September 2006

Ohio Child Fatality Review

Sixth Annual Report

This report includes reviews of child deaths which occurred in 2004

Ohio Department of Health

Mission

To reduce the incidence of preventable child deaths in Ohio.

Submitted on Sept. 30, 2006, to

Bob Taft, Governor, State of Ohio

Jon Husted, Speaker, Ohio House of Representatives

Bill Harris, President, Ohio Senate

Joyce Beatty, Minority Leader, Ohio House of Representatives

C.J. Prentiss, Minority Leader, Ohio Senate

Ohio Child Fatality Review Boards

Ohio Family and Children First Councils

Submitted By

Ohio Department of Health

The Ohio Children's Trust Fund

Table of Contents

Dedication

This report reflects the work of many dedicated professionals in every community throughout the State of Ohio 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 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 volunteers 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 Department of Job and Family Services; the Ohio Department of Health, Division of Prevention; and state and local vital statistics registrars.

We gratefully acknowledge the National MCH Center for Child Death Review for its leadership in developing and implementing a new data system for CFR. The MCH Center staff was sensitive to the particular needs of the Ohio program in designing the system and in the generous provision of technical assistance and training.

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

From the Directors

Dear Friends of Ohio Children,

We respectfully present the 2006 Ohio Child Fatality Review (CFR) Annual Report that contains information from reviews of child deaths that occurred in calendar year 2004. This report documents important changes and developments in the CFR program, as well as the successes and challenges in preventing the untimely deaths of Ohio children.

This sixth-annual report to Governor Bob Taft and the Ohio General Assembly describes the coordination of a statewide program of local CFR boards including use of a nationwide data system; provides data on the numbers and causes of child deaths reviewed in Ohio; presents local CFR boards' findings, including their recommendations to prevent other child deaths and local initiatives that have resulted from the CFR process; and provides recommendations for state-level support of local review teams.

The CFR process begins at the local level. In every county, professionals from public health, children services, recovery services, law enforcement and health care have volunteered many hours for case reviews and discussions about prevention of child deaths. An important outcome of the process is the opportunity for local stakeholders to work collaboratively to assess, discuss and make recommendations for local changes, sharing responsibility and resources to improve public health in our state. We are grateful for the expertise, thoughtfulness and caring these professionals bring to the process.

In order to make the review process complete, the findings must be shared with others who can influence policy, programs and practices. We encourage you to make a commitment to create a safer and healthier Ohio for our children by sharing this report with others.

Sincerely,

J. Nick Baird, MD, Director
Ohio Department of Health

Rick Smith, Acting Executive Director
Ohio Children's Trust Fund

Executive Summary

The 2006 Child Fatality Review (CFR) Annual Report presents information from the reviews of deaths that occurred in 2004.

Every child 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 years of age. 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 MCH Center for Child Death Review. The new tool captures more information about the factors related to the death and better captures the often complex conversations that happen during the review process. More than 4,500 cases were migrated from the old data system to the new system, including 602 cases for reviews of 2004 deaths. As a result, this report is based on combined data from two systems and will be unique from previous annual reports.

In previous annual reports, special-focus sections offered in-depth information about identified groups of deaths such as suicide 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. Because of the challenges of implementing the new data system, the program did not undertake the special-focus sections for this report. The comprehensive nature of the new case report tool and the functionality of the data system have allowed more complete analysis for all groups of deaths. As a result, every section of this report has more detailed data than in previous reports.

Of the 1,623 deaths reviewed, 71 percent (1,159) were due to natural manners. Accidents (unintentional injuries) accounted for 18 percent (294) of the deaths. Vehicular deaths accounted for 9 percent (142) of all deaths reviewed, making it the leading cause of injury deaths. These percentages have remained stable for the past three years of analysis.

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 following are examples of local initiatives:

- Recognizing the risks of infants sleeping in inappropriate bedding and bedsharing, Hamilton County secured funds from the SID Network of Ohio to provide cribs for needy families.
- To address the factors that sometimes result in suicide, Huron County applied for and received a grant to introduce a student assistance program to teach teens to make better life choices.
- Medina County collaborated with community partners to address injury prevention strategies and disseminate safety information to the Amish community.
- Many counties, including Muskingum, Coshocton and Hocking, participate in programs addressing the use of seat belts, safe driving behavior and improving driving skills for teen drivers.
- Cuyahoga County holds monthly forums for mandated reporters of child abuse and neglect to foster closer working relationships, improve casework and decision making and promote professional courtesy between all child and family service providers.

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 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 addressing 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

This 2006 Ohio Child Fatality Review (CFR) Annual Report contains information on child deaths that occurred in 2004.

A total of 1,623 reviews of 2004 child deaths were reported by 88 local CFR boards. All of these reviews were complete for manner and cause of death and were used for analysis. This represents 90 percent of all 1,800 child deaths for 2004, reported in preliminary data from Ohio Vital Statistics.

Black children and boys died at disproportionately higher rates than white children and girls for most causes of death.

Sixty-three percent (1,020) of the deaths reviewed were to infants less than 1 year of age.

Of the 1,623 deaths reviewed, CFR boards determined 25 percent (403) were probably preventable. Of the 294 deaths with manner of death accident, 82 percent (241) were deemed probably preventable.

Seventy-four percent (1,207) of the deaths reviewed were due to medical causes. Seventy-eight percent (939) of deaths due to medical causes were to infants less than 1 year of age. The most frequent medical cause of death was prematurity.

Seven percent (115) of all deaths reviewed were from sudden infant death syndrome (SIDS). Forty-three percent (49) of all SIDS deaths were to black children and 67 percent (77) were to boys. Thirty-nine percent (46) of the SIDS victims were found in locations that are considered particularly unsafe such as in adult beds and on couches. Thirty-nine percent (45) were found in a crib or bassinet. At least 49 percent (56) of SIDS victims were exposed to cigarette smoke in utero or after birth.

Sleep-related deaths accounted for 167 deaths to infants less than 1 year old, including 115 deaths due to SIDS. Forty-six percent (77) occurred in locations considered unsafe such as in adult beds and on couches. Sixty-one percent (102) occurred to infants who were sharing a sleeping surface (bedsharing) with someone else at the time of death.

Twenty-five percent (409) of all deaths reviewed resulted from external causes.

Vehicular deaths accounted for nine percent (142) of all deaths reviewed. Sixty-one percent (87) of these children were 15-17-year-olds and 89 percent (126) were white. Sixty-six percent (94) of the children killed were boys. Of the 101 deaths that occurred in cars, trucks, vans or SUVs, only 32 percent (32) of the children killed were reported to be using appropriate restraints.

Five percent (88) of all deaths reviewed were from suffocation and strangulation. More than half of the deaths (57 percent) occurred to children less than 1 year of age. Thirty-four percent (30) of the deaths from suffocation and strangulation were the result of suicide.

Weapons, including body parts used as weapons, accounted for 3 percent (53) of all deaths reviewed. Seventy-two percent (38) were youth 15-17 years old and 55 percent (29) were black children. Twenty-five percent (13) of the deaths were due to suicide.

Slightly less than 3 percent (41) of all deaths reviewed were from drowning and submersion. Two of the drowning deaths were intentional. Fifty-four percent (22) of the drowning deaths were to children under 5 years of age.

Fire and burns accounted for 2 percent (27) of all deaths reviewed. A smoke alarm was known to be present in only 52 percent (14) of the cases.

