

# Ohio Child Fatality Review — Eighth-annual Report



Ohio Department of Health

Part 2 of 3

*This report includes reviews of child deaths that occurred in 2006*

# DEATHS FROM EXTERNAL CAUSES

## General Characteristics of Reviews of Deaths from External Causes

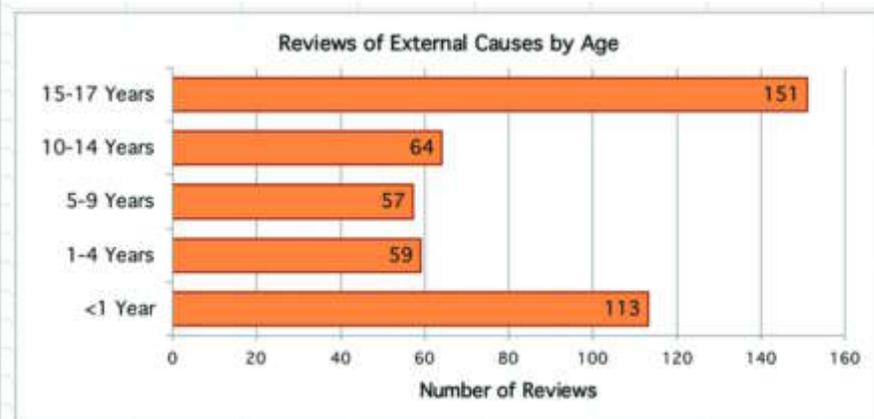
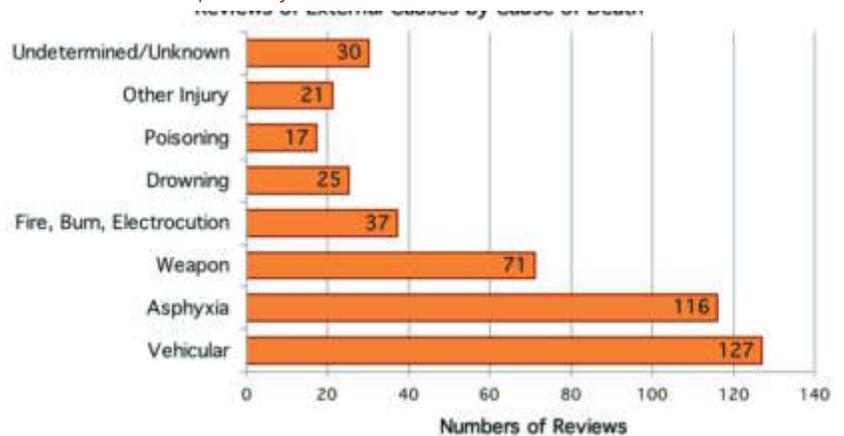
- Twenty-six percent (444) of the 1,692 reviews for 2006 deaths were due to external causes.
- Thirty-four percent (151) of the 444 reviews of deaths from external causes were for children ages 15-17 years.
- Thirty-one percent (137) of the 444 reviews for external causes were for black children, which is disproportionate to their representation in the Ohio child population (16 percent).
- Sixty-six percent (291) of the 444 reviews for external causes were for boys, which is disproportionate to their representation in the population (51 percent).

Vehicular injuries, asphyxia and weapons injuries were the three leading external causes for the 444 reviews.

- Twenty-nine percent (127) were due to vehicular injuries.
- Twenty-six percent (116) were due to asphyxia.
- Sixteen percent (71) were due to weapons injuries.

