Ohio Child Fatality Review
Seventh-annual Report

Ohio Department of Health

This report includes reviews of child deaths that occurred in 2005

Ohio Child Fatality Review Seventh-annual Report

Mission

To reduce the incidence of preventable child deaths in Ohio

Submitted September 30, 2007, to

Ted Strickland, Governor, State of Ohio

Jon Husted, Speaker, Ohio House of Representatives

Bill Harris, President, Ohio Senate

Joyce Beatty, Minority Leader, Ohio House of Representatives

Teresa Fedor, 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 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, Division of Prevention; 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.

Dear Friends of Ohio Children,

We respectfully present the 2007 Ohio Child Fatality Review (CFR) Annual Report that contains information from reviews of child deaths that occurred in calendar year 2005. This report documents the continued development of the CFR program, as well as the successes and challenges in preventing the untimely deaths of Ohio children.

This seventh-annual report to Governor Ted Strickland 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,

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

Candace Valach, Executive Director
Ohio Children's Trust Fund

Executive Summary

The 2007 Child Fatality Review (CFR) Annual Report presents information from the reviews of deaths that occurred in 2005.

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 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. All of the 2005 deaths were reviewed using the new case report tool and data system. As a result, this report is the first based on data entirely from the new system.

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 previous reports. Special-focus sections offer 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.

Of the 1,725 deaths reviewed, 71 percent (1,229) were due to natural manners. Accidents (unintentional injuries) accounted for 17 percent (298) of the deaths. Vehicular deaths accounted for 7 percent (129) of all deaths reviewed, making them the leading cause of injury deaths. These percentages have remained stable for the past four 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:

- The Trumbull County CFR board is working cooperatively with the county fire chiefs to increase public awareness of fire safety through scheduled events.
- In Delaware County, an anti-bullying program and suicide awareness and prevention programs have been instituted in local schools in response to concerns raised during the review process.
- Several counties have obtained sponsorships for billboards, bus placards and other media promoting "Back to Sleep" and other safe sleep messages.
- In response to reviews of infant deaths, Portage County is studying the issues of prenatal care for the county's uninsured women.
- Numerous CFR boards have been actively working to decrease vehicular deaths. Recent changes to Ohio's

teen driving laws and the installation of reflective posts on stop signs and other traffic control signs are the results of their efforts. Many counties, including Huron, Morgan and Madison, continue to participate in programs addressing the use of seat belts, safe driving behavior and improving driving skills for teen drivers.

- The Shaken Baby Syndrome (SBS) program in Cuyahoga County has trained nearly 2,000 teachers and students about SBS prevention.

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 2007 Ohio Child Fatality Review (CFR) Annual Report contains information on child deaths that occurred in 2005.

A total of 1,734 reviews of 2005 child deaths were reported by 88 local CFR boards. Of these, 1,725 reviews were complete for manner and cause of death and were used for analysis. This represents 91 percent of all 1,892 child deaths for 2005, reported in data from Ohio Vital Statistics. Deaths that were not reviewed include cases still under investigation or involved in prosecution.

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

Sixty-five percent (1,117) of the deaths reviewed were to infants less than 1 year of age.

Of the 1,725 deaths reviewed, CFR boards determined 23 percent (401) were probably preventable. Of the 298 deaths with manner of death accident, 81 percent (240) were deemed probably preventable. Fifty-six percent (120) of 214 reviews for children 15-17 years of age were deemed probably preventable.

Seventy-four percent (1,264) of the deaths reviewed were due to medical causes. Seventy-eight percent (992) of deaths due to medical causes were to infants less than 1 year of age. The most frequent medical cause of death was prematurity.

Three percent (57) of all deaths reviewed and 5 percent of reviews to infants less than 1 year of age were from sudden infant death syndrome (SIDS). Eighteen percent (10) of all SIDS deaths were to black children and 61 percent (35) were to boys. Thirty-three percent (19) of the SIDS victims were found in locations that are considered particularly unsafe such as in adult beds and on couches. At least 60 percent (34) of SIDS victims were exposed to cigarette smoke in utero or after birth.