Poison deaths represented 1 percent (19) of all deaths reviewed. Eighty-four percent (16) of the poison deaths occurred to children older than 10 years and 37 percent (seven) were suicide deaths.

CFR boards identified child abuse and neglect as a cause or contributing factor in 23 deaths. Sixty-one percent were violent deaths, with 14 resulting from physical abuse.

There were 53 suicide deaths reviewed. This represents 3 percent of all reviews and 15 percent of all the reviews for children 10-17 years old. Seventy-five percent (40) were white children; 66 percent (35) were boys.

More than 200 recommendations for prevention were submitted by local CFR boards. More than half of the 88 counties shared information about local prevention initiatives and activities that have resulted from the CFR process.

Overview of Ohio Child Fatality Review Program

Child deaths are often regarded as an indicator 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 in July 2000, signed into law 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, school representatives, 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.

Data are recorded and entered into a database for analysis. Each CFR board submits data to the state. In 2005, Ohio began implementation of a new national Web-based report tool and data system developed by the National MCH Center for Child Death Review with a grant from the federal Maternal and Child Health Bureau. The new system is more comprehensive and has the potential to provide standardized CFR data across the nation. This annual report contains analysis of data from both the old and the new systems. Because of the differences in data elements and classifications, data in this annual report may not be comparable to data in previous reports.

ODH is responsible for providing technical assistance and annual training to the CFR 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 Board.

To assist moving CFR forward in Ohio, an advisory committee was established in April 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 2006 Ohio Child Fatality Review Annual Report includes information on the continued growth and development of the program as well as data from local reviews. The report has several important features this year:

- This report includes information from reviews of deaths that occurred in 2004. Including data for a single year makes it easier to identify trends and to compare with other data sources such as vital statistics.
- Due to the implementation of a new national data system, this report can include more detailed analysis for several causes of death including vehicular deaths, SIDS and sleep-related deaths and suicide.
- Many counties have initiated a variety of prevention activities as a result of the CFR process. New partnerships and collaborations have formed. Several of these activities are highlighted in this report, demonstrating local commitment to using the review process to help save the lives of our children.

This report presents information from the reviews of deaths that occurred in 2004. 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.

In spite of 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 for 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.

2006 Data Reporting

By April 1 of each year local child fatality review (CFR) boards must submit a report to the Ohio Department of Health 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.

This report includes only information from reviews of deaths that occurred in 2004. 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 1,623 reviews of 2004 child deaths reported by April 1, 2006. This represents 90 percent of all child deaths (1,800) in Ohio for 2004, based on preliminary data from Ohio Vital Statistics. The 1,623 reviews were complete for manner and cause of death and included demographic information. All 88 counties submitted reports. More than 200 recommendations were submitted. More than half of the 88 counties shared information about local prevention initiatives that have resulted from the CFR process.

Limitations

- Current Ohio law regarding CFR 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 the Ohio Department of Health (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;
  - 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.
- The CFR Advisory Committee recommends that Ohio law be revised so CFR data submitted to ODH will be held in confidence and not be subject to open public record laws.
- The ICD-10 codes used for classification of vital statistics data in this report may not match the codes used for other reports or data systems. The codes used for this report can be found in the appendix.
- This annual report contains analysis of data from both the old and new systems. Because of the differences in data elements and classifications, data in this annual report may not be comparable to data in previous reports.

Summary of CFR Data for 2004 Deaths

Local child fatality review (CFR) boards reviewed the deaths of 1,623 children who died in 2004. Sixty-three percent (1,020) of the reviews were for children less than one year of age. There were greater percentages of reviewed deaths among boys (58 percent) and among black children (31 percent) relative to their representation in the general Ohio population (51 percent for boys and 16 percent for black children, per Ohio Vital Statistics).

Local boards indicated 25 percent (403) of the 1,623 deaths reviewed probably could have been prevented. Deaths of accidental manner were considered the most preventable (82 percent) and deaths of natural manner were considered the least preventable (4 percent).

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 or undetermined. For deaths being reviewed, CFR boards indicate the manner of death as indicated on the death certificate.

Reviews of 2004 Deaths by Manner of Death by Age, Race and Gender

	Natural		Accident		Homicide		Suicide		Undetermined		Total	
Age	#	%	#	%	#	%	#	%	#	%	#	%
1-28 Days	648	56	4	1	2	3			12	23	666	41
29 - 364 Days	256	22	53	18	12	19			33	62	354	21
1-4 Years	99	9	48	16	13	20			5	9	165	10
5-9 Years	50	4	33	11	8	13	2	4	1	2	94	6
10-14 Years	51	4	44	15	2	3	16	30	1	2	114	7
15-17 Years	54	5	111	38	27	42	35	66	1	2	228	14
Race	#	%	#	%	#	%	#	%	#	%	#	%
White	737	64	227	77	27	42	40	76	29	55	1,060	65
Black	380	33	65	22	32	50	13	24	21	40	511	32
Other	17	2	1	<1							18	1
Unknown	25	2	1	<1	5	8			3	6	29	2
Gender	#	%	#	%	#	%	#	%	#	%	#	%
Male	652	56	189	64	43	67	35	66	29	55	948	58
Female	498	43	104	35	21	33	18	34	24	45	665	41
Unknown	9	1	1	<1							10	<1
Total	**1,159**	**100**	**294**	**100**	**64**	**100**	**53**	**100**	**53**	**100**	**1,623**	**100**

Note: Percents may not total 100 due to rounding.

Cases with multiple races indicated were assigned to the minority race.

NATURAL DEATHS (1,159) accounted for 71 percent of all deaths reviewed.

- Seventy-eight percent (904) of all natural deaths were to infants less than 1 year old.
- Fifty-six percent (652) of the natural deaths were to boys and 33 percent (380) were to black children.

ACCIDENTS (Unintentional Injuries) (294) accounted for 18 percent of all deaths reviewed.

- Thirty-eight percent (111) of all unintentional injury deaths were to youth aged 15-17 years.
- Sixty-four percent (189) of unintentional injury deaths were to boys and 22 percent (65) were to black children.

HOMICIDE (64) accounted for 4 percent of all deaths reviewed.

- Twenty-two percent (14) of all homicides were to infants under 1 year of age, 20 percent (13) were to children ages 1-4 years and 42 percent (27) were to youth aged 15-17 years.
- Sixty-seven percent (43) of homicides occurred to boys and 50 percent (32) to black children.

SUICIDE (53) accounted for 3 percent of all deaths reviewed.

- Sixty-three percent (35) of all suicide deaths were to youth ages 15-17 years. Two suicide deaths were to children under 10 years of age.
- Sixty-six percent (35) of suicide deaths were to boys and 76 percent (40) were to white children.

UNDETERMINED, PENDING and UNKNOWN (53) accounted for 3 percent of all deaths reviewed.

- Eighty-five percent (45) of all undetermined, pending and unknown manner of deaths were among infants less than 1 year of age.
- Fifty-five percent (29) of undetermined, pending and unknown manner of deaths were to boys and 40 percent (21) were to black children.

REVIEWS BY MEDICAL CAUSES OF DEATH

The new case report tool and data system implemented in 2005 classify causes of death by medical causes and external causes. Medical causes are further specified by particular disease entities. External causes are further specified by the nature of the injury.