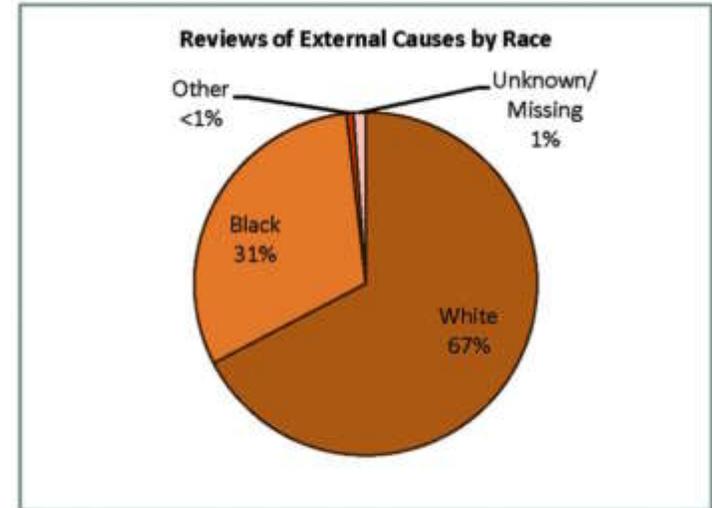
	Birth – 364 Days		1-4 Years		5-9 Years		10-14 Years		15-17 Years		Total	
	#	%	#	%	#	%	#	%	#	%	#	%
<b>Vehicular</b>	4	3	11	9	22	17	22	17	68	54	127	29
<b>Asphyxia</b>	68	59	7	6	4	3	17	15	20	17	116	26
<b>Weapon</b>	8	11	9	13	6	9	11	16	37	52	71	16
<b>Fire, Burn, Electrocutation</b>	3	8	15	41	11	30	4	11	4	11	37	8
<b>Drowning</b>	2	8	8	32	5	20	5	20	5	20	25	6
<b>Poisoning</b>	2	12	2	12	0		1	6	12	71	17	4
<b>Other Injury</b>	3	14	3	14	7	33	3	14	5	24	21	5
<b>Undetermined/Unknown</b>	23	77	4	13	2	7	1	3	0		30	7
<b>External Causes Total</b>	<b>113</b>	<b>25%</b>	<b>59</b>	<b>13%</b>	<b>57</b>	<b>13%</b>	<b>64</b>	<b>14%</b>	<b>151</b>	<b>34%</b>	<b>444</b>	<b>100</b>

Percents may not total 100 due to rounding.



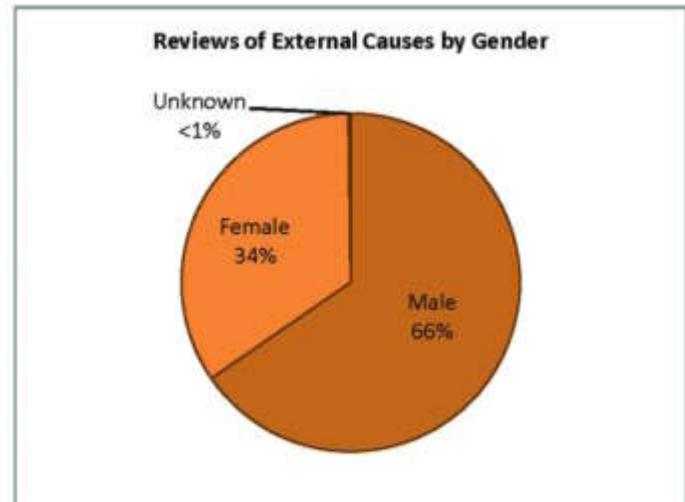
Reviews of 2006 Deaths: All External Causes of Death (N=444) by Race										
	White		Black		Other		Unk/Miss.		Total	
	#	%	#	%	#	%	#	%	#	%
Vehicular	106	84	15	12	3	2	3	2	127	29
Asphyxia	78	67	37	32	0		1	<1	116	26
Weapon	24	34	47	66	0		0		71	16
Fire, Burn, Electrocution	24	65	13	35	0		0		37	8
Drowning	16	64	8	32	0		1	4	25	6
Poisoning	16	94	1	6	0		0		17	4
Other Injury	19	90	2	10	0		0		21	5
Undetermined/Unknown	16	53	14	47					30	7
<b>External Causes Total</b>	<b>299</b>	<b>67%</b>	<b>137</b>	<b>31%</b>	<b>3</b>	<b>&lt;1%</b>	<b>5</b>	<b>1%</b>	<b>444</b>	<b>100%</b>

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



Reviews of 2006 Deaths: All External Causes of Death (N=444) by Gender									
	Male		Female		Unknown/Missing		Total		
	#	%	#	%	#	%	#	%	
Vehicular	77	61	50	38			127	29	
Asphyxia	70	60	45	39	1	<1	116	26	
Weapon	61	86	10	14			71	16	
Fire, Burn, Electrocution	21	57	16	43			37	8	
Drowning	18	72	7	28			25	6	
Poisoning	8	47	9	53			17	4	
Other Injury	18	86	3	14			21	5	
Undetermined/Unknown	18	60	12	40			30	7	
<b>External Causes Total</b>	<b>291</b>	<b>66%</b>	<b>153</b>	<b>34%</b>	<b>1</b>	<b>&lt;1%</b>	<b>444</b>	<b>100%</b>	

Percents may not total 100 due to rounding.