While the number of reviews for SIDS has decreased, the number of sleep-related deaths is similar to past years. Sleep-related deaths accounted for 174 deaths to infants less than 1 year old, including 57 deaths due to SIDS. Forty-three percent (50) of the 117 non-SIDS, sleep-related deaths were to black infants. Fifty-three percent (92) of the sleep-related deaths occurred in locations considered unsafe such as in adult beds and on couches. Fifty-eight percent (101) occurred to infants who were sharing a sleeping surface (bedsharing) with someone else at the time of death.

Twenty-six percent (457) of all deaths reviewed resulted from external causes.

Vehicular deaths accounted for 7 percent (129) of all deaths reviewed. Fifty-four percent (70) of these children were 15-17-year-olds and 85 percent (110) were white. Fifty-nine percent (76) of the children killed were boys. Of the 83 deaths that occurred in cars, trucks, vans or SUVs, only 27 percent (22) of the children killed were reported to be using appropriate restraints.

Six percent (95) of all deaths reviewed were from suffocation and strangulation. More than half of the deaths (59 percent) occurred to children less than 1 year of age. Twenty-six percent (25) of the deaths from suffocation and strangulation were the result of suicide.

Weapons, including body parts used as weapons, accounted for 4 percent (68) of all deaths reviewed. Fifty-six percent (38) were youth 15-17 years old and 50 percent (34) were black children. Twenty-two percent (15) of the deaths were due to suicide.

Slightly less than 3 percent (46) of all deaths reviewed were from drowning and submersion. Three of the drowning deaths were intentional (suicide or homicide). Fifty-nine percent (27) of the drowning deaths were to children under 5 years of age.

Fire and burns accounted for 2 percent (35) of all deaths reviewed. Thirty-one percent (11) were homicides. A smoke alarm was known to be present in only 50 percent (14) of the cases involving fire.

Poison deaths represented less than 1 percent (10) of all deaths reviewed. Seventy percent (seven) of the poison deaths occurred to children older than 10 years and one was a suicide.

CFR boards identified child abuse and neglect as a cause or contributing factor in 25 deaths. Seventy-six percent were violent deaths, with 19 resulting from physical abuse.

There were 46 suicide deaths reviewed. This represents 3 percent of all reviews and 13 percent of all the reviews for children 10-17 years old. Eighty-nine percent (41) were white children; 87 percent (40) 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 indicators of the health of a community. While mortality data provide us with an overall picture of child deaths by number and cause, it is from a careful study of each and every child's death that we can learn how best to respond to a death and how best to prevent future deaths.

Recognizing the need to better understand why children die, Governor Bob Taft 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 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 is the first to contain analysis of data entirely from the new system. Because of the differences in data elements and classifications, data in this annual report may not be comparable to data in previous reports, which used data from both the old and new systems.

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 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 2007 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 2005. Including data for a single calendar year makes it easier to identify trends and to compare with other data sources such as vital statistics.
- This report includes additional detailed analysis for several causes of death including vehicular deaths, SIDS and sleep-related deaths and suicide.
- A progress report is included for a special study of the discrepancies between CFR data and Ohio Vital Statistics regarding child abuse and neglect deaths.
- 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.

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.

Prevention Initiatives

Since the establishment of Ohio Child Fatality Review (CFR) in 2000, numerous 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 means that CFR boards must share their findings and recommendations with others who can spread the influences for change. There are many examples of such partnerships leading to successful implementation of CFR recommendations.