- Seventy-four percent (1,207) of the 1,623 reviews of 2004 deaths were due to medical causes.
- Twenty-five percent (409) of the 1,623 reviews of 2004 deaths were due to external causes.
- Seven cases could not be determined as medical cause or external cause.

Reviews of 2004 Deaths by Cause of Death All Medical Causes Total (N=1,207) and Some Selected Medical Causes of Death, by Age, Race and Gender

	All Medical Causes		Prematurity		Congenital Anomalies		SIDS	
Age	**#**	**%**	**#**	**%**	**#**	**%**	**#**	**%1**
28 Days	659	55	447	91	91	48	8	7
29-364 Days	280	23	37	8	52	28	107	93
1-4 Years	105	9	3	<1	28	15		
5-9 Years	52	4			4	2		
10-14 Years	53	4			8	4		
15-17 Years	55	5	1	<1	5	3		
Unknown/Missing	3	<1	3	<1				
Race	**#**	**%**	**#**	**%**	**#**	**%**	**#**	**%**
White	762	63	246	50	140	75	63	55
Black	401	33	229	47	39	21	49	43
Other	17	1	8	2	2		1	1
Unknown/Missing	4	<1	8	2	7	4	2	2
Gender	**#**	**%**	**#**	**%**	**#**	**%**	**#**	**%**
Male	681	56	280	57	93	50	76	66
Female	517	43	205	42	94	50	39	34
Other	17	2	1	<1			18	1
Unknown/Missing	9	<1	6	1	1	<1		
Total	**1,207**		**491**		**188**		**115**	

Note: Percents may not total 100 due to rounding. Cases with multiple races indicated were assigned to minority race.

General Characteristics of Review of Medical Causes of Death

- Seventy-four percent (1,207) of the 1,623 reviews for 2004 deaths were from medical causes.
- Seventy-eight percent (939) of the 1,207 reviews for medical causes were to infants under the age of 1 year.
- Fifty-six percent (681) of the 1,207 reviews for medical causes were to male children.
- Thirty-three percent (401) of the 1,207 reviews for medical causes were to black children, which is disproportionate to their representation in the Ohio child population (16 percent).
- More than 15 specific medical conditions of were indicated for the 1,207 reviews for medical causes.
- Prematurity, congenital anomalies and sudden infant death syndrome (SIDS) were the three leading causes for the 1,207 reviews for medical causes.
  - Forty-one percent (491) were due to prematurity.
  - Sixteen percent (188) were due to congenital anomalies.
  - Ten percent (115) were due to SIDS.

EXTERNAL CAUSES OF DEATH

Reviews of 2004 Deaths by Cause of Death All External Causes of Death (N=409) by Age

	Birth - 364 Days		1-4 Years		5-9 Years		10-14 Years		15-17 Years		Total
	#	%	#	%	#	%	#	%	#	%	
Vehicular	3	2	12	9	12	9	28	20	87	61	142
Suffocation/ Strangulation	45	51	5	6	7	8	13	15	18	21	88
Weapon	4	8	2	4	4	8	5	9	38	72	53
Drowning	3	8	18	45	7	18	5	13	7	18	40
Fire, Burn, Electrocution	1	4	14	52	10	37	0		2	7	27
Poisoning	1	5	1	5	1	5	4	21	12	63	19
Other Injury	8	27	7	23	1	4	6	20	8	27	30
Undetermined/ Unknown	6	60	3	30	0		0		1	10	10
Total	**77**	**19**	**56**	**14**	**42**	**10**	**61**	**15**	**173**	**42**	**409**

Note: Percents may not total 100 due to rounding.

Reviews of 2004 Deaths by Cause of Death All External Causes of Death (N=409) by Race

	White		Black		Other		Unknown/Missing		Total
	#	%	#	%	#	%	#	%	
Vehicular	126	89	16	11					142
Suffocation/ Strangulation	58	66	29	33	1	1			88
Weapon	24	45	29	55					53
Drowning	27	68	13	33					40
Fire, Burn, Electrocution	14	52	10	37			3	11	27
Poisoning	14	74	5	26					19
Other Injury	23	77	6	20			1	3	30
Undetermined/ Unknown	7	70	1	10			2	20	10
Total	**293**	**72**	**109**	**27**	**1**	**<1**	**6**	**2**	**409**

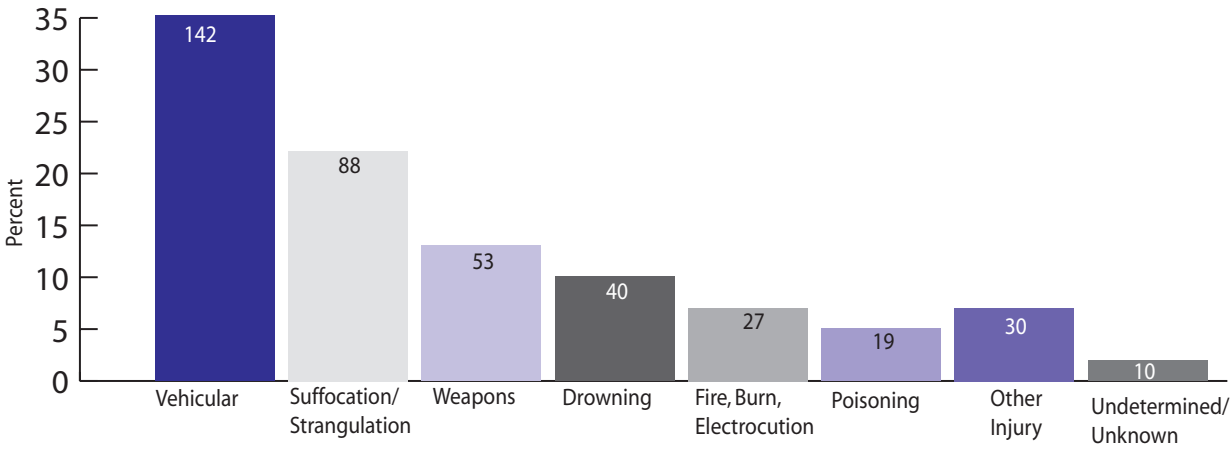
Note: Percents may not total 100 due to rounding. Cases with multiple races indicated were assigned to the minority race.

Reviews of 2004 Deaths by Cause of Death All External Causes of Death (N=409) by Gender

	Male		Female		Unknown/Missing		Total
	#	%	#	%	#	%	
Vehicular	94	66	48	34			142
Suffocation/ Strangulation	55	63	33	38			88
Weapon	35	66	18	34			53
Drowning	28	70	11	28	1	3	40
Fire, Burn, Electrocution	19	70	8	30			27
Poisoning	9	47	10	53			19
Other Injury	20	67	10	33			30
Undetermined/ Unknown	4	40	6	60			10
External Causes Total	**264**	**65**	**144**	**35**	**1**	**<1**	**409**

Note: Percents may not total 100 due to rounding.

External Causes of Death (N = 409)



Note: Numerals in bars equal number of cases.

General Characteristics of Review of External Causes of Death

- Twenty-five percent (409) of the 1,623 reviews for 2004 deaths were due to external causes.
- Forty-two percent (173) of the 409 reviews of deaths from external causes were for children ages 15-17 years.
- Twenty-seven percent (109) of the 409 reviews for external causes were for black children, which is disproportionate to their representation in the Ohio child population (16 percent).
- Sixty-five percent (264) of the 409 reviews for external causes were for boys, which is disproportionate to their representation in the population (51 percent).
- Vehicular injuries, suffocation/strangulation and weapons injuries were the three leading causes for the 409 reviews for external causes.
  - Thirty-five percent (142) were due to vehicular injuries.
  - Twenty-two percent (88) were due to suffocation.
  - Thirteen percent (53) were due to weapons injuries.