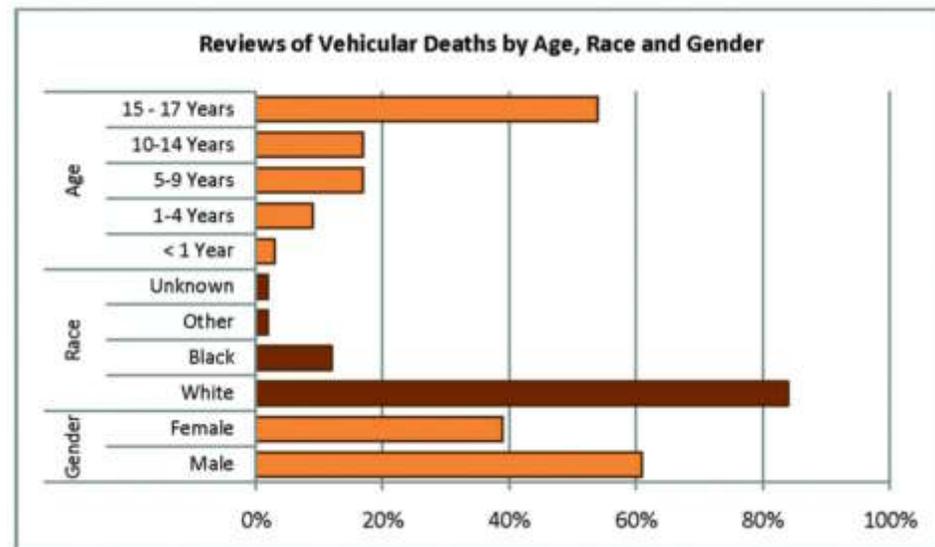
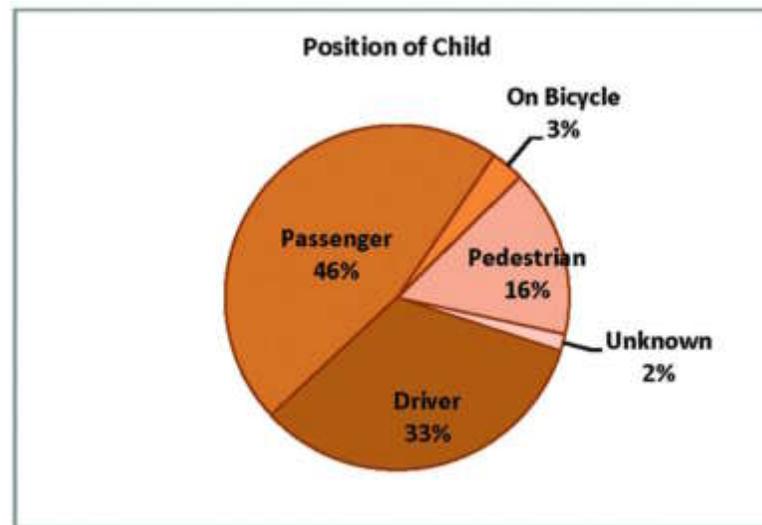
## VEHICULAR DEATHS

### Background

Vehicular deaths include deaths of children involving all types of vehicles including cars, trucks, campers, boats, all-terrain vehicles (ATVs), farm vehicles, motorcycles and bicycles as well as deaths to pedestrians. Motor vehicle crashes are the leading cause of unintentional injury-related death among children and young adults ages 18 years and younger in the United States,

Only 36 percent of children were properly restrained at the time of the incident.

according to the National Center for Health Statistics.<sup>7</sup> 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 (NHTSA) reports that nationally in 2005, 54 percent of children under age 20 killed in motor vehicle crashes were completely unrestrained. According to the NHTSA, when child restraint devices are properly used for infants, the risk of vehicular deaths can be reduced by 71 percent.<sup>8</sup> In 2005, 13 percent of all the drivers involved in fatal crashes were young drivers age 15 to 20 years old. For teenage drivers, inexperience and errors of judgment lead to a higher rate of single-vehicle accidents.<sup>9</sup>





### Vital Statistics

Ohio Vital Statistics reported 137 vehicular deaths to children in 2006. 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

- Local CFR boards reviewed 127 deaths to children from vehicular injuries in 2006.
- These represent 8 percent of the total 1,692 deaths reviewed.
- Fifty-four percent (68) of the deaths occurred to 15–17-year-olds.
- There was a greater percentage (61 percent) of boys among vehicular deaths relative to their representation in the general population (51 percent).
- Sixteen percent (20) of the children killed were pedestrians and four were on bicycles.
- Forty percent of the black children killed in vehicular crashes were pedestrians or on bicycles.
- Fifty-six percent (70) of the children killed in vehicular crashes were in cars. Other types of vehicles involved include vans, sport utility vehicles (SUVs), trucks, motorcycles, ATVs, bicycles and others.
- Thirty-three percent (42) of the vehicular deaths occurred to children who were driving the vehicle involved.
- Of the 42 cases where the child killed was the driver, 37 were determined to be responsible for the incident, and two of those were impaired by drugs or alcohol.
- Of the 59 cases where the child killed was a passenger in the vehicle, the driver of the vehicle was 21 years old or younger in 51 percent of the reviews.