- Ohio's Graduated Driver License law was recently strengthened, in large part as a result of grassroots efforts by CFR boards and others with whom CFR data were shared. Noting the numbers of deaths reviewed involving multiple teens in cars, coupled with the knowledge of distractions and inexperienced judgments leading to fatal crashes, CFR boards shared their findings with their communities and enlisted partners to contact legislators. New revisions to the law limit the number of child passengers for teen drivers and establish a curfew for young drivers.
- A similar approach is being used to address the dangers of children on all-terrain vehicles, as CFR boards share their findings with community leaders.
- Reflective strips on the support poles of stop signs and other traffic signs are being installed on highways around the state, in part, as a result of CFR. Local CFR boards identified poor visibility as a contributor for certain crashes, and then worked with county engineers to make improvements. Those improvements are now becoming the standard for safety throughout the state.
- Many counties are addressing SIDS and other sleep-related deaths with a variety of programs that target minority families, grandparents, caregivers and health professionals. CFR boards have shared their findings with health care providers, child advocates, prevention programs and social service agencies to enlist communitywide partners for "Safe Sleep" campaigns. Billboards, bus and kiosk placards, infant T-shirts and patient-education brochures have been used to increase awareness of risk-reduction measures. Larger counties have focused on educating birth hospital staff on the importance of incorporating safe sleep practices in the newborn nursery policies. Other counties are involved in providing free or low-cost cribs to families in need. Most counties are using existing programs such as Help Me Grow, Women Infant and Children (WIC), Head Start and perinatal clinics to distribute the safe sleep message.
- Youth suicide prevention is a priority in many counties due to input from CFR. County suicide prevention coalitions and task forces focus on increasing awareness of suicide, reducing the factors that increase the risk of suicide, identifying youth at risk and increasing the availability of mental health services.
- To address needs identified through the reviews of many infant deaths, collaborative groups have been organized in some counties to promote early prenatal care and healthy lifestyles for pregnant women. Typical partners include Help Me Grow, WIC, Child and Family Health Services projects, local physicians, schools and other health and social service providers.

- The CFR process has a positive impact on the 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 barriers, the need to maximize use of existing services and opportunities for increased collaboration.

2007 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.

This report includes only information from reviews of deaths that occurred in 2005. 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 1,725 reviews of 2005 child deaths reported by April 1, 2007. This represents 91 percent of all child deaths (1,892) in Ohio for 2005, based on data from Ohio Vital Statistics. The 1,725 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 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 some causes of death in other reports or data systems. The codes used for this report can be found in the appendices.

This annual report is the first to contain analysis of data entirely from the new system. Because of the differences in data elements and classifications, data in this annual report may not be comparable to data in previous reports.

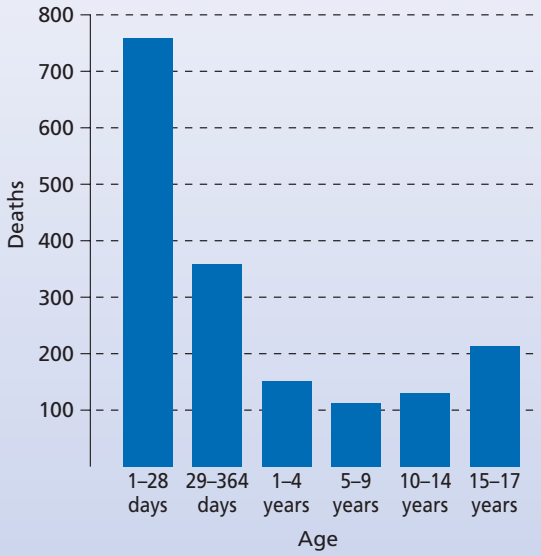
Summary of Reviews for 2005 Deaths

All Reviews

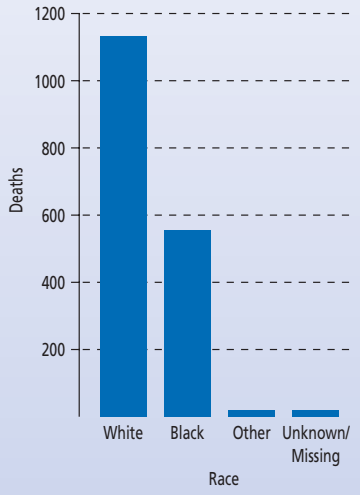
Local child fatality review (CFR) boards reviewed the deaths of 1,725 children who died in 2005. Sixty-five percent (1,117) of the reviews were for children less than 1 year of age. There were greater percentages of reviewed deaths among boys (60 percent) and among black children (32 percent) relative to their representation in the general Ohio population (51 percent for boys and 16 percent for black children, per Ohio Vital Statistics).