The Data, with Local Recommendations and Initiatives

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 in which accidents are preventable. But there are some illnesses such as asthma, infectious diseases and screenable genetic disorders, in which 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. The March of Dimes reports one in five infant deaths in the United States is the result of birth defects, making congenital defects the single leading cause of infant deaths in the nation. According to the National Center for Health Statistics, death from medical causes is the second-leading manner of death for children over 1 year of age, following unintentional injuries.

Vital Statistics

Ohio Vital Statistics preliminary data reported 1,242 children who died of medical causes in 2004. For this report, ICD-10 codes used for classification of vital statistics data were selected to most closely correspond with the causes of death indicated on the CFR Case Report Tool. Therefore, the ICD-10 codes used for this report may not match the codes used for other reports or data systems. The codes used for this report can be found in the appendix.

CFR Findings

Local child fatality review (CFR) boards reviewed 1,207 deaths to children from medical causes in 2004, including 115 deaths from sudden infant death syndrome (SIDS). Deaths from medical causes represent 75 percent of all 1,623 reviews conducted. Seventy-eight percent (939) of all deaths from medical causes reviewed occurred to infants less than 1 year old. A greater percentage of natural deaths occurred among black children (33 percent) relative to their representation in the general population (16 percent).

The new data system provides a list of 15 medical conditions in addition to an "other" category for classifying deaths from medical causes more specifically. Forty-one percent (491) of the deaths from medical causes were due to prematurity, 16 percent (188) were due to congenital anomaly and 10 percent (115) were due to SIDS.

Examples of Local Recommendations

Local CFR boards made more than 20 recommendations for prevention of deaths due to medical causes. Recommendations become initiatives only when resources, priorities and authority converge to make changes happen. Local recommendations included:

- Promote early and adequate prenatal care, improve access to early prenatal care and support community outreach programs to link pregnant women to services.
- Increase support for groups that work to promote healthy lifestyles before, during and after pregnancy and decrease the use of tobacco, alcohol and drugs during pregnancy.
- Support genetics counseling for parents.
- Promote research into causes of extreme prematurity and malignant neoplasm in children.
- Increase prenatal education on premature labor warning signs and risk reduction.
- Improve access to medical care for children with unusual symptoms and educate parents to recognize need for immediate medical attention.
- Improve education for parents of children with special health needs, coordinated with physician, medical equipment suppliers, children services and other care providers.

Examples of Local Initiatives

- The findings and recommendations of local CFR boards have been cited in grant applications for Child and Family Health Services projects, Ohio Infant Mortality Reduction Initiative projects and other prevention projects.
- The Pickaway County CFR Board is developing a Teen Health Task Force to create a teen pregnancy resource booklet.
- Medina County has expanded prenatal education about prematurity as well as community-based smoking cessation services through prenatal clinics.
- New parents in Geauga County are being educated about reducing the risk of infection for infants by limiting exposure of newborns to those outside the family.
- Agencies such as Help Me Grow, WIC and the immunizations clinics are educating families in Fayette County about the importance of well child checkups.
- The Ashland County CFR Board is developing a plan to improve immunization rates in target populations.

SUDDEN INFANT DEATH SYNDROME

Background

Sudden infant death syndrome (SIDS) is a medical cause of death. It is the diagnosis given 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. According to the National Institute of Child Health and Human Development, SIDS is the leading cause of death in infants between 1 month and 1 year of age. While the cause and mechanism of SIDS eludes researchers, several factors appear to put an infant at higher risk for SIDS. Infants who sleep on their stomachs are more likely to die of SIDS than those who sleep on their backs, as are infants whose mothers smoked during pregnancy and who are exposed to passive smoking after birth. There is a large racial disparity, with the SIDS rate for black infants more than twice the rate for white infants.

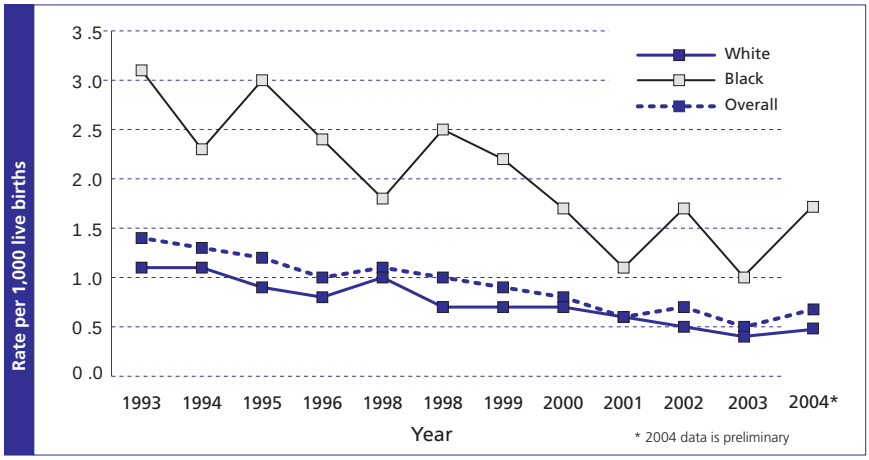
Because SIDS is a diagnosis of exclusion, all other probable causes of death must be eliminated through autopsy, death scene investigation and health history. It is difficult to conclude a death is due to SIDS in the absence of a thorough investigation. The difficulty is compounded with the presence of known risk factors for other causes of infant death such as suffocation. The difficulty of obtaining consistent investigations and diagnoses of infant deaths has been noted by the Centers for Disease Control and Prevention, which has launched an initiative to improve investigations and reporting.

In 2003, the Child Fatality Review (CFR) Advisory Committee recommended that a state-level workgroup be formed to look more closely at deaths from SIDS and other sleep-related deaths. Each subsequent annual report has included an expanded analysis of the data related to these types of deaths. A discussion of the data regarding all sleep-related infant deaths appears later in this report.

Vital Statistics

Ohio Vital Statistics preliminary data reported 101 SIDS deaths to infants in 2004.
According to Ohio Vital Statistics, the Ohio SIDS rate has decreased nearly 50 percent in the past decade, from 1.3 deaths per 1,000 live births in 1994 to 0.7 in 2004. The disparity between black and white deaths from SIDS continues to be large, with the black SIDS rate more than three times higher than the white SIDS rate for 2004. For this report, ICD-10 codes used for classification of vital statistics data were selected to most closely correspond with the causes of death indicated on the CFR Case Report Tool. Therefore, the ICD-10 codes used for this report may not match the codes used for other reports or data systems. The codes used for this report can be found in the appendix.