- Speeding was the most frequently cited risk factor involved in vehicular deaths. Twenty-eight percent (35) of cases involved speeding, and an additional 14 percent (18) involved unsafe speed for the conditions.
- Recklessness was cited in 29 percent (37) of the deaths.
- Drug/alcohol use was noted in 13 percent (16) of the deaths.
- Sixty-nine percent (88) 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 (28) of the 88 were properly restrained at the time of the incident.
- Of the 33 children who were killed while driving cars, trucks, vans and SUVs, 36 percent (12) were properly restrained at the time of the incident.

	<b>Total Deaths</b>	<b>Restraints in Proper Use</b>	<b>%</b>
<b>Birth - 1 Year</b>	4	3	75
<b>1-4 Years</b>	7	2	29
<b>5-9 Years</b>	12	4	33
<b>10-14 Years</b>	9	1	11
<b>15-17 Years</b>	56	18	32
<b>Total</b>	88	28	32

<b>Risk Factors</b>	<b># of Cases</b>	<b>% of Vehicular Deaths</b>
<b>Speeding over the Limit</b>	35	28
<b>Recklessness</b>	37	29
<b>Driver Inexperience</b>	21	17
<b>Unsafe Speed for Conditions</b>	18	14
<b>Drug/Alcohol Use</b>	16	13
<b>Driver Distraction</b>	16	13
<b>Other Driver's Error</b>	10	8

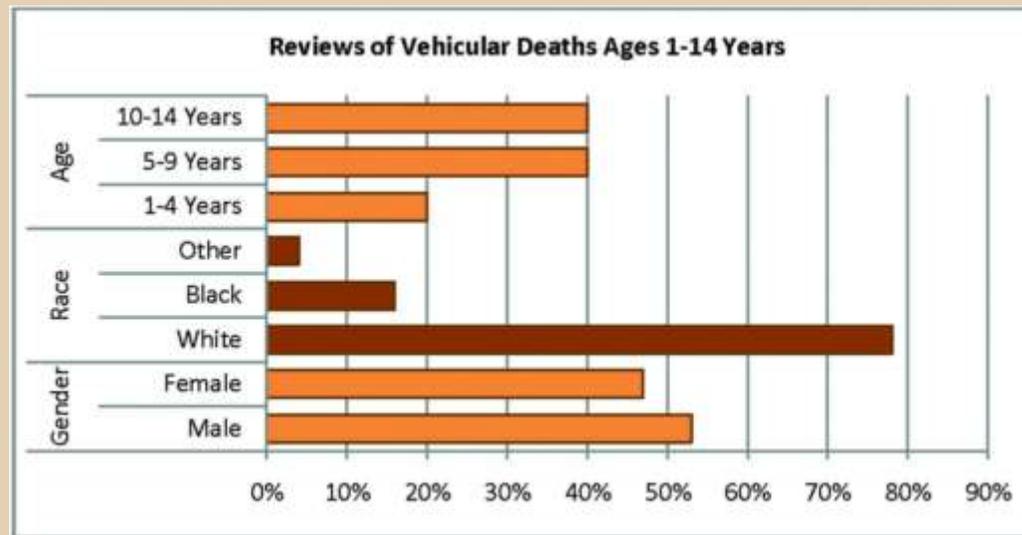
More than one factor may be identified for each case. The total of percents exceeds 100. Twelve other risk factors were cited at least once.



## VEHICULAR DEATHS TO CHILDREN 1 – 14 YEARS OLD

The federal Maternal Child Health Block Grant requires states to address 18 national and 10 state performance measures to report the population's health status. National Performance Measure 10 is the rate of deaths to children 1 – 14 years old caused by vehicular crashes. For 2006, the Ohio rate was 2.6 per 100,000, slightly higher than the target rate of 2.4. While the majority of vehicular deaths occur to the 15-17-year age group, CFR data provide a more complete picture about the unique circumstances and risk factors related to vehicular deaths for the younger age group.

- Of the 55 vehicular deaths to children 1-14 years old, 31 percent (17) were pedestrians or bikers.
- Of the 15 vehicular deaths to black children of all ages, 60 percent (nine) were age 1-14 years.





# ASPHYXIA

## Background

In previous annual reports, this section was called Suffocation and Strangulation. 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 more than 1,600 children die of asphyxia each year in the United States. The largest proportion of asphyxias occurs to infants and toddlers, often while sleeping in unsafe environments.<sup>10</sup> While the rates of child deaths from all other causes of external injury have decreased over the past decade, the rate of death from asphyxia has increased.<sup>11</sup> 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 asphyxia due to substance abuse and suicide.