Local boards indicated 23 percent (401) of the 1,725 deaths reviewed probably could have been prevented. Deaths of accidental manner were considered the most preventable (81 percent) and deaths of natural manner were considered the least preventable (3 percent).

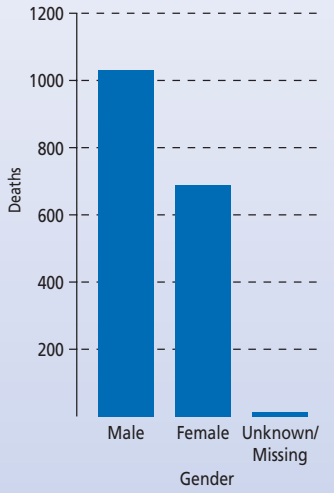
Reviews of 2005 Deaths by Age



Reviews of 2005 Deaths by Race



Reviews of 2005 Deaths by Gender



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 report the manner of death as indicated on the death certificate.

Reviews of 2005 Deaths by Manner of Death by Age, Race and Gender

	Natural		Accident		Homicide		Suicide		Pending/ Undetermined/ Unknown		Total	
Age	#	%	#	%	#	%	#	%	#	%	#	%
1–28 Days	727	59	18	6	2	3			11	14	758	44
29–364 Days	237	19	54	18	11	15			57	74	359	21
1–4 Years	87	7	49	16	11	15			4	5	151	9
5–9 Years	67	6	36	12	7	9	2	4			112	7
10–14 Years	60	5	44	15	15	20	9	20	3	4	131	8
15–17 Years	51	4	97	33	29	39	35	76	2	3	214	12
Race*	#	%	#	%	#	%	#	%	#	%	#	%
White	791	64	226	76	33	44	41	89	41	53	1132	66
Black	406	33	69	23	42	56	5	11	34	44	556	32
Other	15	1	2	1					1	1	18	1
Unknown/Missing	17	1	1	<1					1	1	19	1
Gender	#	%	#	%	#	%	#	%	#	%	#	%
Male	707	58	186	62	50	67	40	87	48	62	1031	60
Female	519	42	112	38	25	33	5	11	29	38	690	40
Unknown/Missing	3	<1					1	2			4	<1
Total	1229	71%	298	17%	75	4%	46	3%	77	4%	1725	100%

Percents may not total 100 due to rounding.
*30 cases with multiple races indicated were assigned to the minority race.

Natural Deaths

(1,229) accounted for 71 percent of all deaths reviewed.

- Seventy-eight percent (964) of all natural deaths were to infants less than 1 year old.
- Fifty-eight percent (707) of the natural deaths were to boys and 33 percent (406) were to black children.

Accidents

(Unintentional Injuries) (298) accounted for 17 percent of all deaths reviewed.

- Thirty-three percent (97) of all unintentional injury deaths were to youth aged 15-17 years.
- Sixty-two percent (186) of unintentional injury deaths were to boys and 23 percent (69) were to black children.

Homicide

(75) accounted for 4 percent of all deaths reviewed.

- Thirty-two percent (24) of all homicides were to children under 5 years of age, 20 percent (15) were to children ages 10-14 years and 39 percent (29) were to youth aged 15-17 years.
- Sixty-seven percent (50) of homicides occurred to boys and 56 percent (42) to black children.

Suicide

(46) accounted for 3 percent of all deaths reviewed.