SIDS Rate per 1,000 Live Births by Race in Ohio, 1993–2004

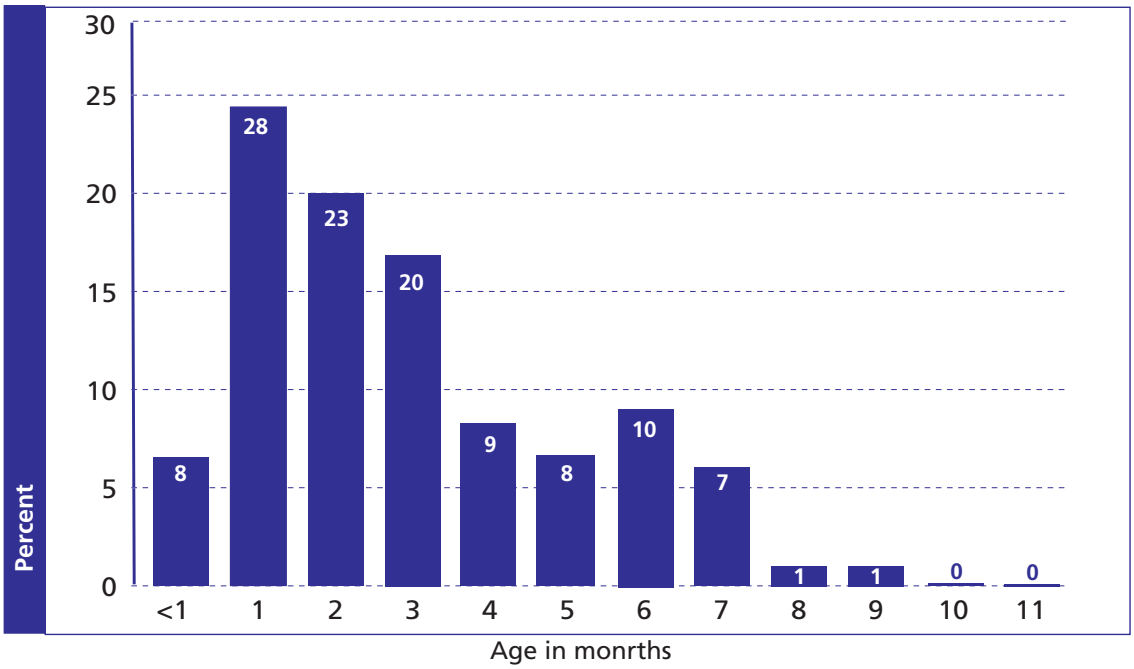


Note: Caution should be used in interpreting rates and trends due to small numbers and due to the updating of pending records
Data Source: Ohio Vital Statistics

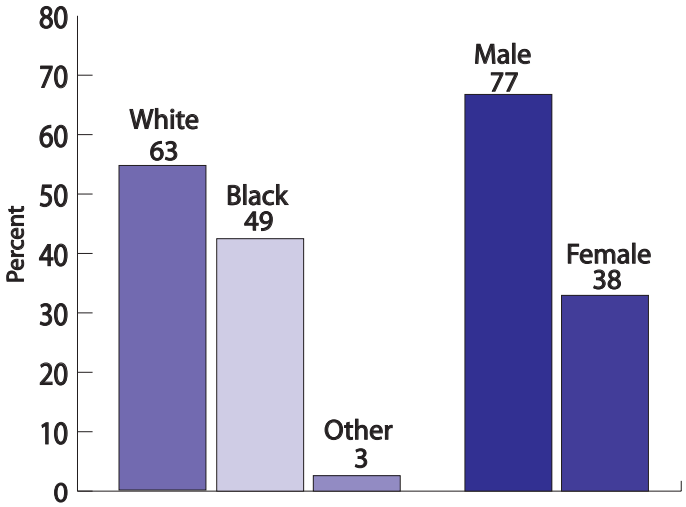
CFR Findings

Local CFR boards reviewed 115 deaths to children from SIDS in 2004. These deaths represent 7 percent of all 1,623 reviews conducted. There were greater percentages of SIDS deaths among boys (67 percent) and among black infants (43 percent) relative to their representation in the general population (51 percent for boys and 16 percent for black children). Eighty-three percent (96) of the SIDS deaths reviewed occurred before 6 months of age.

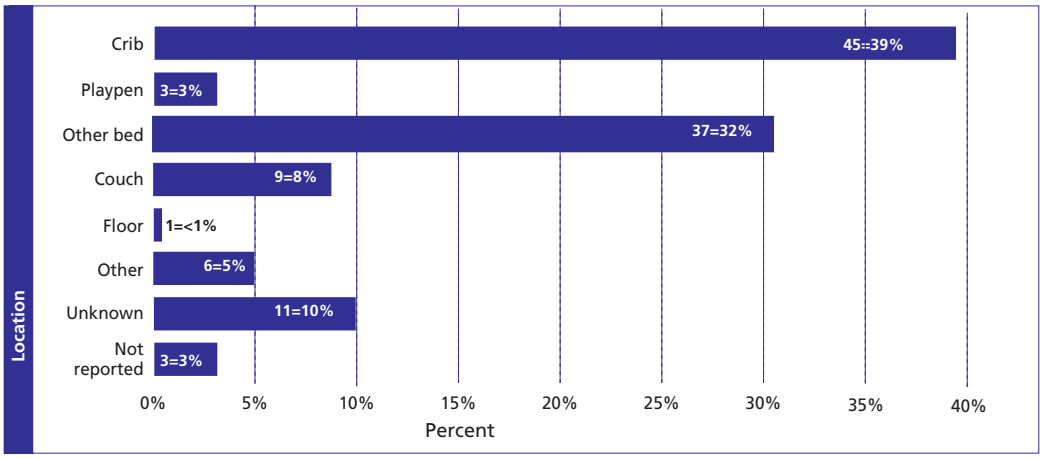
SIDS Deaths by Age at Time of Death



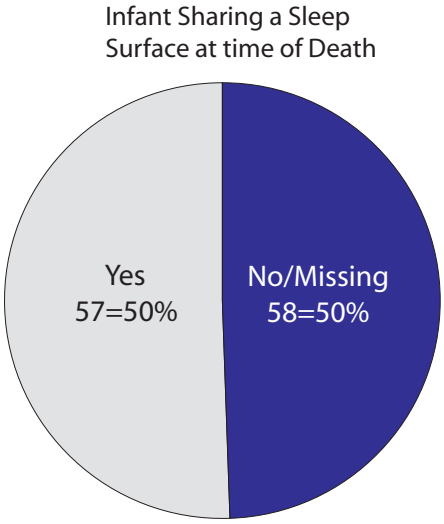
SIDS Deaths by Race and Gender



SIDS Deaths by Location of Infant When Found



Note: numerals in bars equal number of cases



The CFR data reporting tool includes items surrounding the death that can lead to better understanding of the circumstances of SIDS deaths. Many of these items are referred to as risk factors, because their presence seems to increase the risk of an infant dying of SIDS, but they are not the cause of SIDS. It is important to analyze these items so policies and interventions can be developed to prevent future deaths.

In spite of diligent efforts, CFR boards were not able to consistently supply information regarding normal infant sleeping position; overheating; heavy bedding; or sleep surface firmness. Information about the location of the infant when found, bedsharing and some birth health history was reported with sufficient frequency for analysis. Thirty-nine percent (45) of SIDS deaths occurred in cribs or bassinets, while 40 percent (46) of SIDS deaths occurred in locations considered unsafe: in adult beds and on couches and chairs. Fifty percent (57) of infants who died of SIDS were known to be sharing a sleep surface with someone else at the time of death.