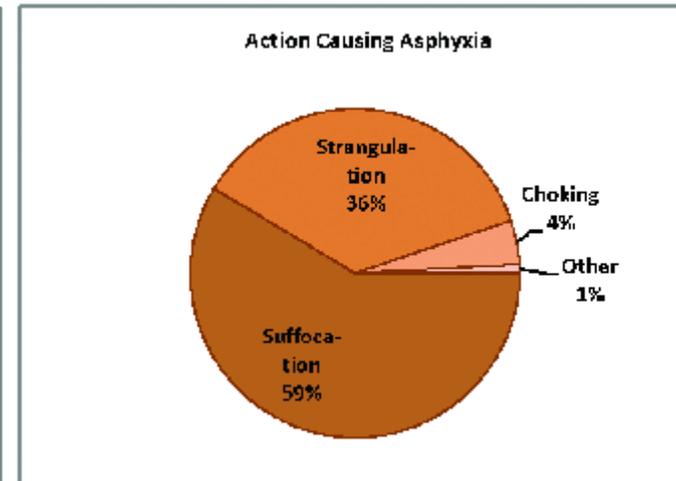
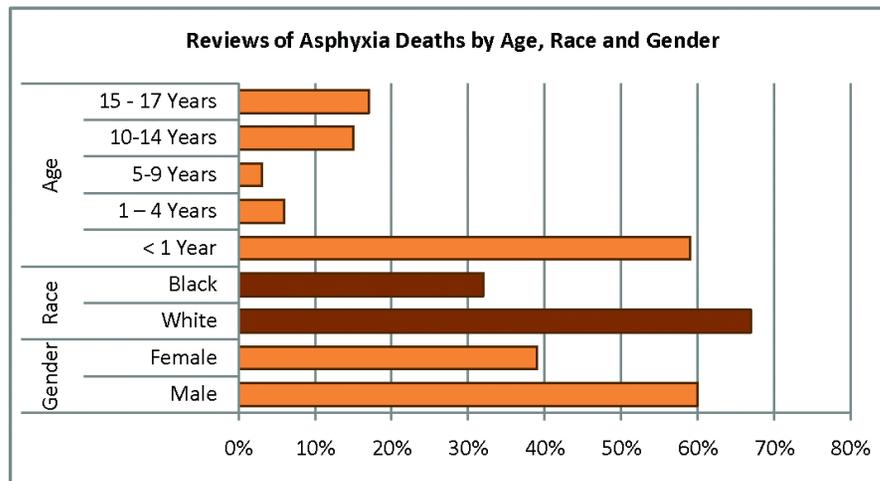
## Vital Statistics

Ohio Vital Statistics reported 105 deaths from asphyxia to children in 2006. 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

- Local CFR boards reviewed 116 deaths to children from asphyxia in 2006. These represent 7 percent of all 1,692 deaths reviewed.
- A greater percentage of asphyxia deaths occurred among black children (32 percent) relative to their representation in the general population (16 percent).
- Fifty-nine percent of the deaths (68) occurred to children less than 1 year of age, while 32 percent (37) were to children 10–17 years old.
- Twenty-four percent (28) of the asphyxia deaths were suicides.
- Deaths from asphyxia are categorized by the action causing the asphyxia to better understand risk factors.
- Fifty-nine percent (68) of the asphyxia deaths were caused by suffocation.
- Thirty-six percent (42) were caused by strangulation.
- Eighty-eight percent (60) of the suffocation deaths were sleep related.
- Eighty-six percent (36) of the strangulation deaths were to children older than 10 years.





