported reviews. More than 200 recommendations for prevention were submitted. More than half of the 88 counties shared information about local prevention initiatives and activities that have resulted from the CFR process.



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. Complex analysis is needed to determine if such changes in proportion represent true trends in the factors of child deaths.

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 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. The codes used for this report can be found in the appendices.

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 cell numbers and lack of access to relevant data.

Ohio's CFR law is unique among the states with CFR laws in that Ohio does not provide for the protection of confidentiality of information at the state level. The Ohio Administrative Code 3701-67-07 specifically states that the annual reports provided to ODH by the county CFR boards are public record and subject to section 149.43 of the Ohio

Revised Code. In order to protect confidentiality, data submitted to ODH by local CFR boards contain no identifying information. As a result:

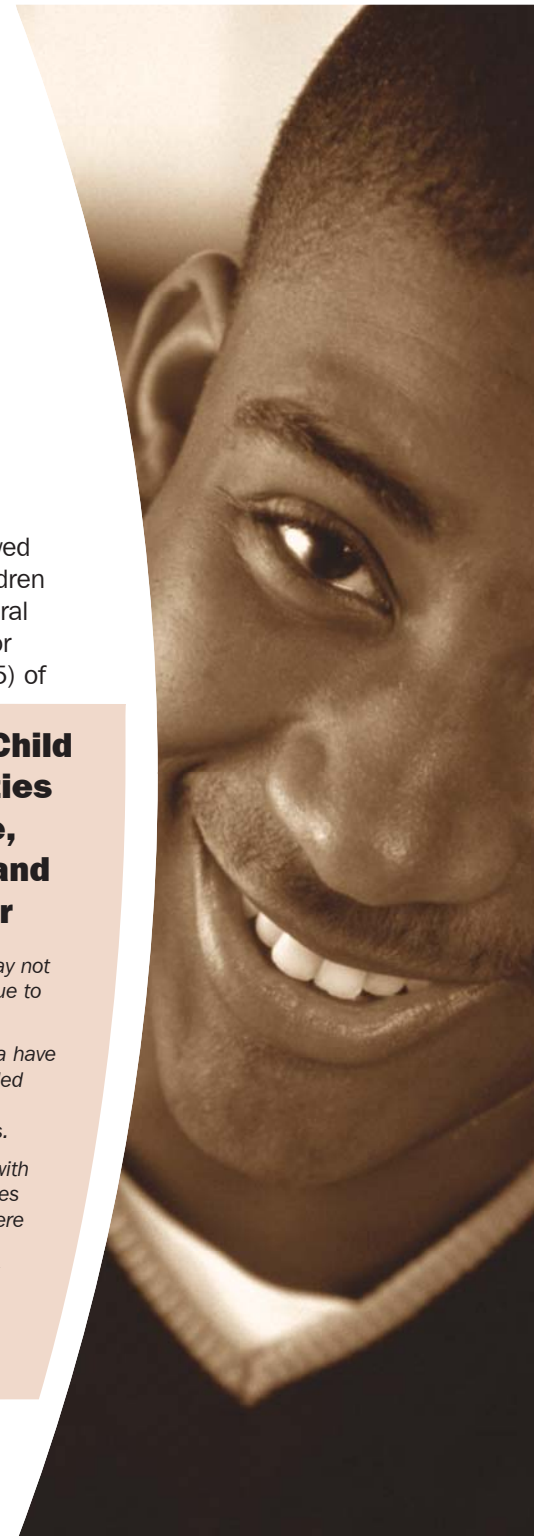
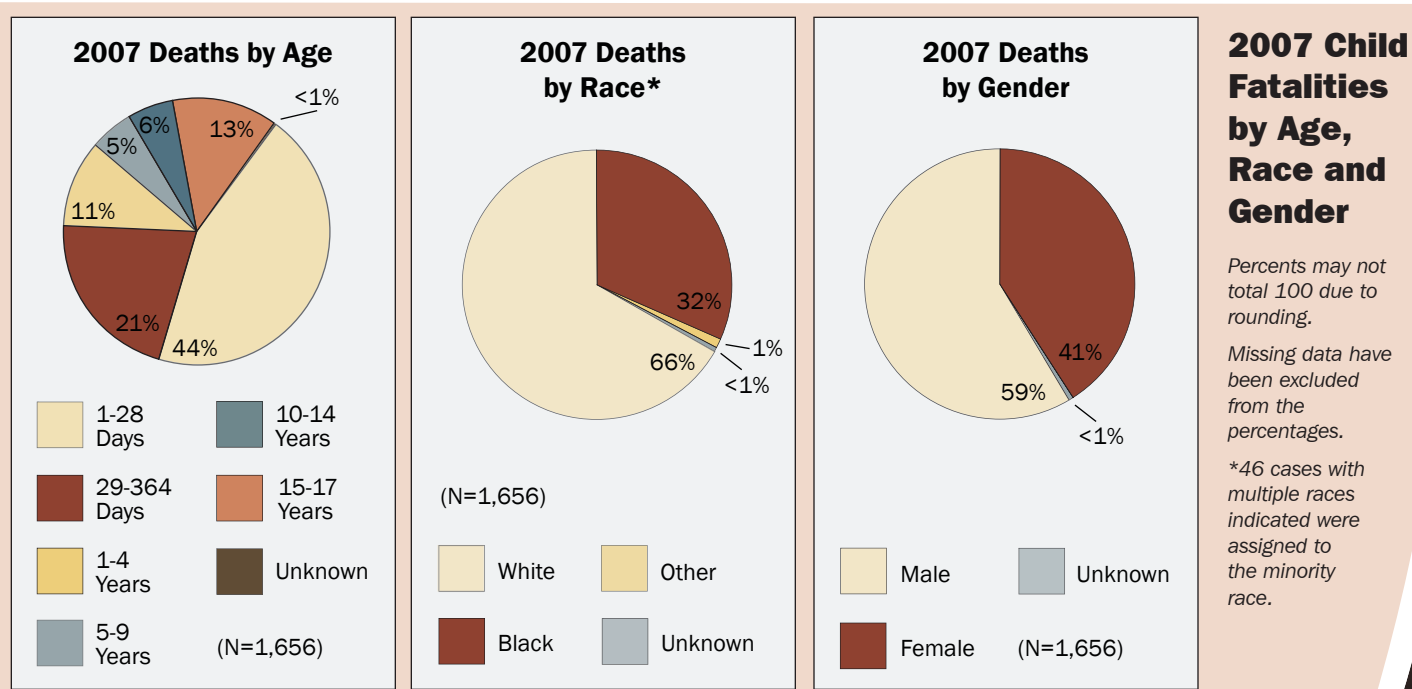
- ODH is prohibited from linking CFR data to death certificates.
- ODH is limited in its ability to investigate discrepancies in the number of county deaths reported by Vital Statistics and the number of reviews conducted by the county.
- ODH is limited in its ability to explain differences in the number of deaths by cause of death reported by Vital Statistics and the number of reviews conducted for each cause.

