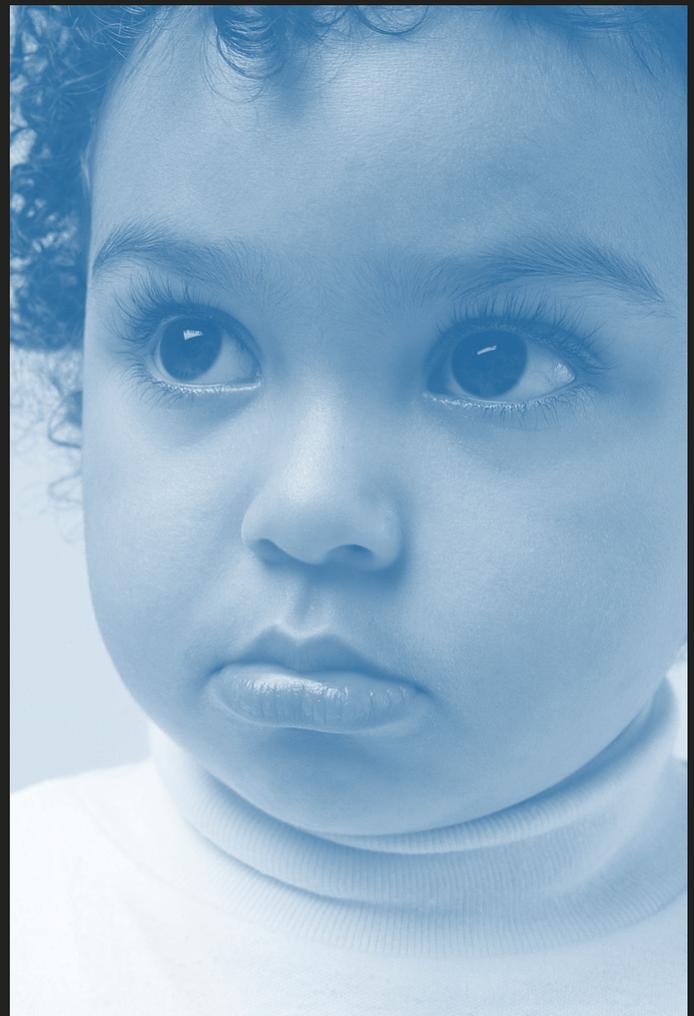




# Franklin County Child Fatality Review 3rd Annual Community Report

Includes data from child deaths which occurred in 2005



# Franklin County Child Fatality Review

Prepared by:

Kathryn T. Reese, MPH

Franklin County Child Fatality Review Program Manager

Ben DeJesus, MS

Office of Assessment and Surveillance

Kathleen S. Cowen, MS

Office of Assessment and Surveillance

This report was prepared by Columbus Public Health for the Franklin County Child Fatality Review.

This report is public domain and may be used and reprinted without special permission, however, citation to the source is appreciated. The suggested citation is: Columbus Public Health. *Franklin County Child Fatality Review, 3rd Annual Community Report*, Columbus, Ohio, 2007.

For more information about this report, or the Franklin County Child Fatality Review, please contact:

Kathryn Reese, MPH

Franklin County Child Fatality Review Program Manager

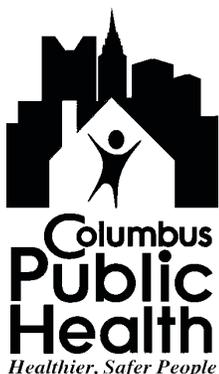
Columbus Public Health

240 Parsons Ave.

Columbus, Ohio 43215

Phone: 614-645-1667

Email: [ktreese@columbus.gov](mailto:ktreese@columbus.gov)



Teresa C. Long, MD, MPH

Health Commissioner

[www.publichealth.columbus.gov](http://www.publichealth.columbus.gov)



City of Columbus

Mayor Michael B. Coleman

## Table of Contents

Dedication	Page 4
Acknowledgement	Page 5
Health Commissioner's Message	Page 6
Mission Statement	Page 7
Overview of 2005 Deaths	Page 8
Manner of Death: Natural	Page 10
Cause of Death: Prematurity	Page 11
Cause of Death: Sudden Infant Death Syndrome	Page 13
Manner of Death: Accident	Page 14
Cause of Death: Motor Vehicle Accident	Page 15
Cause of Death: Poisoning	Page 17
Cause of Death: Suffocation or Strangulation	Page 18
Cause of Death: Fire	Page 19
Cause of Death: Drowning	Page 20
A Closer Look at Infant Sleep-Related Deaths	Page 21
Manner of Death: Suicide	Page 25
Manner of Death: Homicide	Page 26
Additional Recommendations	Page 27
Prevention	Page 28
Technical Notes and Data	Page 30

## Dedication

The Franklin County Child Fatality Review (FCCFR) respectfully dedicates this report, its findings, recommendations, and current and future prevention efforts to the children whose lives were lost. May these findings and the changes they generate prevent future deaths from occurring.



## Acknowledgement

Columbus Public Health recognizes the following agencies, organizations, and the individuals who represent them for their cooperation and dedication to the Franklin County Child Fatality Review. Their commitment makes this process possible. The member agencies and representatives include:

### **Alcohol, Drug and Mental Health (ADAMH) Board of Franklin County**

Keith McCloud, LSW

### **Center for Child and Family Advocacy**

Paul McPherson, MD

Phillip Scribano, DO, MSCE

Jonathan Thackeray, MD

### **Central Ohio SIDS**

Charles Reiner, MD

### **Nationwide Children’s Hospital**

Kathleen Nicol, MD

### **Columbus Fire Department**

Billy Almon

David Sawyer

Ricky Scott

### **Columbus Police Department**

James McCoskey

Anne Pennington

Russell Redman

### **Columbus Public Health**

Kathleen Cowen, MS

Karen Gray, MS, CHES

Kathryn Reese, MPH, Chair

Carolyn Slack, MS, RN

### **Columbus City Schools**

Gabrielle Karpowicz, RN, BSN,  
MA

### **Court Appointed Special Advocates (CASA) of Franklin County**

Susan Burnside-Kelly, JD

Jamie Must, JD

Denise Pleska, JD

### **Franklin County Board of Mental Retardation and Developmental Disabilities**

Frank New

### **Franklin County Children Services**

Patti Marcum

### **Franklin County Coroner’s Office**

William Cox, MD

Jan Gorniak, DO

Joseph Ohr, MD

### **Franklin County Department of Job & Family Services**

Bruce Barber

### **Franklin County Prosecutor’s Office**

Christine Julian, JD

### **Franklin County Public Defender**

Susan Laughlin-Schiopis, JD

### **Franklin County Sheriff’s Department**

Richard Minerd

### **Ohio Department of Job & Family Services**

Michael Robison

### **Westerville Division of Police**

Doug Dietz

## Health Commissioner's Message

The death of a child is a great loss to family, friends, and community. Understanding the underlying conditions and risks is critical to prevent similar deaths occurring in Franklin County. Once an understanding is achieved, it is the role of the Franklin County Child Fatality Review (FCCFR) is to make recommendations to parents, health professionals, and the community about how similar deaths might be prevented in the future.