## WEAPONS

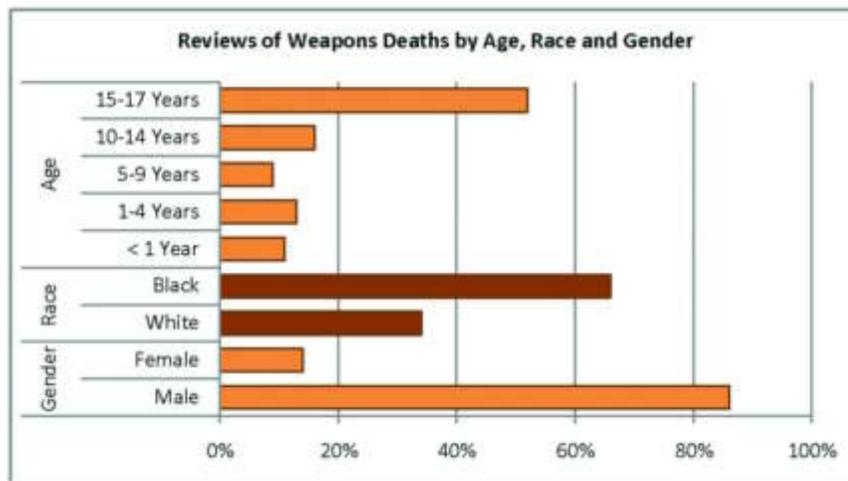
### Background

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

According to the National Center for Health Statistics, 1,490 children under 18 years old were killed by firearms in 2005 in the United States. Fewer than 9 percent were considered unintentional.<sup>12</sup> The U.S. Department of Justice estimates there are more than 190 million privately owned guns in the United States of which one-third are handguns, and approximately 40 percent of U.S. households have some type of firearm. Nearly 3.3 million children in the United States live in homes where guns are available, loaded and unlocked.<sup>13</sup>

### Vital Statistics

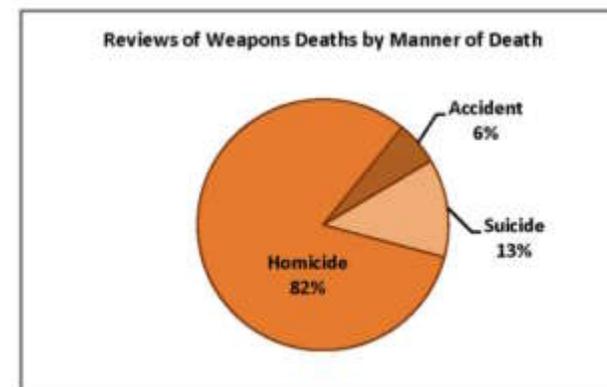
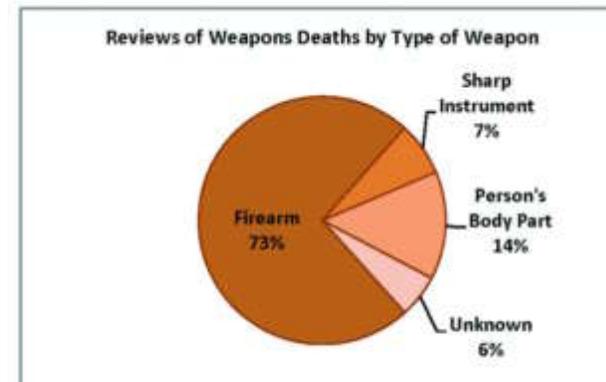
Ohio Vital Statistics reported 71 deaths to children from weapons in 2006. For this report, ICD-10 codes used for classification of Vital Statistics data were selected to most closely correspond with the causes of death indicated on the CFR Case Report Tool.



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

- Local CFR boards reviewed 71 deaths to children from weapons in 2006. These represent 4 percent of all 1,692 deaths reviewed.
- Fifty-two percent (37) were children 15-17 years of age.
- Weapons deaths were disproportionately higher among boys (86 percent) and among black children (66 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 73 percent (52) of the deaths reviewed.
- Thirteen percent (nine) of the weapons deaths were suicides and 82 percent (58) were homicides. Only 6 percent (four) were accidents.





## FIRE AND BURNS

### Background

The National Center for Health Statistics reports fires and burns are the third-leading cause of death among children younger than 18 years of age in the United States.<sup>14</sup> Most of these deaths occur in house fires, and the majority of the deaths are due to smoke

A smoke detector was known to be present in 21 percent of the deaths.

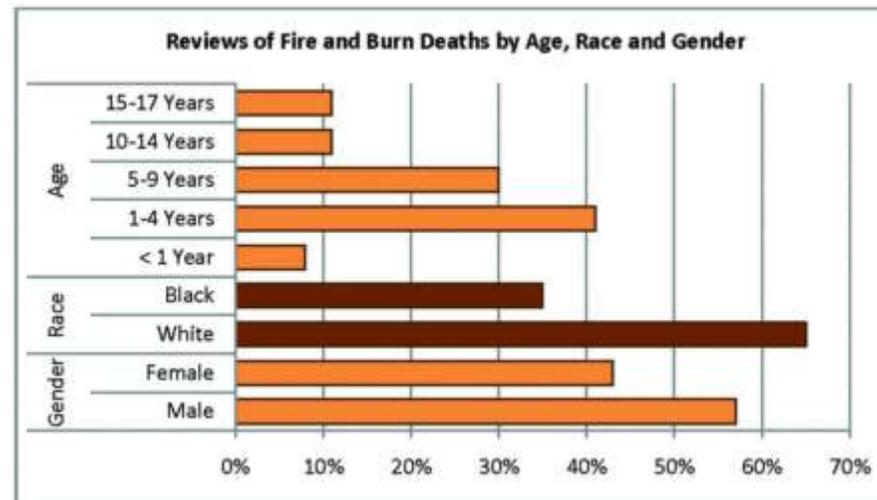
inhalation rather than burns. According to the National Center for Injury Prevention and Control, cigarette smoking is the leading cause of fatal house fires. Young children and elderly adults are especially at risk of fire and burn deaths because of their slower response and decreased mobility. In fact, children under 5 years old are twice as likely to die in a house fire as the rest of the population.<sup>15</sup>