Thirty-seven percent (43) of the infants who died of SIDS were born with low or very low birthweight. Low birthweight is less than 2,500 grams, and very low birthweight is less than 1,500 grams. Thirty-seven percent (42) of the infants were born before 38 weeks gestation. Thirty percent (34) were born to mothers who had a medical condition during the pregnancy.

Forty-nine percent (56) of the children who died of SIDS were exposed to cigarette smoke, including 36 percent (41) who were exposed in utero.

Birth Health History Factors for SIDS Deaths (N = 115)

	#	%
Very Low Birthweight (<1,500 g)	24	21
Low Birthweight (1,500-2,499 g)	19	17
Normal Birthweight (2,500-3,999 g)	69	60
< 38 Weeks Gestation	42	37
38-42 Weeks Gestation	73	64
Multiple Birth	6	5
Mother with Medical Condition	34	30
Mother Smoked during Pregnancy	41	36

Examples of Local Recommendations

Local CFR boards made more than 20 recommendations to reduce the risk of SIDS. Recommendations become initiatives only when resources, priorities and authority converge to make changes happen. Recommendations include:

- Continued repetition of the Back to Sleep message, especially targeting minority families, grandparents and caregivers.
- Include safe sleep environment education with the Back to Sleep message.
- Improve access to prenatal care as well as pre-conception and intra-conception care.
- More consistent diagnosis and death scene investigation to increase understanding of SIDS and other infant deaths.

Examples of Local Initiatives

- Many CFR boards report using existing programs such as WIC, Welcome Home, Ohio Infant Mortality Reduction Initiative projects and Help Me Grow to distribute a coordinated, repeated message regarding SIDS risk reduction and to target hard-to-reach, at-risk populations.
- The Lorain County CFR Board arranged for SIDS risk reduction information from the U.S. Department of Health and Human Services to be included in a mass mailing to local social service providers and law enforcement agencies.
- The Portage County CFR Board initiated changes in notification policies between agencies involved with families after SIDS deaths.
- Franklin County has a new SIDS Committee that is actively training workers to deliver risk reduction education to hospital nursery staff as well as others in the community.
- The Clermont County CFR Board published an article on SIDS risk reduction in the local newspaper.

A discussion of the data regarding all sleep-related infant deaths appears later in this report in the Deaths in Special Circumstances section.

DEATHS FROM EXTERNAL CAUSES

VEHICULAR DEATHS

Background

Vehicular deaths include deaths of children involving all types of vehicles including cars, trucks, campers, boats, all-terrain vehicles, farm vehicles, motorcycles and bicycles as well as pedestrians. Motor vehicle crashes are the leading cause of unintentional injury-related death among children and young adults ages 20 years and younger in the United States, according to the National Center for Health Statistics. 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. The National Highway Traffic Safety Administration reports that nationally in 2002, 59 percent of children under age 20 killed in motor vehicle crashes were completely unrestrained. When child restraint devices are properly used for infants and toddlers, the risk of vehicular deaths can be reduced by 71 percent. For teenage drivers, inexperience and errors of judgment lead to a higher rate of single-vehicle accidents for this age group. Young drivers constitute nearly 7 percent of the driving population, yet they account for 14 percent of all fatal crashes in the United States.

In 2003, the Child Fatality Review (CFR) Advisory Committee recommended that a state-level workgroup be formed to look more closely at vehicular deaths. Each annual report since 2004 has included an expanded analysis of the data related to vehicular deaths.

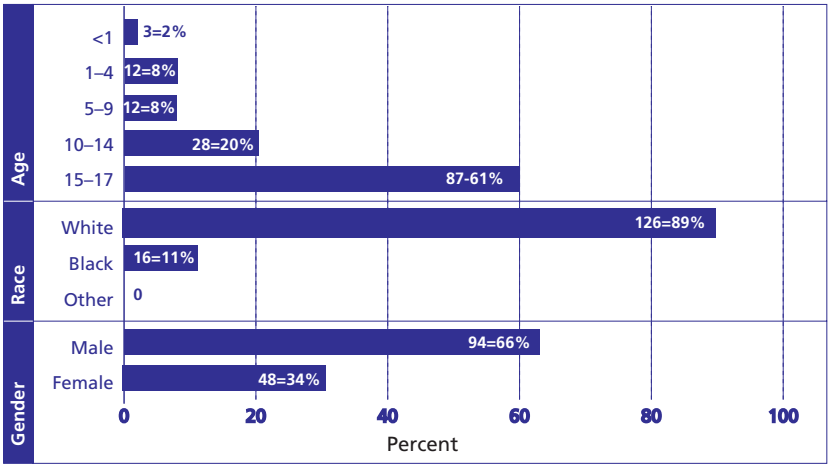
Vital Statistics

Ohio Vital Statistics preliminary data reported 151 vehicular deaths to children in 2004. For this report, ICD-10 codes used for classification of vital statistics data were selected to most closely correspond with the causes of death indicated on the CFR Case Report Tool. Therefore, the ICD-10 codes used for this report may not match the codes used for other reports or data systems. The codes used for this report can be found in the appendix.

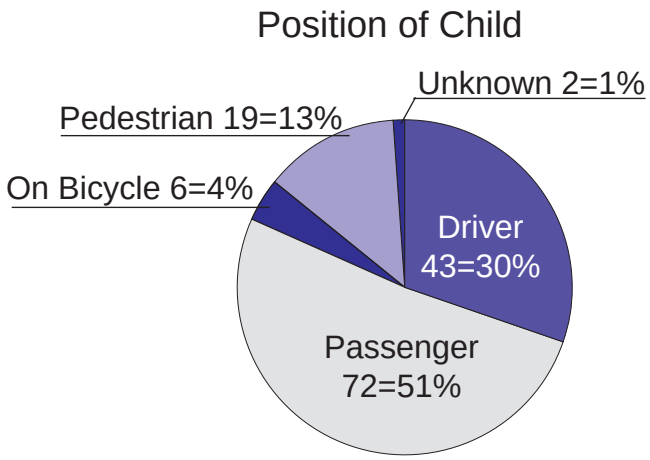
CFR Findings

Local CFR boards reviewed 142 deaths to children from vehicular injuries in 2004.
This represents 9 percent of the total 1,623 deaths reviewed. Sixty-one percent of the deaths occurred to 15-17-year-olds. There was a greater percentage (66 percent) of boys among vehicular deaths relative to their representation in the general population (51 percent).

Vehicular Deaths by Age, Race and Gender



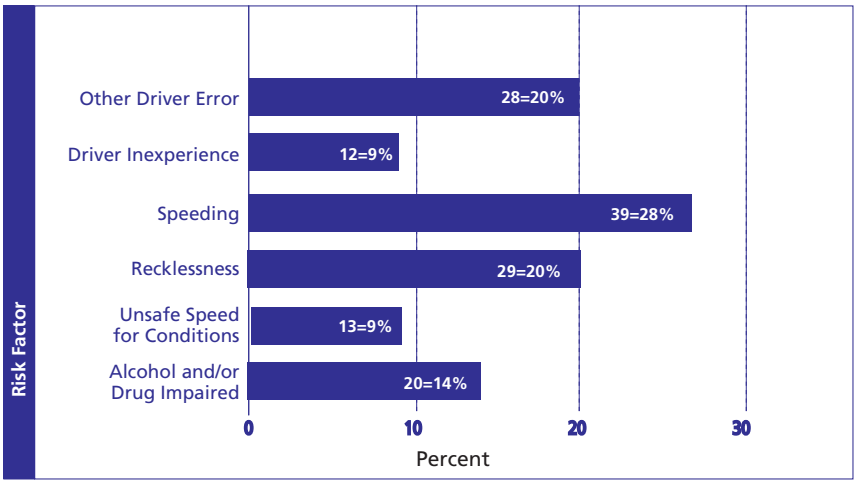
Note: numerals in bars equal number of cases



Sixty-six percent (93) of the children killed in vehicular crashes were in cars. Other types of vehicles involved include vans, sport utility vehicles (SUVs), trucks, motorcycles, farm vehicles, all-terrain vehicles (ATVs), snowmobiles, bicycles and others. Thirteen percent (19) of the children killed were pedestrians.