Summary of Reviews for 2007 Deaths

Demographic Characteristics

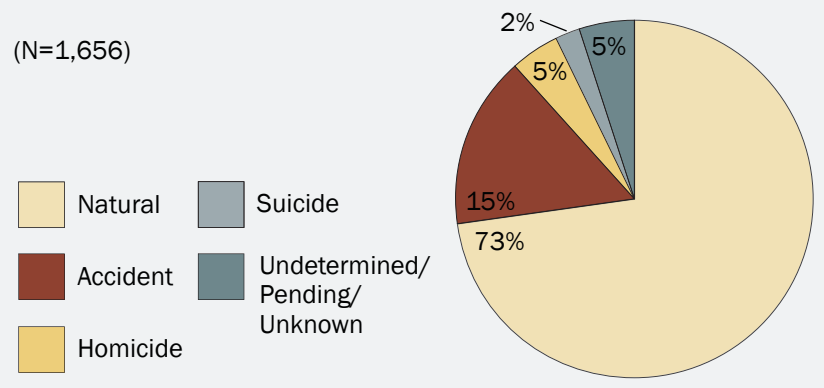
Local child fatality review (CFR) boards reviewed the deaths of 1,656 children who died in 2007. Sixty-six percent (1,086) of the reviews were for children less than

1 year of age. There were greater percentages of reviewed deaths among boys (59 percent) and among black children (32 percent) relative to their representation in the general Ohio population (51 percent for boys and 16 percent for black children, per U.S. Census data¹). Five percent (85) of



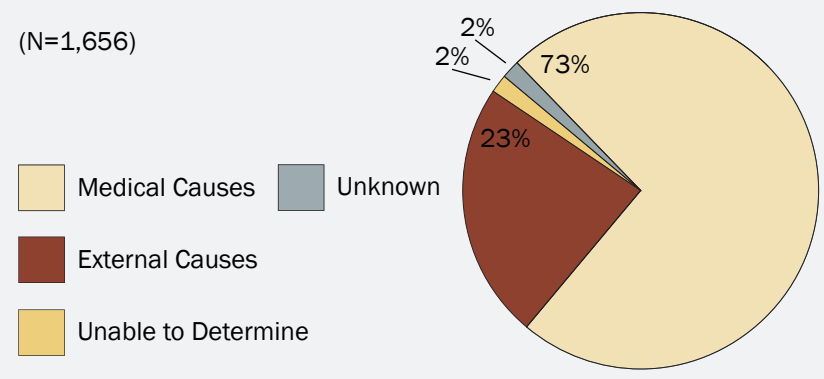
2007 Deaths by Manner of Death

(N=1,656)



2007 Deaths by Cause of Death

(N=1,656)



all reviews were for children of Hispanic ethnicity.

Reviews by 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 and undetermined. For deaths being reviewed, CFR boards report the manner of death as indicated on the death certificate. For deaths that occurred in 2007, the 1,656 reviews were classified as follows:

- Seventy-three percent (1,209) were natural deaths.
- Fifteen percent (254) were accidents.
- Five percent (76) were homicides.
- Two percent (37) were suicides.
- Five percent (80) were of an undetermined, pending or unknown manner.

Since 2005, the proportional distribution of reviews across the manners of death has changed very little. See Appendix 5 for additional tables including manner of death by demographic information.

Reviews by Cause of Death

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. In 2007, the 1,656 reviews were classified as follows:

- Seventy-three percent (1,217) were due to medical causes.
- Twenty-three percent (385) were due to external causes.
- In 54 reviews, the cause of death could not be determined as either medical or external.

Deaths from Medical Causes

Background

Deaths from medical causes are the result of some 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 these conditions are not believed 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 during preconception and pregnancy, earlier or more consistent prenatal care and smoking cessation counseling. While some conditions cannot be prevented, early detection and prompt, appropriate treatment can often prevent deaths.

Vital Statistics

Ohio Vital Statistics reported 1,272 children who died of medical causes in 2007. For further information on the ICD-10 codes used to produce Vital Statistics data, see Appendix 4.

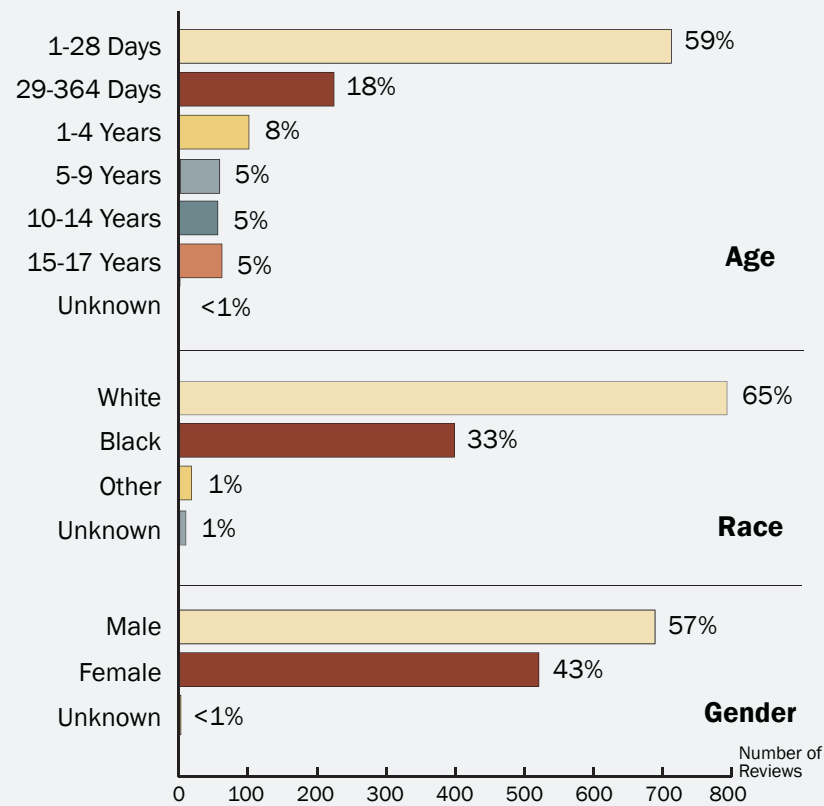
CFR Findings

Seventy-three percent (1,217) of the 1,656 reviews for 2007 deaths were from medical causes.

- Seventy-seven percent (936) of the 1,217 reviews for medical causes were to infants under the age of 1 year.
- Fifty-seven percent (688) of the 1,217 reviews for medical causes were to male children.
- Thirty-three percent (397) of the 1,217 reviews for medical causes were to black children, which is disproportionate to their representation in the Ohio child population (16 percent).
- 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, congenital anomalies and pneumonia/other infections were the three leading medical causes of death.
 - Forty-three percent (523) of the deaths from medical causes were due to prematurity.
 - Fifteen percent (179) were due to congenital anomalies.
 - Seven percent (84) were due to pneumonia and other infectious conditions.
- The leading medical cause of death for children older than 1 year was cancer. Seventeen percent (49) of deaths from medical causes to children older than 1 year were due to cancer.