This report outlines the causes of all child deaths, their related risk factors, and the resulting recommendations by the FCCFR. If this information, the awareness it raises, and the changes that result lead to one less child death in the future, then this report will be one of the most important public health initiatives we undertake this year. I'd like to express my appreciation for the continued dedication of the Franklin County Child Fatality Review (FCCFR) for its work to understand the factors contributing to child deaths. Though this is difficult work, it is essential in order to gain the knowledge required to put new public health practices into place.

There are actions we can take as a community and as individuals to prevent future child deaths. In addition to this report, the FCCFR booklet *Top Ten Tips For Healthier, Safer Children* offers a set of ten primary prevention areas with specific steps and links to local resources. For a copy of this booklet, go to [www.publichealth.columbus.gov](http://www.publichealth.columbus.gov) or call (614) 645-1667.

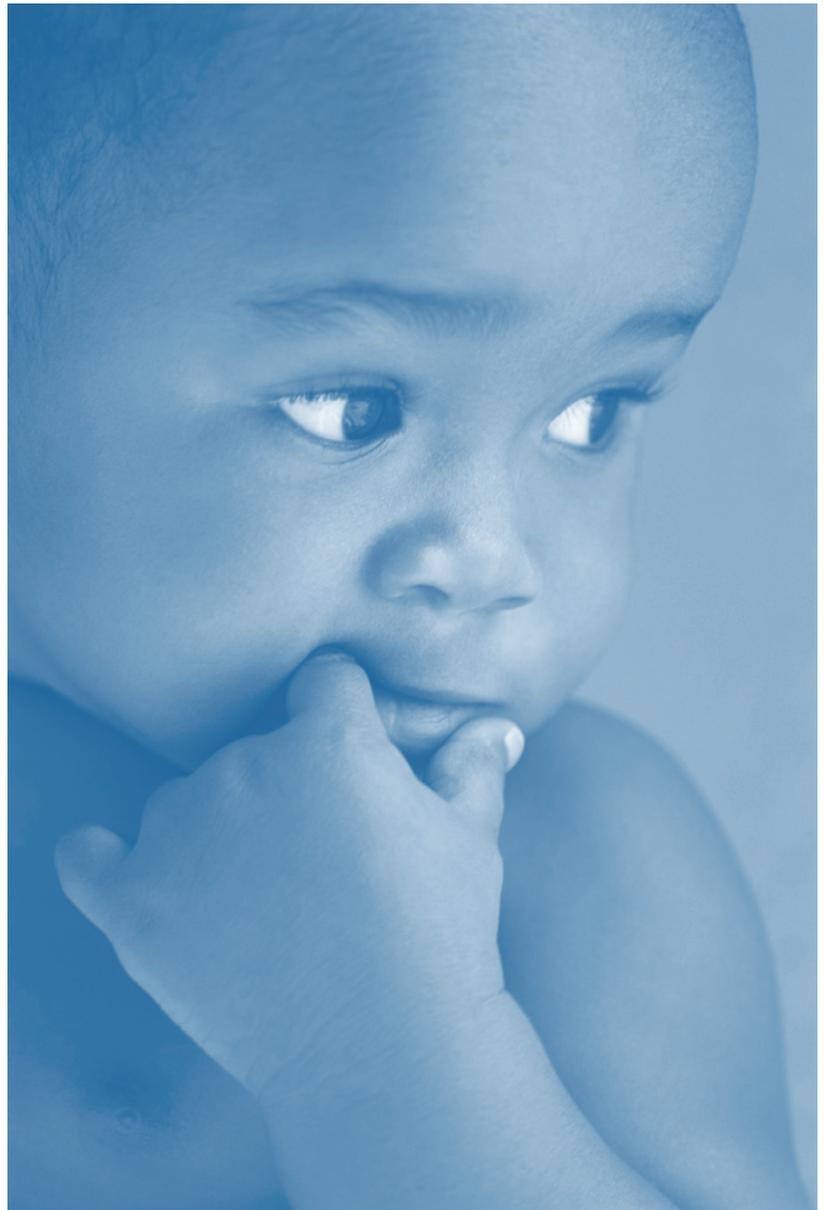
Teresa C. Long, MD, MPH  
Health Commissioner  
Columbus Public Health



## Mission Statement

The mission of the Franklin County Child Fatality Review (FCCFR) Program is to reduce the incidence of preventable child deaths in Franklin County. The FCCFR is an on-going community planning process in which a team of community experts from various systems and agencies convenes to review the circumstances around the deaths of children, under the age of 18, who are residents of Franklin County. The purpose of the review process is to identify common themes and trends surrounding these deaths, and to develop recommendations for future prevention. Columbus Public Health currently convenes the state-mandated Franklin County Child Fatality Review process.

To determine if a death might have been prevented, the FCCFR uses the following definition: A child's death is considered to be preventable if the community (through legislation, education, etc.) or an individual (through reasonable precaution, supervision, or action) could have done that which could have changed the circumstances that led to the death (National Center on Child Fatality Review, 2007).



## Overview of 2005 Deaths

In 2005, there were a total of 205 child deaths in Franklin County (Figure 1). Seventy-three percent (149) of these deaths occurred to children under one year of age. The second most represented age group was children between 15 and 17 years, which accounted for 12% (24) of the deaths (Figure 2). Forty-five percent (92) of the children were black and 57% (116) were male (Figures 3 and 4). These percentages are high compared to the representation of these groups within the general population of Franklin County\*.

The most frequent manner of death was Natural (79.0%, 162), followed in occurrence by Accident (14.1%, 29), Homicide (3.9%, 8), Suicide (2.4%, 4), and Undetermined (0.5%, 1) (Figures 5 and 6). Therefore, 25% (51) of these deaths were due to external injury (Figure 6). Twenty-one percent (43) of these deaths were determined by the FCCFR to be preventable (Figure 7). When compared to previous years, the number of deaths has varied slightly, but the rate has remained about the same (Figure 1).

The top five causes of death for all children were prematurity, other medical condition, motor vehicle accident, cardiovascular condition, and suffocation and strangulation (Table 1). For infants under the age of one, the top causes of death were prematurity, other medical condition, undetermined cause, cardiovascular condition, congenital anomaly, and SIDS (Table 2). For this report, cases will be grouped, according to Death Certificate rulings, by Manner of Death and then further broken down by underlying Cause of Death.