Thirty percent (43) of the vehicular deaths occurred to children who were driving the vehicle involved. Of the 43 cases where the child killed was the driver, 27 were determined to be responsible for the incident, and five of those were impaired by drugs or alcohol. Of the 72 cases where the child killed was a passenger in the vehicle, the driver of the vehicle was less than 20 years old in 53 percent of the reviews.

Risk Factors Cited in Vehicular Deaths



Note: More than one factor may be identified for each case. The total of percents exceeds 100. Thirteen other risk factors were cited at least once.

Speeding was the most frequently cited risk factor involved in vehicular deaths. Twenty-eight percent (39) of cases involved speeding over the limit, and an additional 9 percent (13) involved unsafe speed for the conditions. Recklessness was cited in 20 percent (29) of the deaths. Drug/alcohol use was noted in 14 percent (20) of the deaths.

Proper Use of Restraints for 101 Cases of Deaths to Children in Cars, Trucks, Vans and SUVs by Age

	Total Deaths	Restraints in Proper Use	%
29 days - 1 Year	3	1	33
1-4 Years	7	2	29
5-9 Years	6	0	0.0
10-14 Years	21	5	24
15-17 Years	64	24	38
Total	**101**	**32**	**32**

Seventy-one percent (101) 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 (32) of the 101 were properly restrained at the time of the incident.

Examples of Local Recommendations

Local CFR boards made more than 20 recommendations for the prevention of vehicular deaths based on the review of local deaths. Recommendations become initiatives only when resources, priorities and authority converge to make changes happen. The recommendations ranged from short-term local initiatives to legislative changes and included:

- Using Safe Kids coalitions to educate the community about pedestrian and bicycle safety.
- Heighten awareness of the dangers of excessive speed, drinking and driving and of the importance of seatbelt, car seat and helmet use through public education and media campaigns.
- Support continuation and enhancement of current programs such as Students Against Drunk Driving and Prom Promise aimed at teen drivers that promote seatbelt use and safe driving techniques and discourage risk-taking behaviors.
- Improve road design safety by working with law enforcement and county engineers.
- Urge legislators, ATV dealers and parents to confront the dangers of ATVs when operated by children.

Examples of Local Initiatives

- Several county CFR boards, including Mercer County, partnered with other local safety and school organizations to monitor the use of seatbelts by teen drivers as they left school parking lots at the end of the school day. Both negative and positive reinforcements were used to demonstrate the message that seatbelt use is the expected norm, and that adults are concerned about teen driving safety. Prom Promise is an activity used in many communities.
- The Athens County CFR Board worked with the county engineer to have a guard rail installed at the site of a fatal vehicular crash.
- The Carroll County CFR Board is providing ATV safety education information to organizations in the agriculture community for use at regular occurring meetings and events.
- The Champaign County CFR Board has reinstituted Car Teams in area high schools. These teams of students provide peer education to other teens regarding safe driving.
- The Wyandot County sheriff's department has instituted educational efforts targeting snowmobile and ATV owners and users.

Ohio's Graduated Driver License Law

Ohio's law regarding teen driving addresses many of the risk factors identified for young drivers.

- A temporary learning permit may be obtained at age 15 1/2 and requires a parent with a driver's license or certified driving instructor to be seated beside the learner.
- Fifty hours of actual driving experience, including at least 10 hours of night driving, must be certified by the learner's parent.
- These 50 hours are in addition to 24 hours of classroom instruction and eight hours of driving with a driver education program instructor.
- At age 16 and after passing a driving test, the teen can obtain a probationary license.
- Sixteen-year-olds are prohibited from driving between 1 a.m. and 5 a.m. unless with a parent.
- Until the driver is 18 years old, the number of passengers is limited to the number of seatbelts in the vehicle and all passengers must be buckled up.

Many local CFR boards have made recommendations to educate parents of new drivers of their responsibilities with the graduated driver's licensing and to empower parents to set limits for new drivers regarding the number of passengers, driving in inclement weather, time of day for driving, etc. Many boards continue to recommend that Ohio's graduated license law be strengthened to include further restrictions on nighttime driving and the number of passengers permitted, as well as making failure to buckle up a primary violation.

SUFFOCATION AND STRANGULATION

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 about 1,500 children die of suffocation and strangulation each year in the United States. The largest proportion of suffocations 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 SIDS or homicide. Older children are at risk for suffocation and strangulation due to substance abuse and suicide.

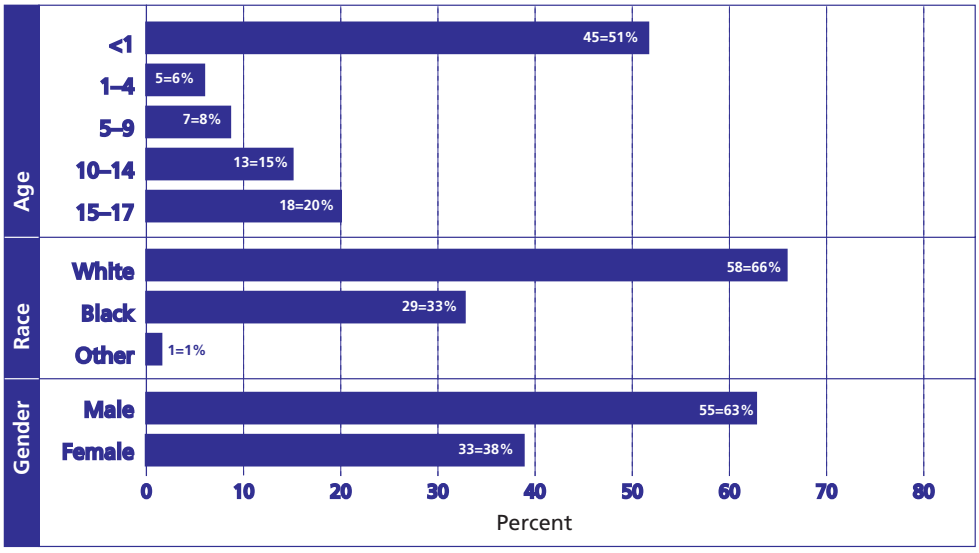
Vital Statistics

Ohio Vital Statistics preliminary data reported 95 deaths from suffocation and strangulation to children in 2004. For this report, ICD-10 codes used for classification of vital statistics data were selected to most closely correspond with the causes of death indicated on the CFR Case Report Tool. Therefore, the ICD-10 codes used for this report may not match the codes used for other reports or data systems. The codes used for this report can be found in the appendix.