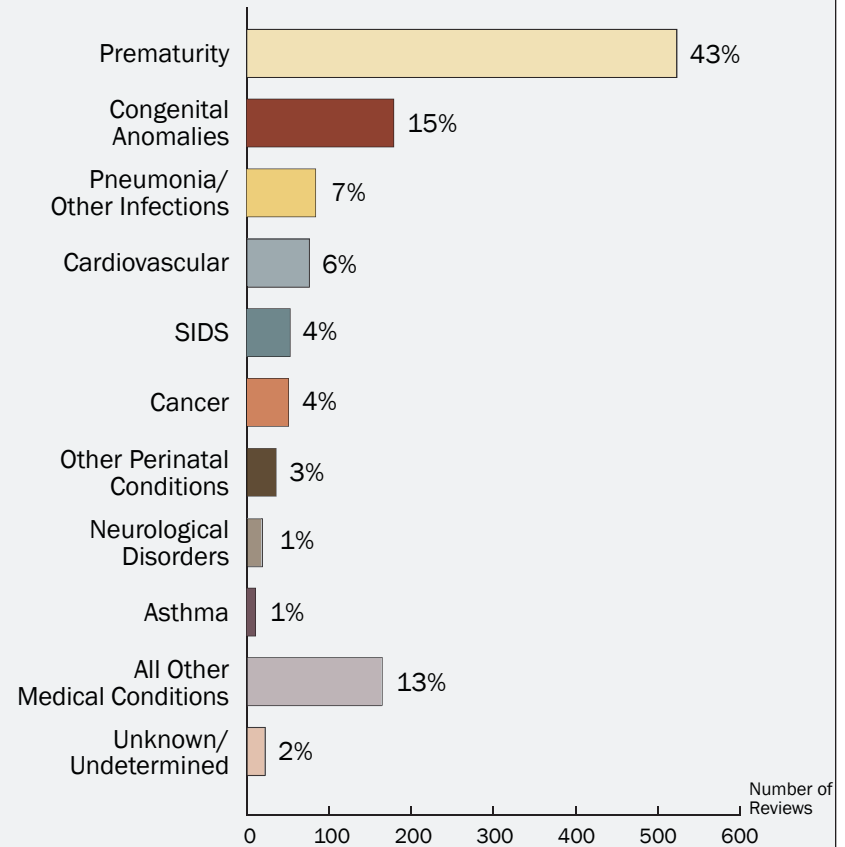


2007 Deaths from Medical Causes by Age, Race and Gender (N=1,217)



Percents may not total 100 due to rounding. | Missing data have been excluded from the percentages.

Deaths from Medical Causes by Cause of Death (N=1,217)



Percents may not total 100 due to rounding.

Three Leading Medical Causes of Death, by Age, Race and Gender

	Prematurity (N=523)		Congenital Anomalies (N=179)		Pneumonia/Other Infections (N=84)	
Age	#	%	#	%	#	%
1-28 Days	480	92	95	53	21	26
29-364 Days	40	8	43	24	22	26
1-4 Years	2	<1	20	11	18	22
5-9 Years	-	-	10	6	10	12
10-14 Years	-	-	8	4	8	10
15-17 Years	-	-	2	1	3	4
Unknown	1	<1	-	-	-	-
Missing	-		1		2	
Race	#	%	#	%	#	%
White	281	54	131	73	59	70
Black	230	44	45	25	23	27
Other	6	1	1	1	2	2
Unknown	3	1	1	1	-	-
Missing	3		1		-	
Gender	#	%	#	%	#	%
Male	300	58	100	56	56	67
Female	219	42	77	43	28	33
Unknown	1	<1	-	-	-	-
Missing	3		2		-	
Total	523	43	179	15	84	7

Percents may not total 100 due to rounding.

Sudden infant death syndrome (SIDS) is a medical cause of death. A discussion of reviews of SIDS deaths is found in the infant death section of this report.

For additional tables including all medical causes of death by demographic information, please see Appendix 5.