All Child Deaths by Cause	2005 Frequency	2004 Frequency
Prematurity	92	65
Other medical condition	18	38
Motor vehicle or other transport	13	8
Cardiovascular	12	7
Suffocation or strangulation	10	7
Weapon, including body part	8	11
Undetermined external injury	8	1
Congenital anomaly	7	19
Pneumonia	7	1
SIDS	7	19
Poisoning	4	3
Cancer	4	5
Other infection	4	9
Fire, burn, or electrocution	2	5
Drowning	2	4
Other/unspecified external	2	0
Unknown external injury	2	0
Fall or crush	1	2
Malnutrition/dehydration	1	0
Undetermined medical cause	1	2
Neurological	0	2
<b>Total Natural Deaths</b>	<b>205</b>	<b>208**</b>

**Table 1: All Child Deaths by Cause**

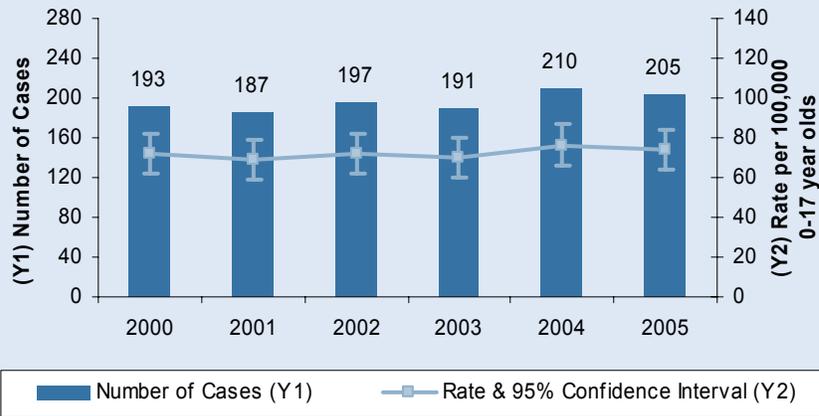
Infant Only Deaths by Cause	2005 Frequency	2004 Frequency
Prematurity	92	64
Other medical condition	9	23
Undetermined	8	0
Cardiovascular	7	6
Congenital anomaly	7	15
SIDS	7	19
Pneumonia	6	1
Suffocation or strangulation	6	3
Other infection	2	6
Unknown external injury	2	0
Undetermined medical cause	1	0
Other/unspecified external injury	1	0
Undetermined external injury	0	1
Weapon, including body part	0	1
<b>Total Natural Deaths</b>	<b>148</b>	<b>139**</b>

**Table 2: All Infant Deaths by Cause**

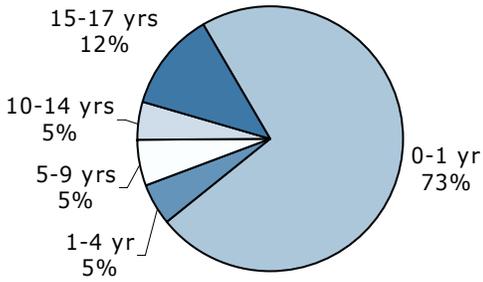
\*According to the U.S. Census Bureau, 23% of children in Franklin County are black and 51% are male (2000).

\*\*In 2004, two cases were not completed and did not include a cause of death. One of the incomplete cases was an infant death.

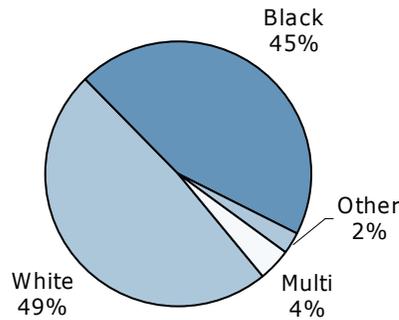
**Figure 1: Frequency and Rate of All Child Deaths 2000-2005**



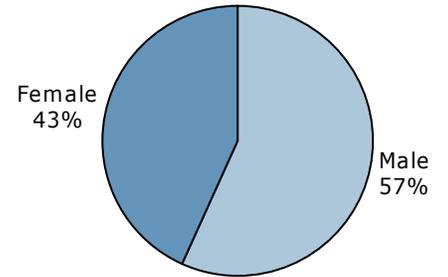
**Figure 2: All Child Deaths by Age**



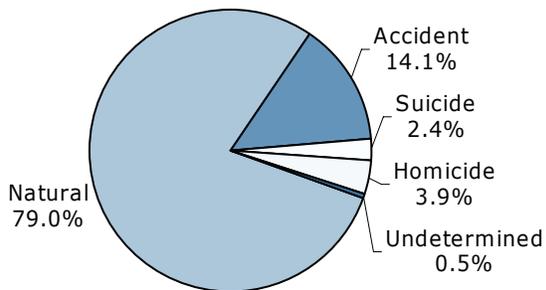
**Figure 3: All Child Deaths by Race**



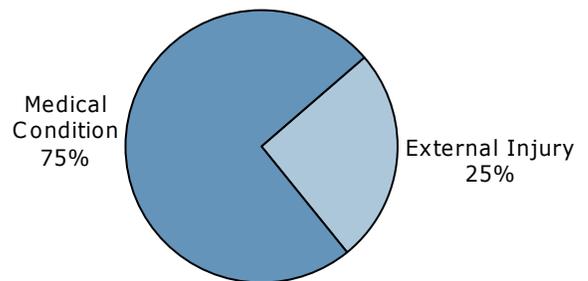
**Figure 4: All Child Deaths by Gender**



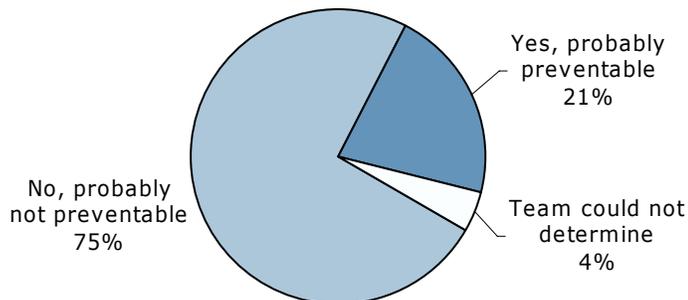
**Figure 5: All Child Deaths by Manner**



**Figure 6: General Cause of All Child Deaths**



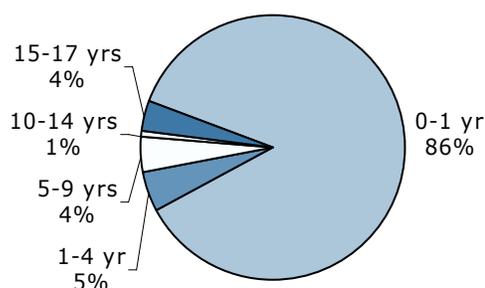
**Figure 7: All Child Deaths by Preventability**



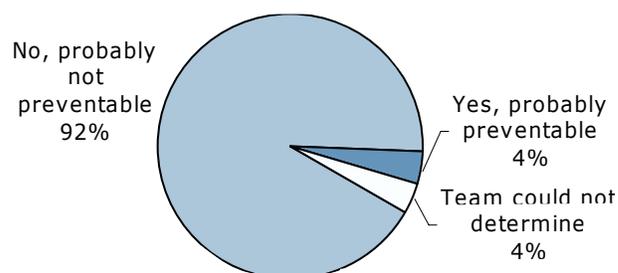
## Manner of Death: Natural

In 2005, there were 162 deaths from a Natural manner (Table 3). Although this number is very similar to the previous year, distribution of cases across Cause of Death categories differs between years. These differences will be further discussed in appropriate sections. Of the Natural deaths, 86% (139) were to children under one year of age (Figure 8). Black children and males accounted for 46% (74) and 54% (87) of deaths, respectively (Figures 9 and 10). These percentages are high compared to the representation of these groups within the general population of Franklin County\*. Of these deaths, the FCCFR determined that 4% (6) might have been prevented (Figure 11). In this report, prematurity and SIDS will be examined more closely than other Natural causes of death because, even though these deaths are not considered preventable, it may be possible to reduce risk with strategies that apply to large populations. Also, due to recent changes in categorization, the inclusion of external injuries within the Natural Deaths will be discussed in the section on infant sleep-related deaths (p.21).