### Vital Statistics

Ohio Vital Statistics reported 13 deaths from fire and burns to children in 2006. 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

- Local child fatality review boards reviewed 37 deaths from fire and burn to children in 2006. These represent 2 percent of all 1,692 deaths reviewed.
- A greater percentage of fire and burn deaths occurred among black children (35 percent) relative to their representation in the general population (16 percent).
- Forty-nine percent (18) of the fire and burn deaths were to children younger than 5 years old.
- For the 34 deaths due specifically to structure fires, a smoke detector was known to be present in 21 percent (seven) of the deaths reviewed.





## DROWNING AND SUBMERSION

### Background

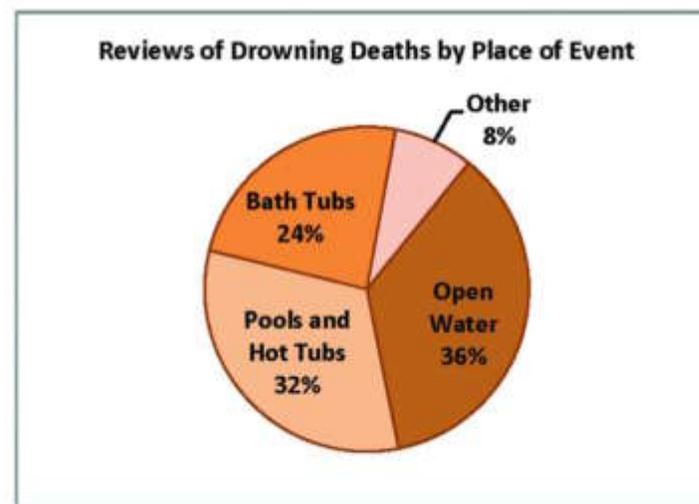
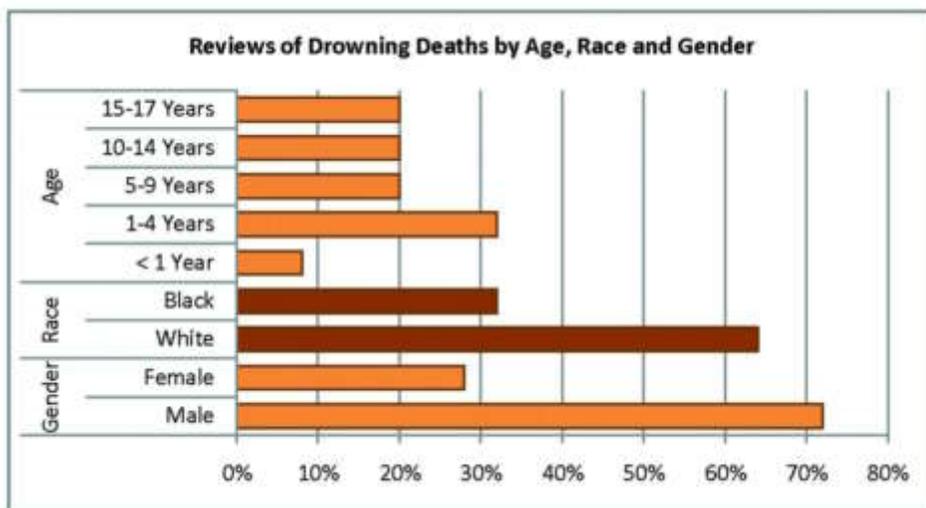
Drowning represents the second-leading cause of unintended injury-related death among children ages 1 to 14 years of age in the United States, according to the National Center for Health Statistics.<sup>16</sup> Drowning incidents occur suddenly and unexpectedly, often during momentary lapses in adult supervision. In fact, a study by Safe Kids indicated nearly 90 percent of child drowning deaths occurred while the child was being supervised.<sup>17</sup>

### Vital Statistics

Ohio Vital Statistics reported 25 deaths from drowning and submersion to children in 2006. 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

- Local child fatality review boards reviewed 25 deaths to children from drowning and submersion in 2006. These deaths represent less than 2 percent of all 1,692 deaths reviewed.
- Forty percent (10) of the children were less than 5 years old.
- A greater percentage of drowning and submersion deaths occurred among boys (72 percent) and among black children (32 percent) relative to their representation in the general population (51 percent for boys and 16 percent for black children).
- Thirty-six percent (nine) of the drowning deaths occurred in open water such as rivers and ponds, while 32 percent (eight) occurred in pools and hot tubs.
- Twenty-four percent (six) occurred in bath tubs.