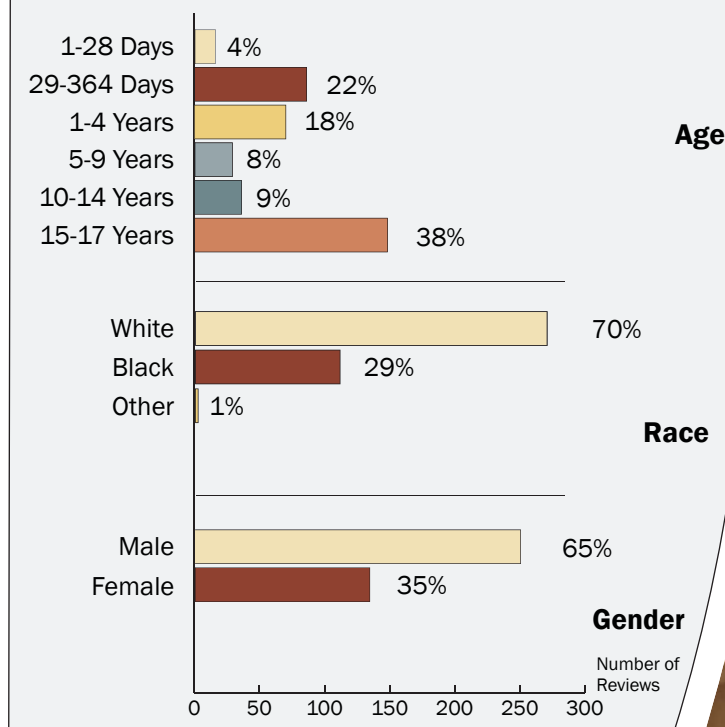
Deaths from External Causes

General Characteristics

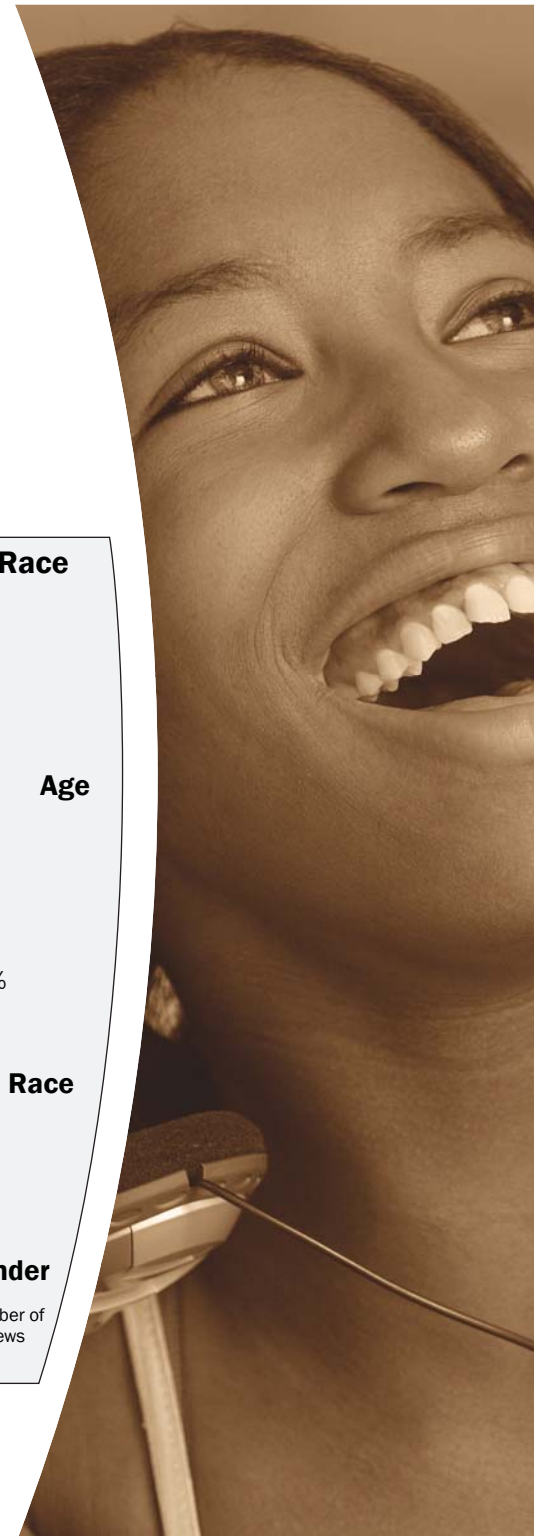
Twenty-three percent (385) of the 1,656 reviews for 2007 deaths were due to external causes.

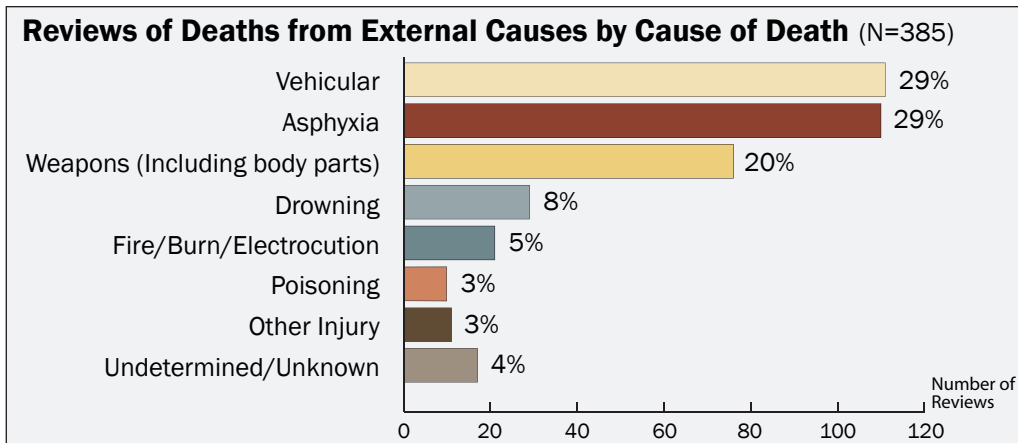
- Thirty-eight percent (148) of the 385 reviews of deaths from external causes were for children ages 15-17 years.
- Twenty-nine percent (111) of the 385 reviews for external causes were for black children, which is disproportionate to their representation in the Ohio child population (16 percent).
- Sixty-five percent (250) of the 385 reviews for external causes were for boys, which is disproportionate to their representation in the population (51 percent).
- Vehicular injuries, asphyxia and weapons injuries were the three leading external causes for the 385 reviews.
 - Twenty-nine percent (111) were due to vehicular injuries.
 - Twenty-nine percent (110) were due to asphyxia.
 - Twenty percent (76) were due to weapons injuries.

2007 Deaths from External Causes by Age, Race and Gender (N=385)



Percents may not total 100 due to rounding. | Missing data have been excluded from the percentages.





Percents may not total 100 due to rounding.

For additional tables including all external causes of death by demographic information, please see Appendix 5.

Vehicular Deaths

Background

Vehicular deaths are deaths of children involving all types of vehicles including cars, trucks, campers, boats, all-terrain vehicles (ATVs), farm vehicles, motorcycles and bicycles as well as deaths to pedestrians. In 2006, motor vehicle crashes were the leading cause of unintentional injury-related death among children and young adults ages 18 years and younger in the United States, according to the National Center for Health Statistics.² Several factors known to contribute to the risk of motor vehicle fatalities include alcohol, speeding and failure to use a restraint device—notably seat belts and child restraints. According to the National Highway Traffic Safety Administration (NHTSA), when child restraint devices are properly used for infants, the risk of vehicular deaths can be reduced by 71 percent.³ In 2005, 13 percent of all the drivers involved in fatal

crashes were young drivers age 15 to 20 years old.⁴ For U.S. teenage drivers, inexperience and errors of judgment lead to a higher rate of single-vehicle accidents.⁵

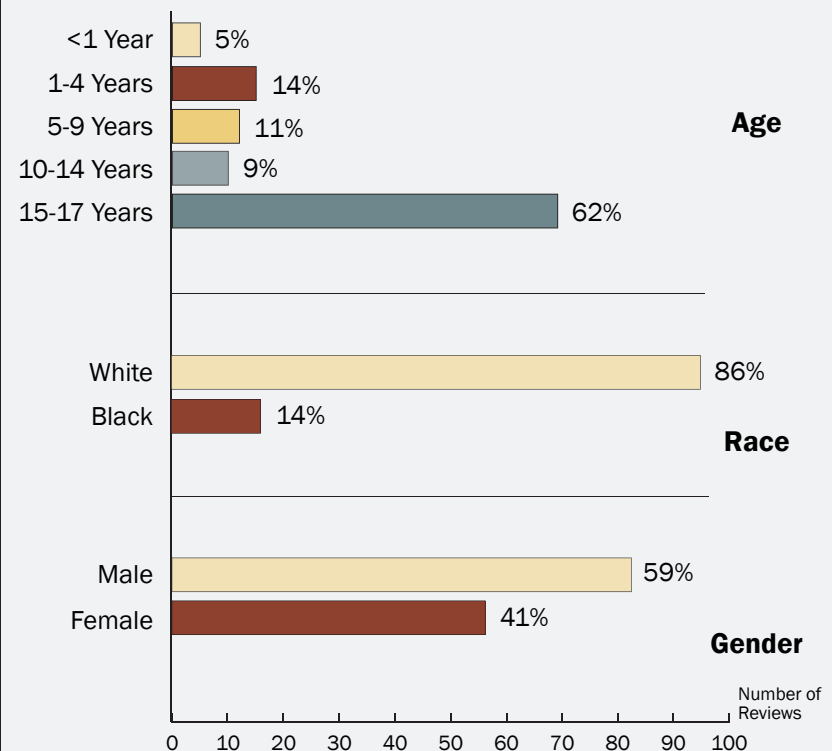
Vital Statistics

Ohio Vital Statistics reported 118 vehicular deaths to children in 2007. For further information on the ICD-10 codes used to produce Vital Statistics data, please see Appendix 4.