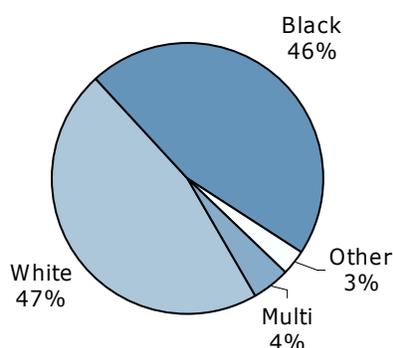
**Figure 8: Natural Deaths by Age**



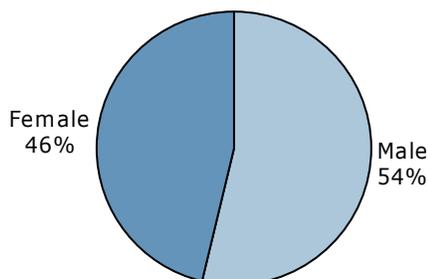
**Figure 11: Natural Deaths by Preventability**



**Figure 9: Natural Deaths by Race**



**Figure 10: Natural Deaths by Gender**



Natural Deaths by Cause	2005 Frequency	2004 Frequency
Total Medical Conditions	153	164
Prematurity	92	65
Other medical condition	18	37
Cardiovascular	12	7
Congenital anomaly	7	19
Pneumonia	7	1
SIDS	7	19
Cancer	4	5
Other infection	4	9
Malnutrition/dehydration	1	0
Undetermined medical cause	1	2
Total External Injuries	9	0
Suffocation & Strangulation	1	0
Undetermined external injury	7	0
Unknown	1	0
<b>Total Natural Deaths</b>	<b>162</b>	<b>164</b>

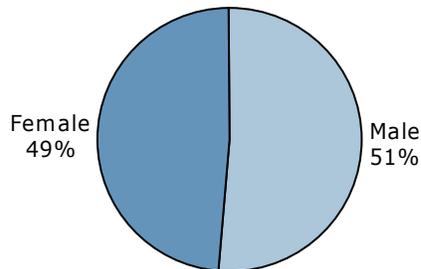
**Table 3: Natural Deaths by Cause**

10 \*According to the U.S. Census Bureau, 23% of children in Franklin County are black and 51% are male (2000).

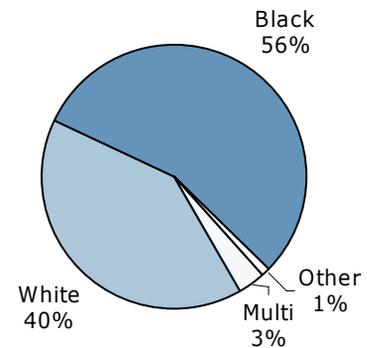
## Cause of Death: Prematurity

In 2005, 57% (92) of the Natural deaths were caused by premature birth, making prematurity the leading cause of death overall. Fifty-one percent of these children were male, and 56% were black (Figures 12 and 13). The number of deaths due to prematurity for black children was high relative to their proportion within the general population\*. While the greatest number of mothers received prenatal care beginning in the second month of pregnancy, with an average of 5.1 visits, these data were missing from birth certificates for over half of these cases (Figure 14). The most frequent gestational age of deaths due to prematurity was 20 weeks, with a range of 17 to 30 weeks (Figure 15). When compared to the previous year, the number of deaths due to prematurity has increased significantly from 65 in 2004. This increase corresponds with an increase in the proportion of all births that are premature, a phenomenon that is true throughout the United States\*\*. Although the causes of premature birth are unknown, it is the consensus among health professionals that the health of the mother prior to pregnancy has a large impact on the outcome.

**Figure 12: Prematurity Deaths by Gender**



**Figure 13: Prematurity Deaths by Race**



### Among Prematurity Deaths reviewed...

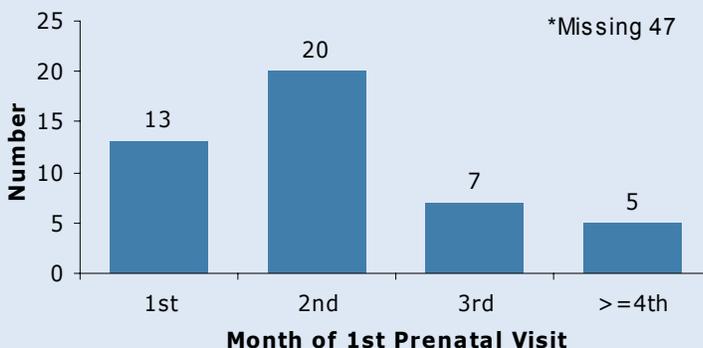
- 41** percent of mothers had medical complications during pregnancy
- 18** percent of the babies were part of a multiple-birth pregnancy
- 14** percent of mothers smoked during pregnancy
- 22** weeks was the average gestational age of the babies
- 5.1** was the average number of prenatal visits before delivery

\*In 2005, 28% of children born in Franklin County were black.

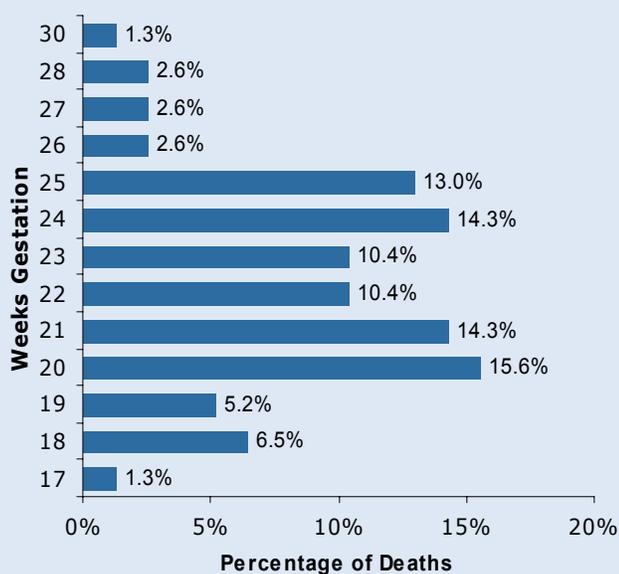
\*\*<http://www.marchofdimess.com/peristats/pdf/lib/195/99.pdf>

Cause of Death: Prematurity, *continued*

**Figure 14: Premature Deaths by First Prenatal Visit**



**Figure 15: Premature Deaths by Gestation**



**Recommendations**

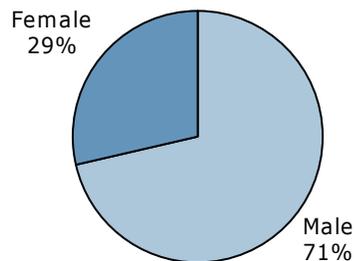
To prevent prematurity, the FCCFR recommends that mothers not smoke while pregnant, and receive preconception care and early prenatal care.