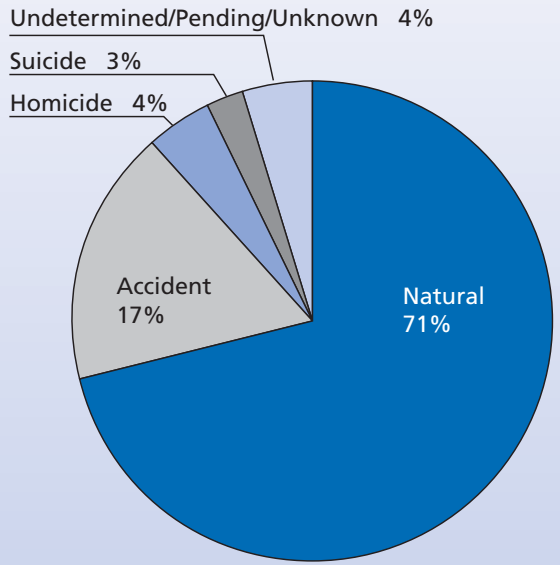
- Seventy-six percent (35) of all suicide deaths were to youth ages 15-17 years. Two suicide deaths were to children under 10 years of age.
- Eighty-seven percent (40) of suicide deaths were to boys and 89 percent (41) were to white children.

Undetermined, pending and unknown

(77) accounted for 5 percent of all deaths reviewed.

- Eighty-eight percent (68) of all undetermined, pending and unknown manner of deaths were among infants less than 1 year of age.
- Sixty-two percent (48) of undetermined, pending and unknown manner of deaths were to boys and 44 percent (34) were to black children.

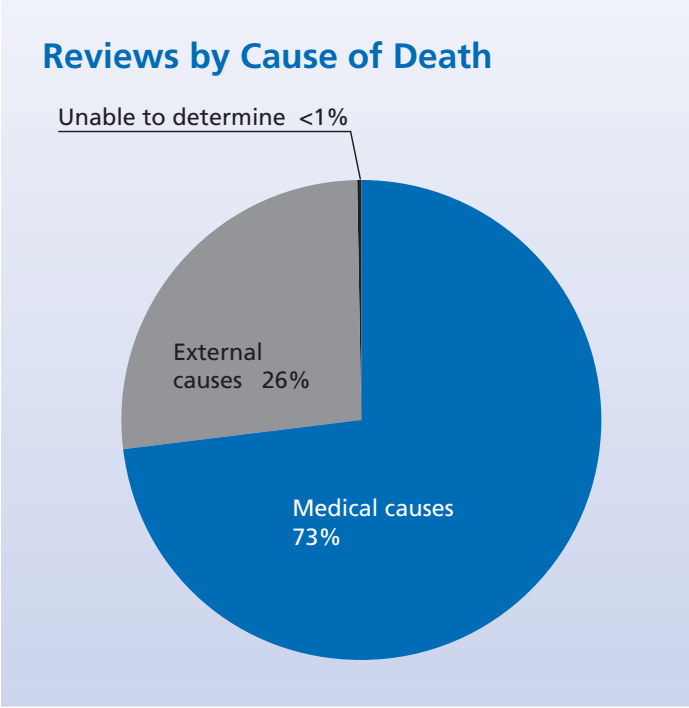
Reviews by Manner of Death



Reviews by Cause of Death

The CFR 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-three percent (1,264) of the 1,725 reviews of 2005 deaths were due to medical causes.
- Twenty-six percent (457) of the 1,725 reviews of 2005 deaths were due to external causes.
- Four cases could not be determined as medical cause or external cause.



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 counseling. While some conditions cannot be prevented, early detection and prompt, appropriate treatment can often prevent deaths.