CFR Findings

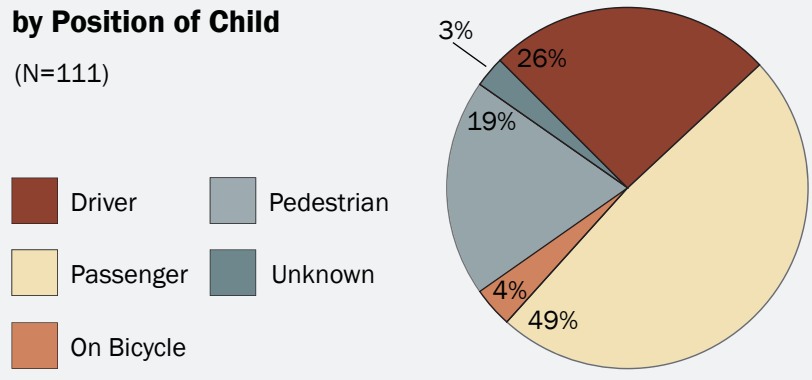
Local CFR boards reviewed 111 deaths to children from vehicular injuries in 2007. These represent 7 percent of the total 1,656 deaths reviewed. The number of reviews of vehicular deaths has decreased from 128 in 2006, but the proportion of deaths from external causes attributed to vehicular crashes has not changed.

Reviews of Vehicular Deaths by Age, Race and Gender
(N=111)



Reviews of Vehicular Deaths by Position of Child

(N=111)



Percents may not total 100 due to rounding. | Missing data have been excluded from the percentages.

Risk Factors Most Frequently Cited in Vehicular Deaths

(N=111)

Risk Factors	# of Cases	% of Vehicular Deaths
Speeding over the Limit	34	31
Recklessness	22	20
Drug/Alcohol Use	17	16
Unsafe Speed for Conditions	15	14
Driver Inexperience	12	11
Driver Distraction	8	7
Other Driver's Error	3	3

More than one factor may be identified for each case so total of percents exceeds 100.

- Sixty-two percent (69) of the deaths occurred to 15-17-year-olds.
- There was a greater percentage (59 percent) of boys among vehicular deaths relative to their representation in the general population (51 percent).
- Nineteen percent (21) of the children killed in vehicular crashes were pedestrians and 4 percent were on bicycles.
- Forty-four percent (seven) of the black children killed in vehicular crashes were pedestrians or on bicycles. Nineteen percent (18) of the white children killed in vehicular crashes were pedestrians or on bicycles.
- Fifty-one percent (53) of the vehicular deaths reviewed involved children as passengers or drivers in cars. Other types of vehicles involved included vans (eight), ATVs (five), bicycles (four), sport utility vehicles (SUVs) (two), trucks (two), motorcycles (one) and other vehicles (two).
- Twenty-six percent (28) of the vehicular deaths occurred to children who were driving the vehicle involved.
- Of the 28 cases where the child killed was the driver, 24 were determined to be responsible for the incident and five of those were impaired by drugs or alcohol.
- Of the 53 cases where the child killed was a passenger in the vehicle, the driver of the vehicle was 21 years old or younger in 69 percent of the reviews.
- Speeding was the most frequently cited risk factor involved in vehicular deaths. Thirty-one percent (34) of cases involved speeding, and an additional 14 percent (15) involved unsafe speed for the conditions.
- Recklessness was cited in 20 percent (22) of the deaths.
- Drug/alcohol use was noted in 16 percent (17) of the deaths.

Proper Use of Restraints for Deaths to Children in Cars, Trucks, Vans and SUVs by Age (N=65)

	Total Deaths	Restraints in Proper Use	%
Birth-1 Year	4	0	0
1-4 Years	7	3	43
5-9 Years	4	3	75
10-14 Years	2	0	0
15-17 Years	46	14	30
Total*	63	20	32

* Total deaths include only those cases in which information about restraint use is available. | In 2 cases, information about restraint use was missing.

- Sixty-three percent (65) of the vehicular deaths occurred to children as drivers or as passengers in cars, trucks, vans and SUVs, where by law, children must use seatbelts and/or safety seats. Only 32 percent were properly restrained at the time of the incident. Of the 22 cases where the child was the driver, 30 percent were properly restrained.

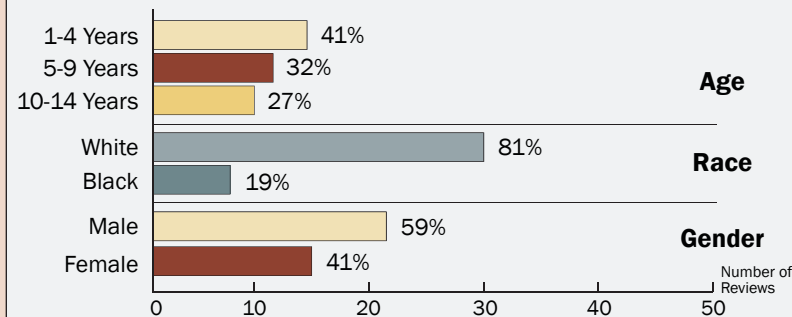
Vehicular Deaths to Children 1-14 Years

The federal Maternal and Child Health Block Grant requires states to address 18 national and 10 state performance measures to report the population's health status. National Performance Measure 10 is the rate of deaths to children 1-14 years old caused by vehicular crashes. For 2007, the Ohio rate was 1.6 per 100,000, below the target rate of 2.4. While the majority of vehicular deaths occur to the 15-17-year age group, it is also important to review the unique

circumstances and risk factors related to vehicular deaths for younger age groups.

- Of the 37 vehicular deaths to children 1-14 years old, 41 percent (15) occurred to children who were pedestrians or bikers.
- Of the 13 vehicular deaths to children 1-14 years old that occurred in cars, trucks, vans and SUVs, 46 percent were properly restrained.