## Cause of Death: Sudden Infant Death Syndrome

In 2005, there were a total of 7 deaths due to Sudden Infant Death Syndrome (SIDS). All of these deaths were to white children less than or equal to 8 months of age. Seventy-one percent of these deaths were to males, a percentage that is high relative to their representation within the population\* (Figure 16). Though all these deaths are not considered preventable, risk factors such as sleep surface, sleep position, and exposure to tobacco smoke can be examined. The majority of these children were placed in a crib or bassinet and were put to sleep on their backs, practices which are recommended for safe sleep. However, a number of these children were exposed to tobacco smoke, which may contribute to a risk for SIDS.

When compared to the 19 SIDS deaths in 2004, a significant decrease in the rate of SIDS seems to have occurred. However, this decrease is likely explained by the strict adherence by the FCCFR to the American Academy of Pediatrics guidelines for ruling a death SIDS. In order for SIDS, a diagnosis of exclusion, to be upheld, a thorough scene investigation, an autopsy, and a review of medical records must reveal no other possible cause of death (AAP, 2001). By following these stricter standards, the FCCFR now excludes cases which might have previously been called SIDS. These cases, however, have contributed to a rise in sleep-related deaths, particularly from suffocation and strangulation, and undetermined external injuries. This will be discussed later in this report.

**Figure 16: SIDS Deaths by Gender**



### Among SIDS Deaths reviewed...

- 43 percent were exposed to secondhand smoke
- 29 percent of the mothers smoked during pregnancy
- 29 percent were found on their stomach at time of death

## Recommendations

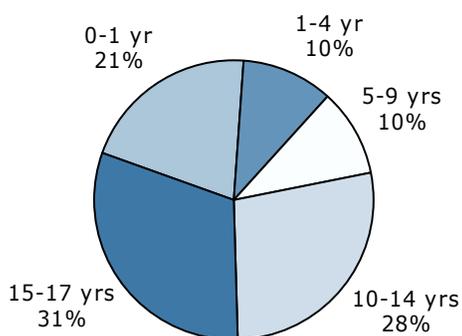
To reduce the risk of SIDS, the FCCFR recommends that parents and caregivers should place their children alone to sleep on their backs, on a firm, safety-approved sleep surface free of clutter or excessive bedding, and should not allow anyone (adult, other child, or animal) to share a sleep surface with their child. Also, mothers should not smoke while pregnant or allow anyone to smoke near their child after birth.

\*According to the U.S. Census Bureau, 51% of children in Franklin County are male (2000).

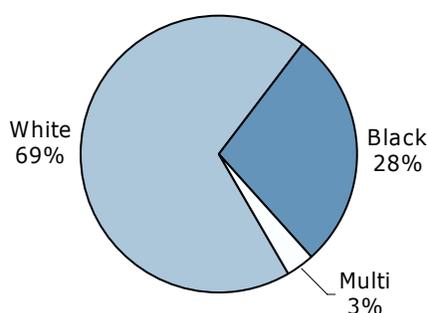
## Manner of Death: Accident

In 2005, 29 deaths were due to accidents. The most common age group, with 31% (9) of these deaths, was 15-17 years old (Figure 17). The majority of these children were white (69%, 20) and male (59%, 17) (Figures 18 and 19). The most frequent cause of death was motor vehicle accident (13), followed by suffocation or strangulation (4), and poisoning (4) (Table 4). Eighty-six percent (25) of these deaths were determined preventable by the FCCFR (Figure 20). When compared with the previous year, 2005 showed a slight increase in number of deaths due to accidents. However, this increase was not statistically significant.

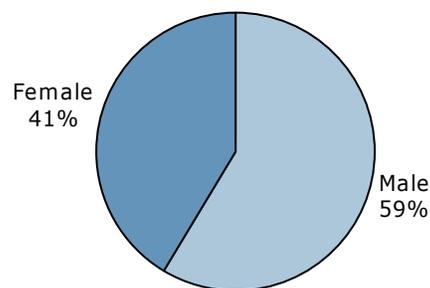
**Figure 17: Accidental Deaths by Age**



**Figure 18: Accidental Deaths by Race**

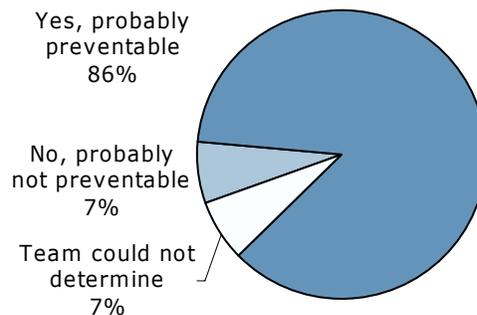


**Figure 19: Accidental Deaths by Gender**



Accidental Deaths by Cause	2005 Frequency	2004 Frequency
Total External Injuries	29	21
Motor vehicle or other transport	13	8
Suffocation or strangulation	4	3
Poisoning	4	1
Fire, burn, or electrocution	2	2
Drowning	2	4
Fall or crush	1	2
Weapons	0	1
Undetermined	1	0
Other	1	0
Unknown	1	0
Total Medical Conditions	0	2
Neurological Seizure Disorder	0	2
<b>Total Accidental Deaths</b>	<b>29</b>	<b>23</b>

**Figure 20: Accidental Deaths by Preventability**

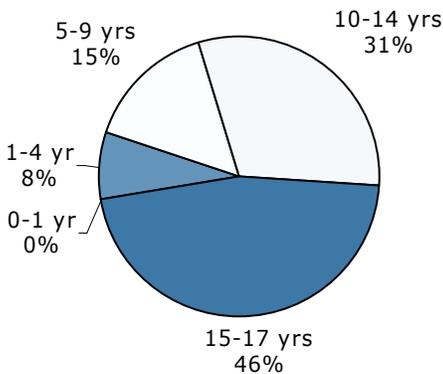


**Table 4: Accidental Deaths by Cause**

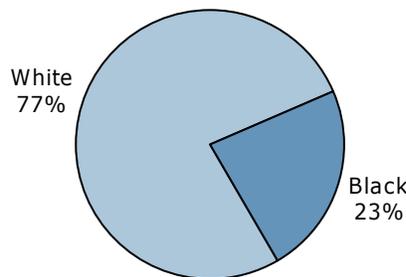
## Cause of Death: Motor Vehicle Accident

In 2005, there were a total of 13 deaths due to motor vehicle accident. The majority of these children (46%, 6) were 15-17 years old (Figure 21). Seventy-seven percent (10) of these deaths were to white children and 54% (7) were to males (Figures 22 and 23). In 62% (8) of motor vehicle accident deaths, the child was a passenger, while 23% (3) were pedestrians, 8% (1) rode a bike, and 8% (1) drove a motorcycle (Figure 24). The most frequently cited contributing factors to these accidents were recklessness and running a stop light, which both occurred in 23% (3) of the cases (Table 5). When examined by protective measures, seven of the eight cases where the child was in a car, seatbelts were present and not used, used incorrectly, or not present. In the cases where a child rode either a motorcycle or a bicycle, a helmet was either use incorrectly, or not at all (Table 6). Although there were fewer deaths due to motor vehicle accidents in 2004 (8), the increase in 2005 is not statistically significant.