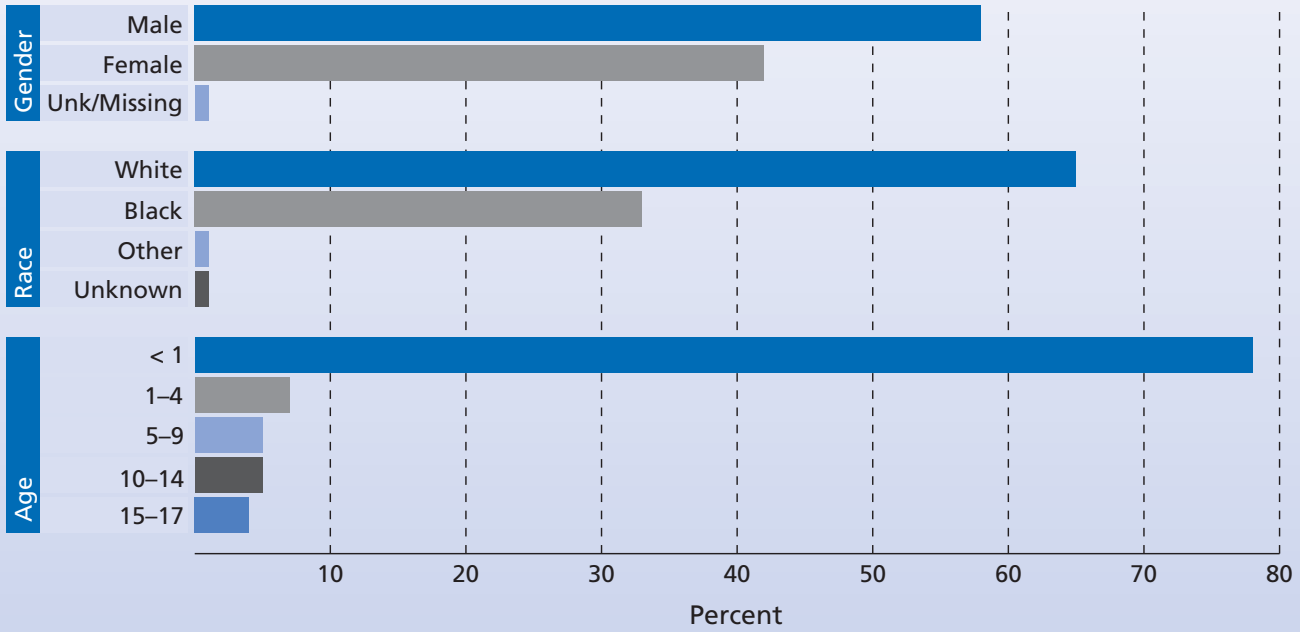
Vital Statistics

Ohio Vital Statistics reported 1,353 children who died of medical causes in 2005, including 82 from sudden infant death syndrome (SIDS). 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 appendices.

CFR Findings

- Seventy-three percent (1,264) of the 1,725 reviews for 2005 deaths were from medical causes, including 57 deaths from SIDS.
- Seventy-eight percent (992) of the 1,264 reviews for medical causes were to infants under the age of 1 year.
- Fifty-eight percent (734) of the 1,264 reviews for medical causes were to male children.
- Thirty-three percent (413) of the 1,264 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 cardiovascular conditions were the three leading medical causes of death.
  - Forty-two percent (533) were due to prematurity.
  - Sixteen percent (196) were due to congenital anomalies.
  - Five percent (60) were due to cardiovascular conditions.

Reviews of Deaths from Medical Causes by Age, Race and Gender



Reviews of 2005 Deaths by Cause of Death

All Medical Causes Total (N=1,264) and Three Leading* Medical Causes of Death, by Age, Race and Gender

	All Medical Causes		Prematurity		Congenital Anomalies		Cardiovascular Conditions	
Age	#	%	#	%	#	%	#	%
1–28 Days	737	58	497	93	104	53	18	30
29–364 Days	255	20	34	6	52	27	11	18
1–4 Years	88	7	2	<1	16	8	9	15
5–9 Years	67	5			13	7	7	12
10–14 Years	61	5			9	5	8	13
15–17 Years	56	4			2	1	7	12
Race	#	%	#	%	#	%	#	%
White	818	65	279	52	147	75	45	75
Black	413	33	240	45	44	22	12	20
Other	14	1	4	<1	2	1	3	5
Unknown/Missing	19	2	10	2	3	2		
Gender	#	%	#	%	#	%	#	%
Male	734	58	306	57	110	56	38	63
Female	527	42	226	42	85	43	22	37
Unknown/Missing	3	<1	1	<1	1	<1		
Total	1264	100%	533	42%	196	16%	60	5%

Percents may not total 100 due to rounding.
Cases with multiple races indicated were assigned to minority race.
*12 addition specific causes and "other" accounted for remaining 38% of reviews for medical causes.