Reviews of Vehicular Deaths Ages 1-14 Years, by Age, Race and Gender (N=37)



Asphyxia

Background

Deaths in this category include deaths from suffocation, strangulation and choking, as well as confinement in airtight places. The National Center for Health Statistics reports 1,788 children died of asphyxiation in 2006 in the United States. While the rates of child deaths from all other causes of external injury have decreased over the past decade, the rate of death from asphyxia has increased.⁶ The largest proportion of asphyxiations occurs to infants and toddlers, often while sleeping in unsafe environments. Without complete autopsies and death scene investigations, it is difficult, if not impossible, to distinguish an unintentional suffocation from sudden infant death syndrome or homicide. For older children, asphyxia often occurs as the result of suicide.⁷

Vital Statistics

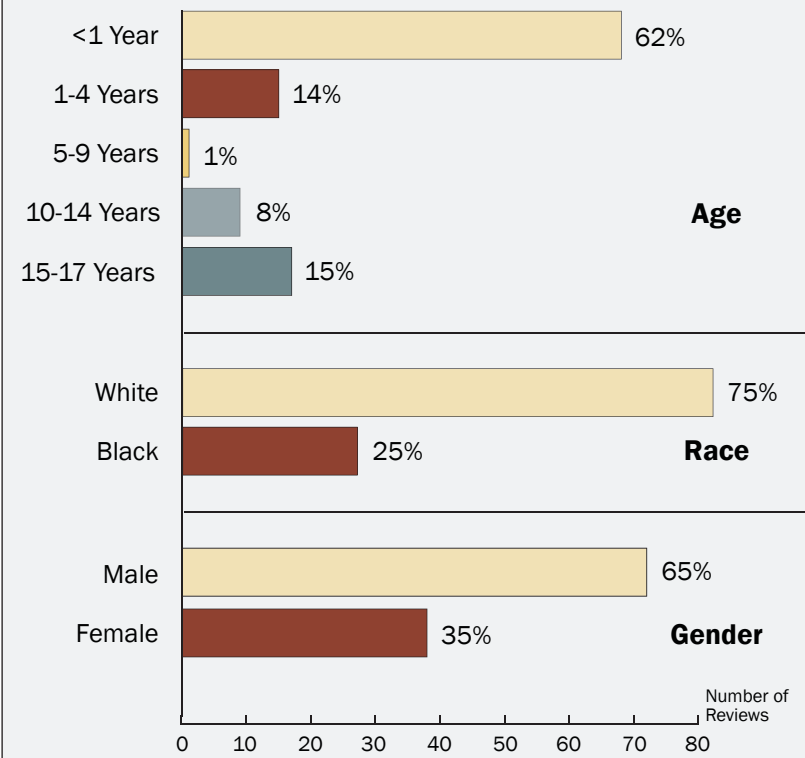
Ohio Vital Statistics reported 104 deaths from asphyxia to children in 2007. For further information on the ICD-10 codes used to produce Vital Statistics data, please see Appendix 4.

CFR Findings

Local CFR boards reviewed 110 deaths to children from asphyxia in 2007. These represent 7 percent of all 1,656 deaths reviewed. The number of reviews of asphyxia deaths has decreased from 117 in 2006, but the proportion of deaths from external causes attributed to asphyxia has increased from 26 percent to 29 percent.

- A greater percentage of asphyxia deaths occurred among black children (25 percent) relative to their representation in the general population (16 percent).

Reviews of Asphyxia Deaths by Age, Race and Gender (N=110)

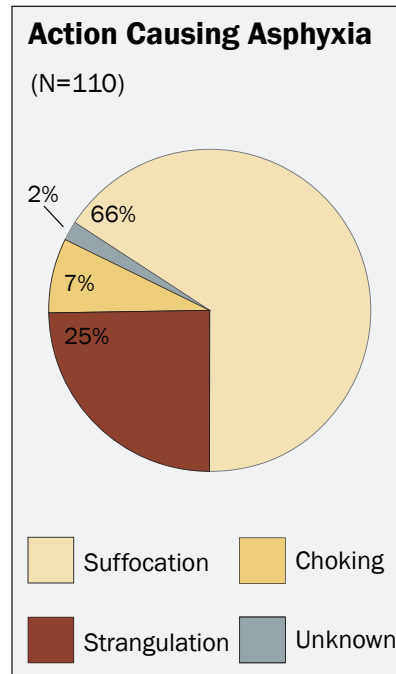


Missing data have been excluded from the percentages.

- Sixty-two percent of asphyxia deaths (68) occurred to children less than 1 year of age. Ninety-four percent of asphyxia deaths occurring to children less than 1 year of age occurred in a sleep environment.
- Of the 26 asphyxia deaths to children 10-17 years old, 73 percent (19) were suicides.

Deaths from asphyxia are categorized by the action causing the asphyxia to better understand risk factors.

- Sixty-six percent (72) of the asphyxia deaths were caused by suffocation.
- Twenty-five percent (27) were caused by strangulation.
- Seven percent (eight) were caused by choking.



Missing data have been excluded from the percentages.

Weapons

Background

The Ohio Child Fatality Review (CFR) data system includes a broad definition for weapons deaths. The definition includes deaths that result from the use of firearms, knives and other instruments as well as the use of body parts as weapons. As a result, the weapons category includes many deaths from beatings, child abuse and other assaults.

According to the National Center for Health Statistics, 1,593 children under 18 years old were killed by firearms in 2006 in the United States. Six percent were considered unintentional.⁸ The U.S. Department of Justice estimates approximately 40 percent of U.S. households contain at least one firearm, and that about 30 percent of all handguns are kept loaded and unlocked, and therefore easily accessible.⁹

Vital Statistics

Ohio Vital Statistics reported 68 deaths to children from weapons in 2007. For further information on the ICD-10 codes used to produce Vital Statistics data, please see Appendix 4.

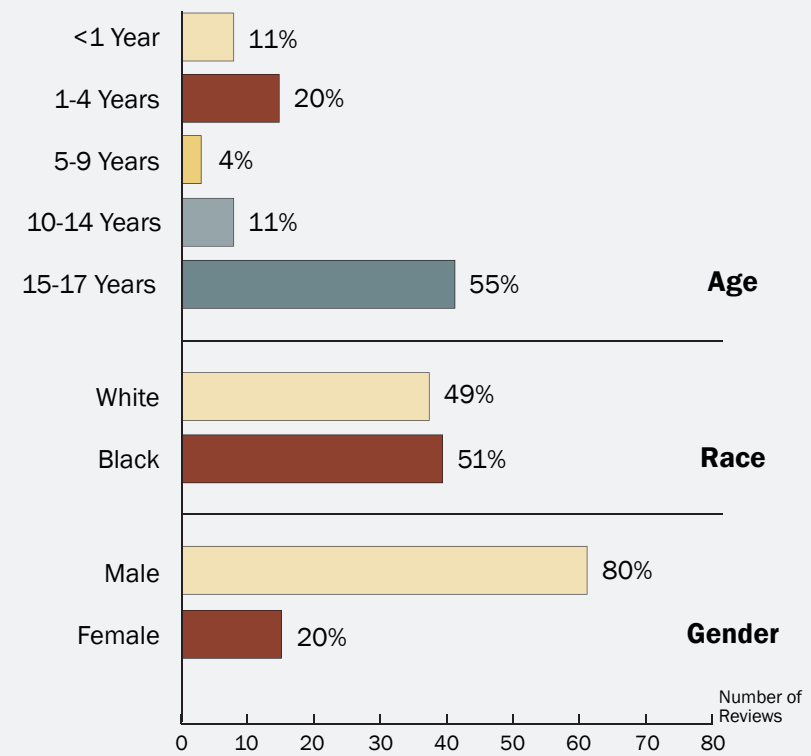
CFR Findings

Local CFR boards reviewed 76 deaths to children from weapons in 2007. These represent 5 percent of all 1,656 deaths reviewed. The number of reviews of weapons deaths increased from 71 in 2006. The proportion of deaths from external causes attributed to weapons increased from 16 percent to 20 percent.