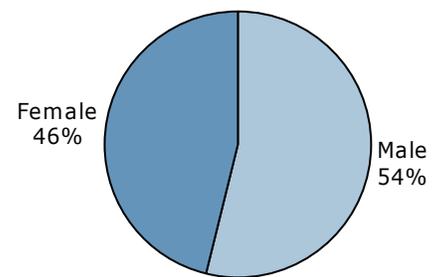
**Figure 21: MVA Deaths by Age**



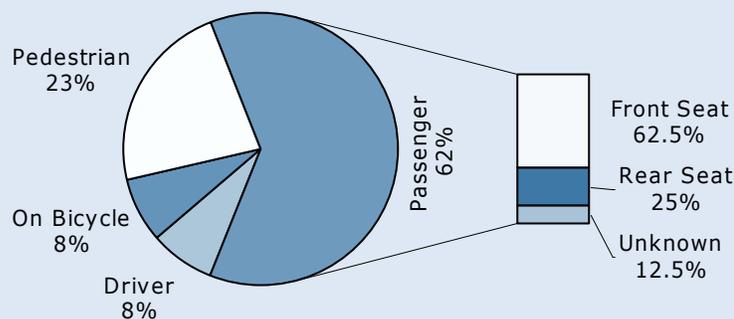
**Figure 22: MVA Deaths by Race**



**Figure 23: MVA Deaths by Gender**



**Figure 24: MVA Deaths by Position of Child**



Cause of Death: Motor Vehicle Accident, *continued*

Contributing Factors to Motor Vehicle Accident Deaths	Number of Times Documented	% of 13 Vehicular deaths
Animal in Road	1	8%
Driver Inexperience	2	15%
Alcohol and/or Drug use	1	8%
Poor Visibility	1	8%
Poor Weather	1	8%
Recklessness	3	23%
Running Stop Light	3	23%
Speeding over Limit	1	8%

**Table 5: Contributing Factors to MVA Deaths**

Among...	Protective Measure Documentation	Number of Times Documented/Applicable Situation
Eight child deaths riding in a car as passengers	Air Bag Measures Blank or Unknown	8/8
	Lap and Shoulder Belt Present—Not used	3/8
	Lap and Shoulder Belt Present—Used Incorrectly	3/8
	Lap and Shoulder Belt Needed—Not Present	1/8
	Lap and Shoulder Belt Measures Blank or Unknown	1/8
	Front facing Child Seat Present—Used Correctly	1/1
One child death riding a Motorcycle	Helmet Present—Used Incorrectly	1/1
One child death riding a bicycle	Helmet Needed—Not Present	1/1
Three child pedestrian deaths	Helmet Needed while Skateboarding/ Rollerblading—Not Present	1/1
	Reflective clothing needed—Not Present	1/3

**Table 6: Protective Measures Used in MVA Deaths**

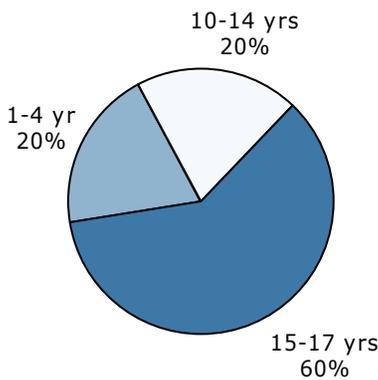
*Recommendations*

To prevent motor vehicle accidents, the FCCFR recommends community education about safe driving including avoidance of deer, and the potential of view obstruction due to objects hanging from a rearview mirror. Also, persons should not drink alcohol, or use drugs and drive and traffic signs should be obeyed at all times. The FCCFR also recommends community education about helmet use and access to free or low cost bike helmets.

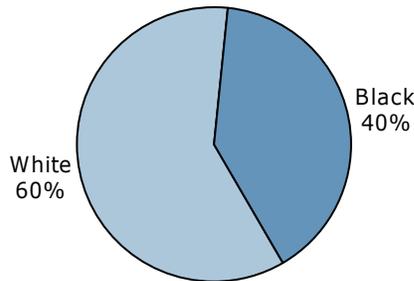
## Cause of Death: Poisoning

In 2004 and 2005, there were a total of five deaths due to poisoning\*. Sixty percent (3) of the children dying from poisoning were 15-17 years of age and white, and 80% (4) were male (Figures 25-27). The majority of these poisonings (60%, 3) were caused by street drugs, and 20% (1) each by methadone and carbon monoxide (Figure 28). Sixty percent (3) were believed to be accidental overdoses.

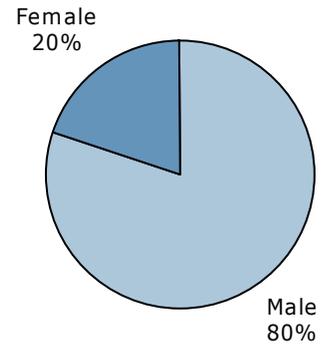
**Figure 25: Poisoning Deaths by Age**



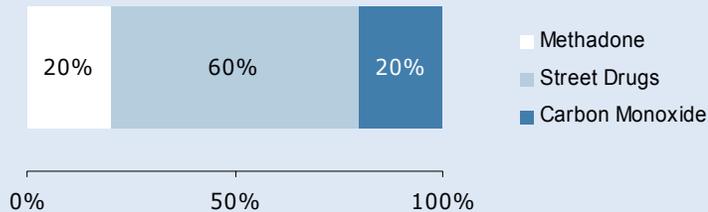
**Figure 26: Poisoning Deaths by Race**



**Figure 27: Poisoning Deaths by Gender**



**Figure 28: Poisoning Deaths by Type of Poisoning**



## Recommendations

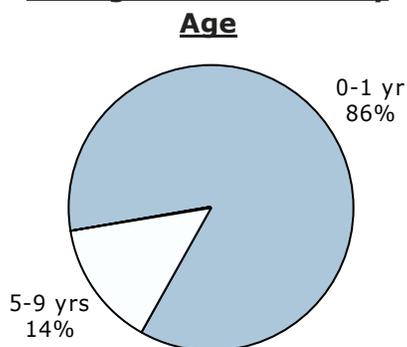
To avoid poisoning, the FCCFR recommends that parents keep medication out of reach of children and educate their children about the dangers of improper use.

\*For this cause of death, numbers were too small to be looked at by individual year. Therefore, 2004 and 2005 data have been combined to create a better picture of the characteristics of this group of deaths.