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.[1] 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.[2] There is a large racial disparity, with the SIDS rate for black infants often more than twice the rate for white infants. While the national SIDS death rate has decreased, the post-neonatal mortality rates have not decreased, and the rate of "undetermined causes" has increased, suggesting that some deaths previously classified as SIDS are now being classified as other causes.[3]

In an October 2005 policy statement, the American Academy of Pediatrics recognized nationwide inconsistencies in the diagnosis of sudden, unexpected infant deaths. Deaths with similar circumstances have been diagnosed as SIDS, accidental suffocation, positional asphyxia or undetermined.[4]

Because SIDS is a diagnosis of exclusion, all other probable causes of death must be eliminated through autopsy, death scene investigation and health history. Incomplete investigations, ambiguous findings and the presence of known risk factors for other causes of deaths result in many sudden infant deaths being diagnosed as "undetermined cause" rather than SIDS. The difficulty of obtaining consistent investigations and diagnoses of infant deaths led the Centers for Disease Control and Prevention to launch an initiative to improve investigations and reporting.[5]

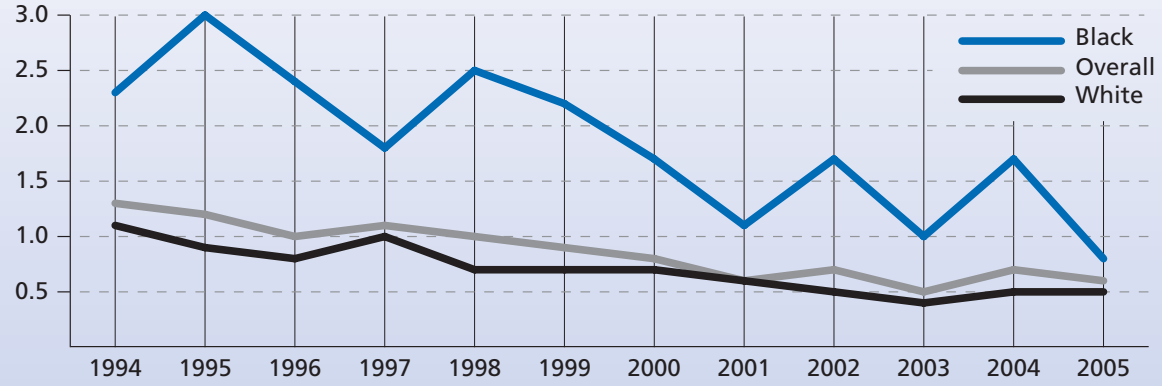
Although the cause and mechanism of SIDS eludes researchers, several factors appear to put an infant at higher risk for SIDS. Infants who sleep on their stomachs are more likely to die of SIDS than those who sleep on their backs, as are infants whose mothers smoked during pregnancy and who are exposed to passive smoking after birth. Soft sleep surfaces, excessive loose bedding and bedsharing increase the risk of sleep-related deaths.[6]

A discussion of the data regarding all sleep-related infant deaths regardless of diagnosis assigned appears later in this report.

Vital Statistics

Ohio Vital Statistics reported 82 SIDS deaths to infants in 2005. According to Ohio Vital Statistics, the Ohio SIDS rate has decreased 50 percent in the past decade, from 1.3 deaths per 1,000 live births in 1994 to 0.6 in 2005. 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 appendices.