## POISON DEATHS

### Background

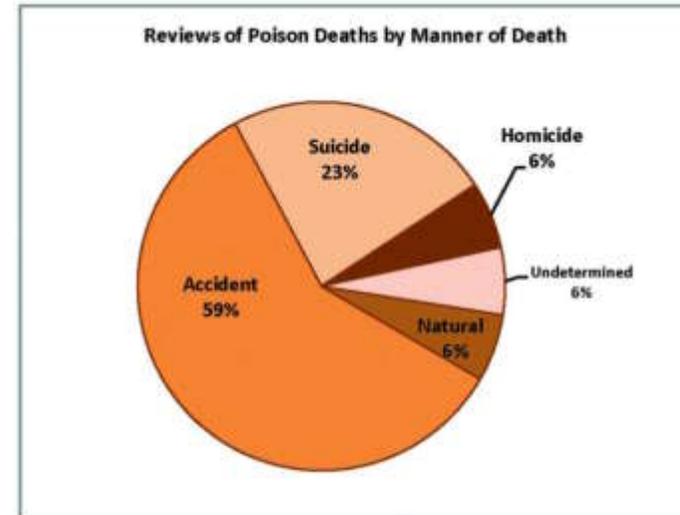
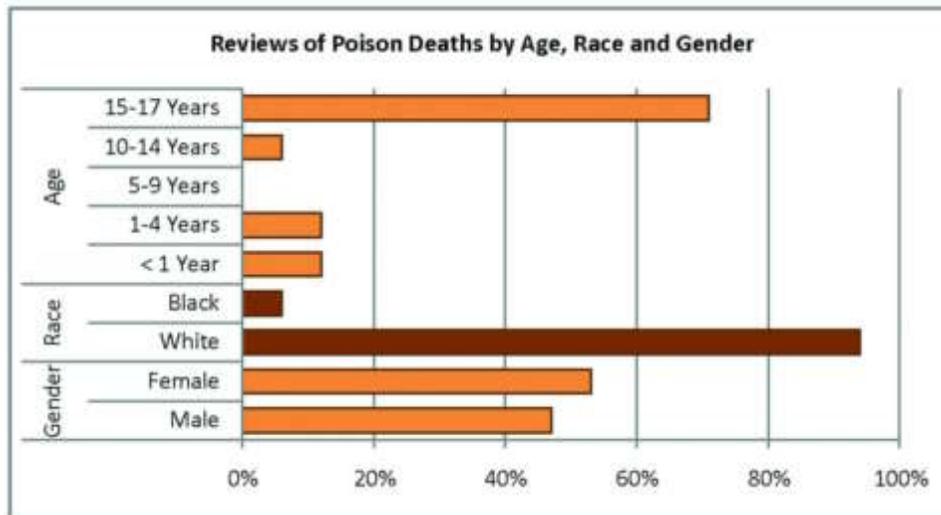
The poison death rate for children 14 years of age and younger has decreased nearly 50 percent since 1981, according to the National Center for Health Statistics.<sup>18</sup> Safe Kids attributes the decline in childhood poison deaths over the past two decades to a decreased use of aspirin for treating child fevers, reductions in the amount of child analgesics in packages and the use of child-resistant packaging for a variety of household substances and medications. Unfortunately, the poisoning deaths of adolescents have increased in the past five years. The rise is attributed to an increase in the inhalation of common household substances by teens to achieve a high, the recreational abuse of drugs and the intentional ingestion of poison to commit suicide.<sup>19</sup>

### Vital Statistics

Ohio Vital Statistics data reported 18 deaths from poisoning to children in 2006. 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

- Local child fatality review boards reviewed 17 deaths from poisoning to children in 2006. These represent 1 percent of all 1,692 deaths reviewed.
- Seventy-six percent (13) of the deaths occurred among children 10 years and older.
- Four of the poison deaths were the result of suicide.
- There was one carbon monoxide poison death. The other reviews indicated medications, alcohol and street drugs as the poison agent.





# OTHER DEATHS FROM EXTERNAL CAUSES

- Deaths from other external causes include deaths from falls and crushes (13), exposure (one), unknown (four), undetermined (26) and other (seven) specified causes.
- Local child fatality review boards reviewed a total of 51 deaths from other external causes to children in 2006. These represent 3 percent of all 1,692 deaths reviewed.
- Deaths from unknown and undetermined external causes of death represent 1.8 percent of all reviews of 2006 deaths.