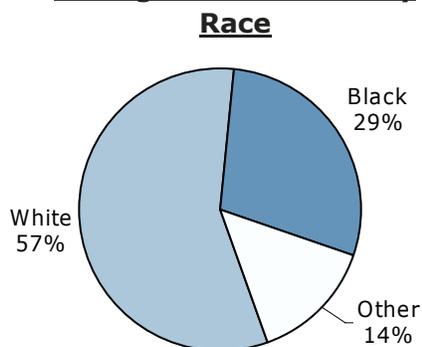
## Cause of Death: Suffocation or Strangulation

A total of seven deaths due to suffocation and strangulation occurred in 2004 and 2005\*. Eighty-six percent (6) of these children were under one year of age and 57% (4) of these children were white and 57% (4) were female (Figures 29-31). The majority of these children (71%, 5) were suffocated by bedding or overlay\*\* (Figure 32). None of these children were known to suffer from seizures or sleep apnea.

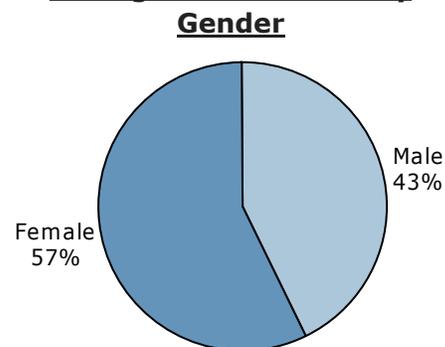
**Figure 29: Suffocation/Strangulation Deaths by Age**



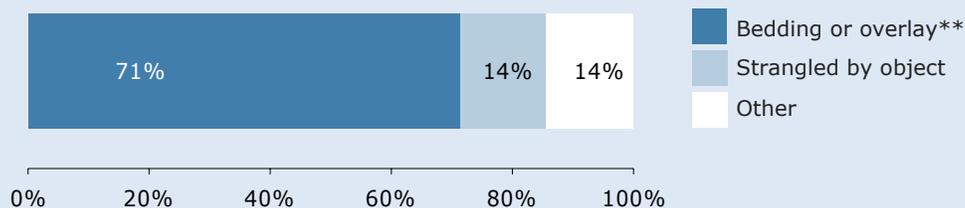
**Figure 30: Suffocation/Strangulation Deaths by Race**



**Figure 31: Suffocation/Strangulation Deaths by Gender**



**Figure 32: Suffocation Deaths by Action Causing Suffocation**



## Recommendations

To prevent suffocation and strangulation, the FCCFR recommends that parents and caregivers should place their children to sleep on their backs, on a firm, safety-approved sleep surface free of clutter or excessive bedding, and should not share a sleep surface with their child.

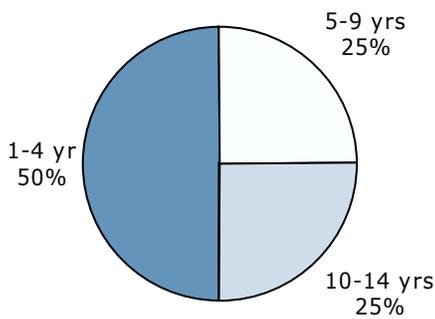
\*For this cause of death, numbers were too small to be looked at by individual year. Therefore, 2004 and 2005 data have been combined to create a better picture of the characteristics of this group of deaths.

\*\*Overlay is when a child is rolled over upon and suffocated by an adult, another child, or animal, that shares the same sleeping surface.

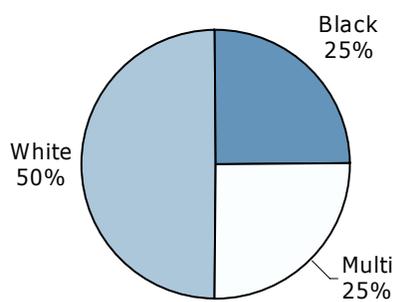
## Cause of Death: Fire

There were a total of four deaths due to fire\*. Fifty percent (2) of these children were 1-4 years of age and white, while 75% (3) were male (Figures 33-35). Fire detectors and sprinklers were not present in three of these cases, and were unknown in the other. Two of these fires occurred at rental properties, with one unknown. Also, in the two cases where source of ignition was known, both were caused by problems with electrical wiring.

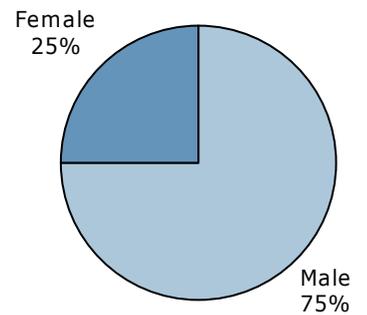
**Figure 33: Fire Deaths by Age**



**Figure 34: Fire Deaths by Race**



**Figure 35: Fire Deaths by Gender**



## Recommendations

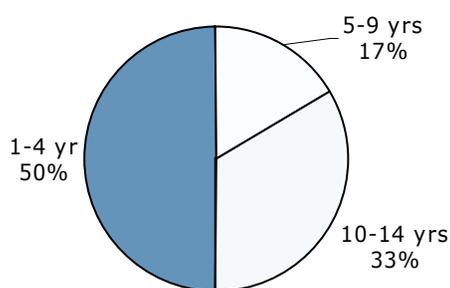
To prevent deaths due to fire, the FCCFR recommends community education on fire safety, escape plans, and availability of smoke detectors at reduced cost. The FCCFR also recommends that a requirement be made for smoke detectors in rental homes.

\*For this cause of death, numbers were too small to be looked at by individual year. Therefore, 2004 and 2005 data have been combined to create a better picture of the characteristics of this group of deaths.

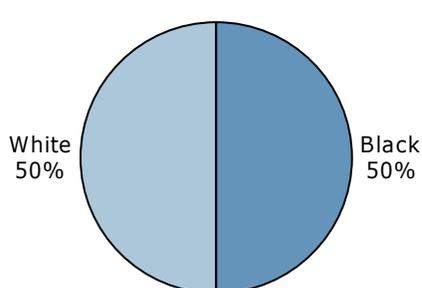
## Cause of Death: Drowning

In 2004 and 2005, there were a total of six drownings\*. Half (3) of these cases occurred to children 1-4 years of age, half (3) were white, and 67% (4) were male (Figures 36-38). Drowning locations were equally divided with 33% (2) occurring in open water, 33% (2) occurring in a pool, hot tub, or spa, and 33% (2) occurring in a bath tub (Figure 39). Also, 33% (2) of children were playing near the water, 33% (2) were bathing, and 17% (1) were swimming (Figure 40). In all of these cases, the child was not wearing a personal flotation device, or using a bathing aid. In three of the four drownings that did not occur in a bath, the child was unable to swim and there were no barriers to prevent access to the water (Table 7).