CFR Findings

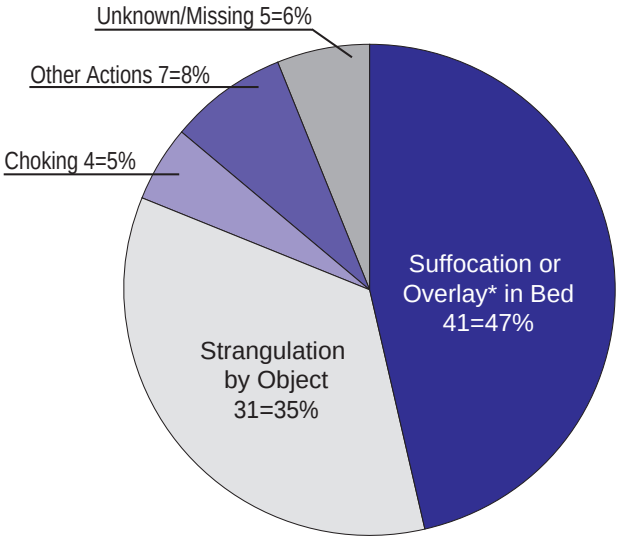
Local child fatality review (CFR) boards reviewed 88 deaths to children from suffocation and strangulation in 2004. These deaths represent 5 percent of all 1,623 deaths reviewed. More than half of the deaths (45) occurred to children less than 1 year of age while 35 percent (31) were to children 10-17 years old. A greater percentage of suffocation and strangulation deaths occurred among black children (33 percent) relative to their representation in the general population (16 percent). Thirty-four percent (30) of the reviews for suicide deaths in 2004 were due to suffocation and strangulation. In 47 percent of the suffocation and strangulation deaths reviewed, the child was suffocated in bed.

Suffocation and Strangulation Deaths by Age, Race and Gender



Note: numerals in bars equal number of cases

Action Causing Suffocation and Strangulation



Examples of Local Recommendations

Local CFR boards made more than 20 recommendations for the prevention of suffocation and strangulation deaths, all of them addressing the sleeping environment. Recommendations for collaboration with health care and other service providers to educate parents and child care providers about safe sleep environments were common. Other recommendations involved increasing the availability of safe cribs to low-income families. Recommendations become initiatives only when resources, priorities and authority converge to make changes happen.

Example of Local Initiatives

- Parents of newborns residing in Stark County receive a mailing from the health department with information about creating a safe sleep environment as well as other topics such as shaken baby syndrome.
- In Trumbull County, billboards, infant T-shirts,and flyers were used to deliver safe sleep messages.

WEAPONS

Background

The Ohio Child Fatality Review (CFR) adopted a new data system for 2004 deaths that includes a broad category for weapons deaths. The category now includes deaths that result from the use of firearms, knives and other instruments as well as the use of body parts as weapons. This change results in the inclusion in the weapons category of many deaths from child abuse in addition to other assaults.

According to the National Center for Health Statistics, 1,317 children under 18 years old were killed by firearms in 2003 in the United States. Only 8 percent were considered unintentional. The U.S. Department of Justice estimates there are more than 200 million privately owned guns in the United States and approximately 40 percent of U.S. households have some type of firearm. Twenty-five percent have handguns. Nearly 3.3 million children in the United States live in homes where guns are available, loaded and unlocked.

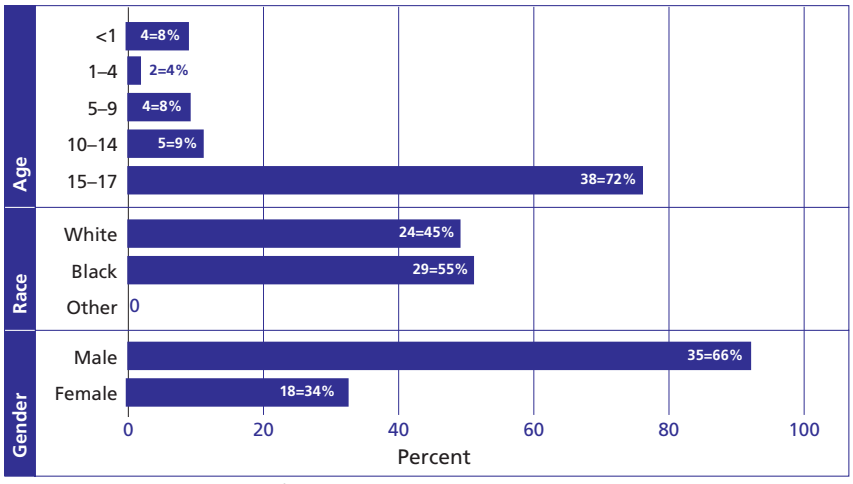
Vital Statistics

Ohio Vital Statistics preliminary data reported 61 deaths to children from weapons in 2004. For this report, ICD-10 codes used for classification of vital statistics data were selected to most closely correspond with the causes of death indicated on the CFR Case Report Tool. Therefore, the ICD-10 codes used for this report may not match the codes used for other reports or data systems. The codes used for this report can be found in the appendix.

CFR Findings

Local CFR boards reviewed 53 deaths to children from weapons in 2004. This represents 3 percent of all 1,623 deaths reviewed. Seventy-two percent (38) were children 15-17 years of age. Weapons deaths were disproportionately higher among boys (66 percent) and among black children (55 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 77 percent (41) of the deaths reviewed. Twenty-five percent (13) of the weapons deaths were suicides and 68 percent (36) were homicides.

Weapons Deaths by Age, Race and Gender



Note: numerals in bars equal number of cases

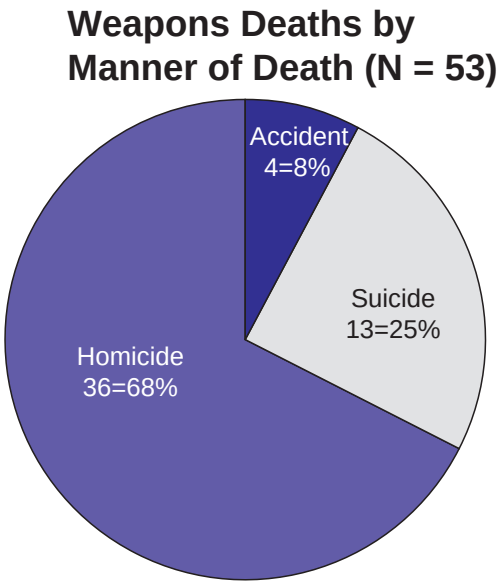
Weapons Deaths by Type of Weapon (N = 53)

Type	#	%
Firearm	41	77
Sharp Instrument	1	2
Person's Body Part	8	15
Other	1	2
Unknown	2	4
Total	**53**	**100**

Examples of Local Recommendations

Local CFR boards made more than 10 recommendations for the prevention of deaths due to firearms and weapons. Recommendations become initiatives only when resources, priorities and authority converge to make changes happen. Recommendations included:

- Improve education of adults to prevent the access of children to guns and ammunition and to promote the use of gun locks.
- Provide gun safety education for families.
- Institute peer mediation and anger management programs for youth; support mentorship programs for at-risk youth.
- Promote and support programs such as Block Watch to encourage the public to report suspicious activities.



Example of Local Initiatives

- In Montgomery County, the newly formed Dayton Commission on Youth is charged with keeping youth development and youth violence prevention as key priorities for policymakers and the community.
- A collaborative effort in Cuyahoga County involved community presentations on safe storage of firearms and the distribution of free trigger locks.