- Fifty-five percent (42) were children 15-17 years of age.
- Weapons deaths were disproportionately higher among boys (80 percent) and among black

Reviews of Weapons Deaths by Age, Race and Gender

(N=76)

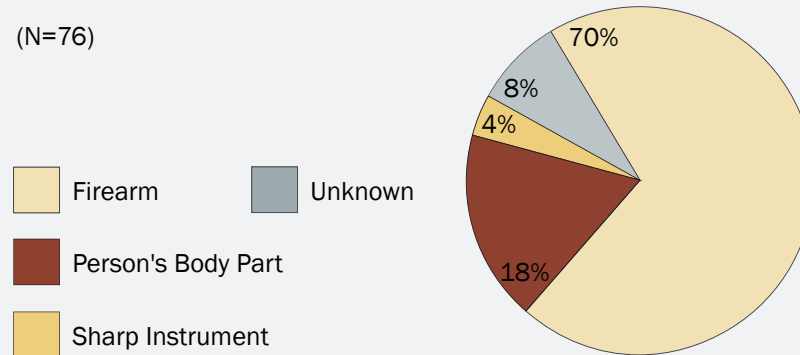


children (51 percent) relative to their representation in the general population (51 percent for boys and 16 percent for black children).

- Firearms (shotguns, rifles and handguns) were involved in 70 percent (52) of the deaths reviewed.
- Twenty-one percent (16) of the weapons deaths were suicides and 74 percent (56) were homicides. Only 5 percent (four) were accidents.

Reviews of Weapons Deaths by Type of Weapon

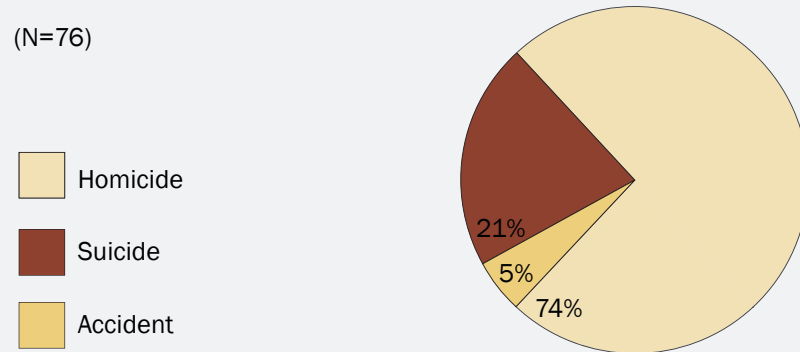
(N=76)



Missing data have been excluded from the percentages.

Reviews of Weapons Deaths by Manner of Death

(N=76)



Drowning and Submersion

Background

Drowning represents the second-leading cause of unintended injury-related death among children ages 1 to 14 years of age in the United States, according to the National Center for Health Statistics.¹⁰ Drowning incidents occur suddenly and unexpectedly, often during momentary lapses in adult supervision. In fact, a study by Safe Kids indicated nearly 90 percent of child drowning deaths occurred during only a brief lapse in supervision.¹¹

Vital Statistics

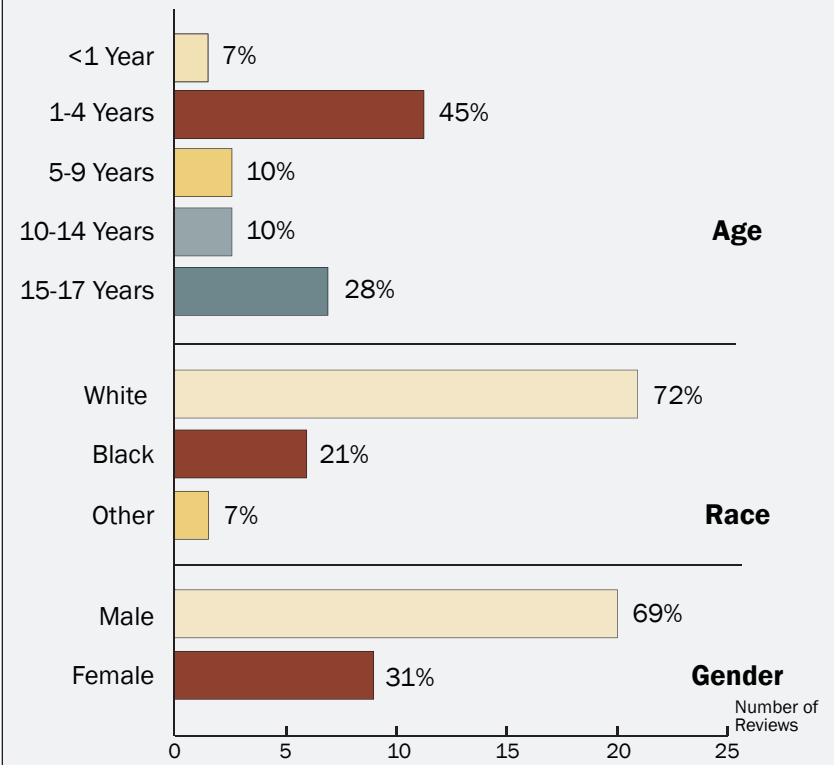
Ohio Vital Statistics reported 26 deaths from drowning and submersion to children in 2007. For further information on the ICD-10 codes used to produce Vital Statistics data, please see Appendix 4.

CFR Findings

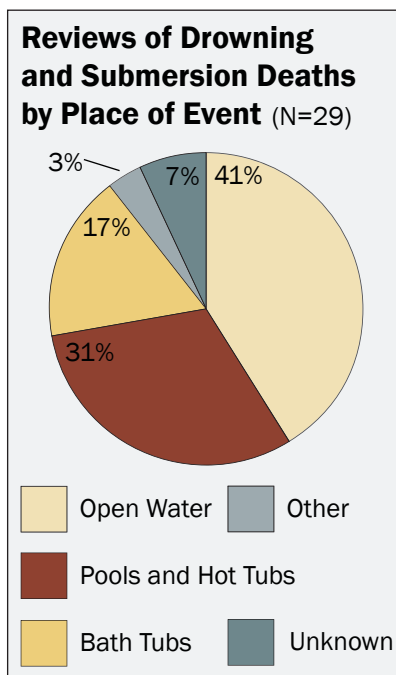
Local child fatality review boards reviewed 29 deaths to children from drowning and submersion in 2007. These deaths represent 2 percent of all 1,656 deaths reviewed. The number of reviews of drowning deaths has increased from 25 in 2006. The proportion of deaths from external causes attributed to drowning has increased from 6 percent to 8 percent.

- Fifty-two percent (15) of the children were less than 5 years old.
- A greater percentage of drowning and submersion deaths occurred among boys (69 percent) and among black children (21 percent) relative to their representation in the general population (51 percent for boys and 16 percent for black children).