SIDS Rate Per 1,000 Live Births by Race in Ohio, 1994–2005



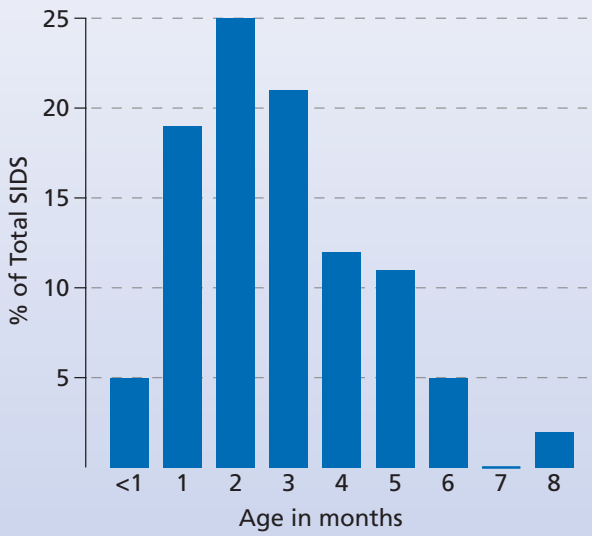
Note: Caution should be used in interpreting rates and trends due to small numbers and due to the updating of pending records.

CFR Findings

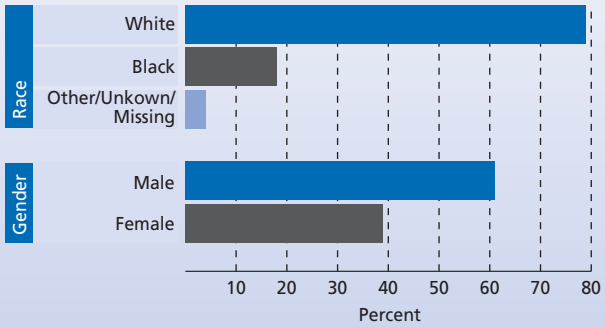
- Local CFR boards reviewed 57 deaths to children from SIDS in 2005. These deaths represent 3 percent of all 1,725 reviews conducted.
- There were greater percentages of SIDS deaths among boys (61 percent) relative to their representation in the general population (51 percent).
- Ninety-three percent (53) of the SIDS deaths reviewed occurred between 1 and 6 months of age.

It should be noted that while the number of SIDS deaths is significantly less than the 115 deaths reported for 2004, the number of infant sleep-related deaths has not decreased. A discussion of the data regarding sleep-related deaths from all causes appears later in this report in the Deaths in Special Circumstances section.

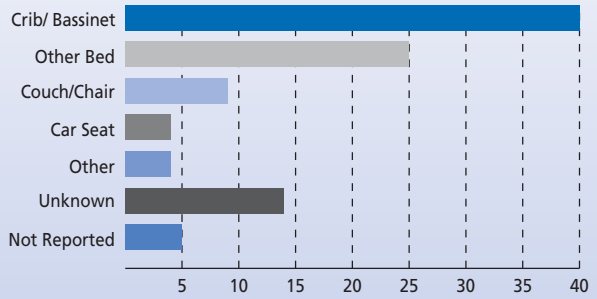
SIDS Deaths by Age



SIDS Deaths by Race and Gender



SIDS Deaths by Location of Infant when Found



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.

Information about the location of the infant when found, bedsharing and some birth health history was reported with sufficient frequency for analysis.

- Forty percent (23) of SIDS deaths occurred in cribs or bassinets, while 33 percent (19) of SIDS deaths occurred in locations considered especially unsafe: in adult beds and on couches and chairs.
- Twenty-one percent (12) of infants who died of SIDS were known to be sharing a sleep surface with an adult at the time of death.
- Eighteen percent (10) of the infants who died of SIDS were born with low (less than 2,500 grams) or very low (less than 1,500 grams) birthweight. Eighteen percent (10) of the infants were born before 37 weeks gestation.
- Twenty-one percent (12) were born to mothers who had a medical condition during the pregnancy.
- Sixty percent (34) of the children who died of SIDS were exposed to cigarette smoke, including 47 percent (27) who were exposed in utero.

Birth History Factors for SIDS Deaths (N=57)

	#	%
Multiple Birth	5	9
Very Low Birthweight (<1,500 g)	1	2
Low Birthweight (1,500–2,499 g)	9	16
Normal Birthweight (2,500–3,999 g)	38	67
Above Normal Birthweight (>3,999 g)	3	5
< 37 Weeks Gestation	10	18
37–42 Weeks Gestation	40	70
Mother with Medical Condition	12	21
Mother Smoked during Pregnancy	27	47