Reviews of Drowning and Submersion Deaths by Age, Race and Gender (N=29)



- Forty-one percent (12) of the drowning deaths occurred in open water such as rivers and ponds, while 31 percent (nine) occurred in pools and hot tubs. Seventeen percent (five) occurred in bath tubs.



Percents may not total 100 due to rounding.

Fire, Burn and Electrocution

Background

The National Center for Health Statistics reports fires and burns are the third-leading cause of unintentional injury death among children younger than 18 years of age in the United States.¹² Most of these deaths occurred in house fires, and the majority of the deaths are due to smoke inhalation rather than burns. According to the National Center for Injury Prevention and Control, cigarette smoking is the leading cause of fatal house fires. Young children and elderly adults are especially at risk of fire and burn deaths because of their slower response and decreased mobility. In fact, children under 4 years old are twice as likely to die in a house fire as the rest of the population.¹³

Vital Statistics

Ohio Vital Statistics reported 25

deaths from fire, burn and electrocution to children in 2007. For further information on the ICD-10 codes used to produce Vital Statistics data, please see Appendix 4.

CFR Findings

In 2007, 1 percent (21) of the 1,656 deaths reviewed by local child fatality review boards were caused by fire, burn, or electrocution. The number of reviews of fire and burn deaths decreased from 38 in 2006. The proportion of deaths from external causes attributed to fire and burn decreased from 9 percent to 6 percent.

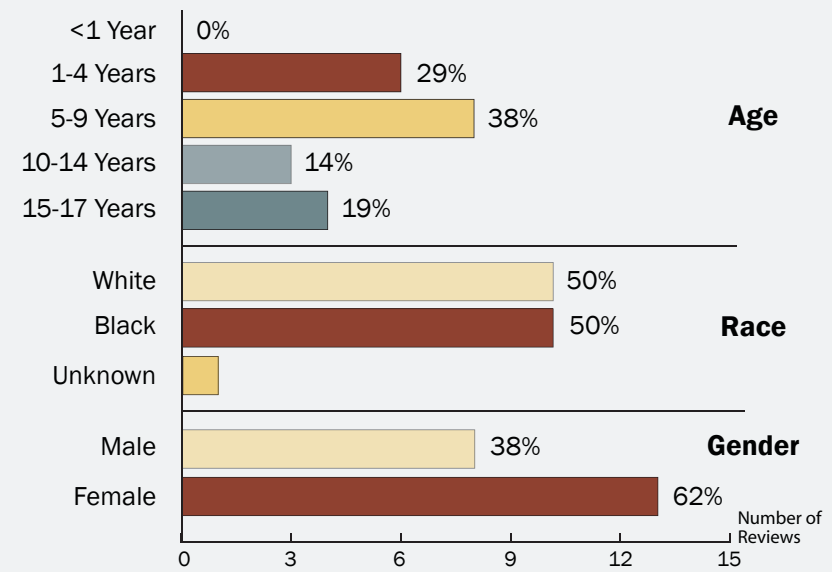
- For the 19 fire, burn or electrocution deaths where the event causing the death was known, all were caused by fire.
- A greater percentage of fire, burn and electrocution deaths occurred among black children (50 percent) relative to their repre-

sentation in the general population (16 percent).

- Twenty-nine percent (six) of the fire, burn and electrocution deaths were homicides.
- Information about the presence

of smoke detectors was available for 11 reviews. A smoke detector was present in 10 of the 11 reviews (91 percent). Only two of the 10 were known to be functioning properly.

Reviews of Fire and Burn Deaths by Age, Race and Gender (N=21)



Missing data have been excluded from the percentages.

Poisoning

Background

The unintentional poisoning death rate for children 14 years of age and younger has decreased nearly 50 percent since 1981, according to the National Center for Health Statistics.¹⁴ Safe Kids attributes the decline in childhood poisoning deaths over the past two decades to a decreased use of aspirin for treating child fevers, reductions in the amount of child analgesics in packages and the use of child-resistant packaging for a variety of household substances and medications. Unfortunately, the poisoning deaths of adolescents have increased since 2000.¹⁵ The rise is attributed to an increase in the recreational abuse of drugs and household substances and the intentional ingestion of poison to commit suicide.¹⁶

Vital Statistics

Ohio Vital Statistics data reported 10 deaths from poisoning to children in 2007. For further information on the ICD-10 codes used to produce Vital Statistics data, please see Appendix 4.

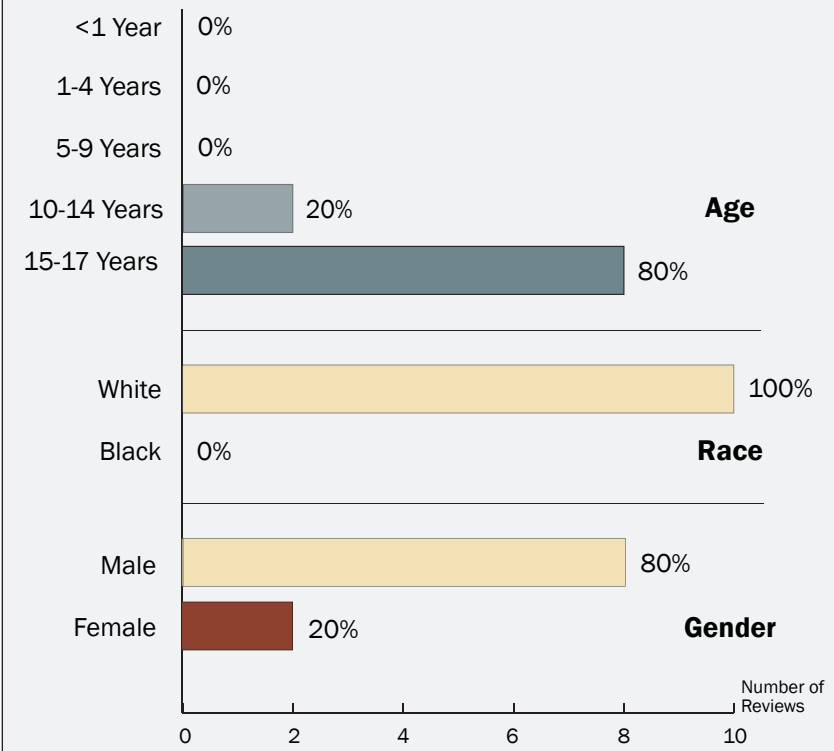
CFR Findings

Local child fatality review boards reviewed 10 deaths from poisoning to children in 2007. These represent less than 1 percent of all 1,656 deaths reviewed.

- All of the deaths occurred among children 10 years and older.
- One poisoning death was the result of suicide. The rest were accidental.
- The reviews indicated medications, alcohol, street drugs and antifreeze as the poisoning agents.

Reviews of Poisoning Deaths by Age, Race and Gender

(N=10)



Other Deaths from External Causes

Local child fatality review boards reviewed a total of 28 deaths from other external causes to children in 2007. These represent 2 percent of all 1,656 deaths reviewed.

- Deaths from other external causes include deaths from falls and crushes (eight), exposure (two), undetermined (17) and other (one) specified causes.