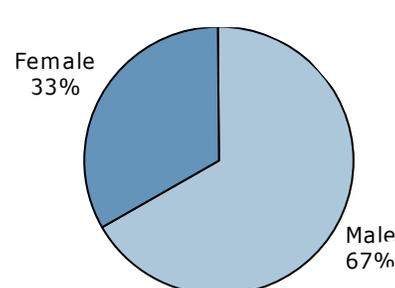
**Figure 36: Drowning Deaths by Age**



**Figure 37: Drowning Deaths by Race**



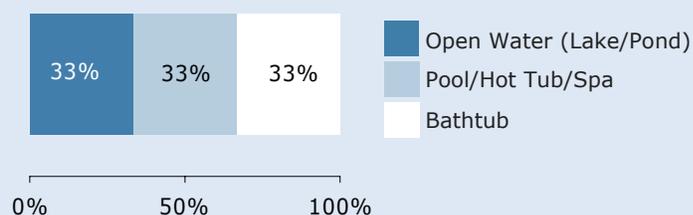
**Figure 38: Drowning Deaths by Gender**



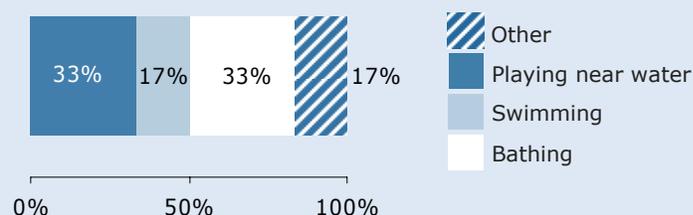
Among...	Protective Measure Documentation	Number of Times Documented/ Applicable Situation
Four drownings in Open Water and Pools/Hot Tub/Spa	NO personal floatation device worn	4/4
	Child NOT able to swim or Unknown	3/4
	NO barriers/layers of protection to prevent access to water	3/4
Two drownings in a bathtub	Child NOT in a bathing aid	2/2

**Table 7: Protective Measures Used in Drowning Deaths**

**Figure 39: Drowning Deaths by Location**



**Figure 40: Drowning Deaths by Activity Before Drowning**



## Recommendations

To prevent drowning, the FCCFR recommends that parents and caregivers keep constant, undistracted watch over children whenever they are near water. Also, caution should be used when swimming in areas where no lifeguard is present.

\*For this cause of death, numbers were too small to be looked at by individual year. Therefore, 2004 and 2005 data have been combined to create a better picture of the characteristics of this group of deaths.

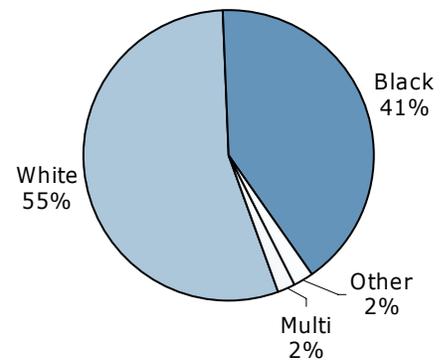
## A Closer Look at Infant Sleep-Related Deaths

Due to the large number of infant sleep-related deaths, including SIDS, suffocation in bedding, and overlay, this category of deaths will be examined more closely. In 2004 and 2005, there are a total of 49 sleep-related infant deaths. Fifty-five percent (27) of these children were white, 59% (29) were male, and 54% (26) of these deaths were not considered preventable by the FCCFR (Figures 41-43). Also, the breakdown of deaths by manner, general cause, and specific cause seen in the table below highlights the FCCFR’s change in approach to SIDS rulings, as deaths due to external injury would not otherwise be included within Natural and Undetermined manners of death (Table 8). This change in approach was previously addressed in the section on SIDS (p.13).

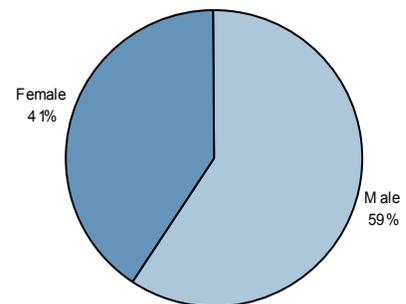
Infant Sleep-Related Deaths by Manner, General Cause, Specific Cause	2005 Frequency	2004 Frequency	2004-2005 Total
<b>Accidental</b>	<b>6</b>	<b>2</b>	<b>8</b>
External Injury	6	2	8
<i>Suffocation or Strangulation</i>	4	2	6
<i>Undetermined/Unknown</i>	2	-	2
<b>Natural</b>	<b>18</b>	<b>20</b>	<b>38</b>
External Injury	9	-	9
<i>Suffocation or Strangulation</i>	1	-	1
<i>Undetermined/Unknown</i>	8	-	8
Medical Condition	9	20	29
<i>SIDS</i>	7	19	26
<i>Other (SUDs*)</i>	1	-	1
<i>Other (infection)</i>	-	1	1
<i>Undetermined/Unknown</i>	1	-	1
<b>Unknown/Undetermined</b>	<b>1</b>	<b>2</b>	<b>3</b>
External Injury	1	1	2
<i>Suffocation or Strangulation</i>	1	-	1
<i>Undetermined</i>	-	1	1
Medical Condition	-	1	1
<i>Other</i>	-	1	1
<b>Total Sleep-Related Infant Deaths</b>	<b>25</b>	<b>24</b>	<b>49</b>

**Table 8: Infant Sleep-Related Deaths by Manner, General Cause, and Specific Cause**

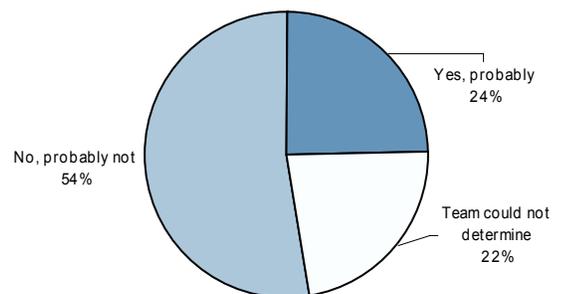
**Figure 41: All Infant Sleep-Related Deaths by Race, 2004-2005**



**Figure 42: All Infant Sleep-Related Deaths by Gender, 2004-2005**



**Figure 43: All Infant Sleep-Related Deaths by Preventability, 2004-2005**

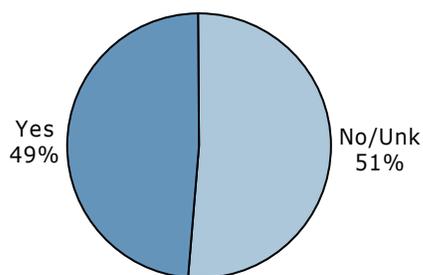


\*Sudden, Unexplained Deaths

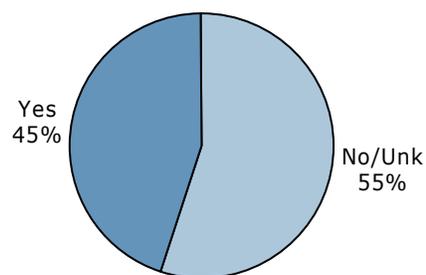
## A Closer Look at Infant Sleep-Related Deaths, *continued*

In order for an infant’s sleep environment to be considered safe, the child must be placed to sleep on his or her back in a firm, safety-approved crib or bassinet that is free from excessive bedding or clutter. This surface also should not be shared with an adult, another child, or an animal. The infant should be dressed lightly to avoid overheating and should not be exposed to tobacco smoke. When data for all sleep related deaths is analyzed for risk factors, it can be seen that nearly half (49%, 24) of these children were known to have been exposed to tobacco smoke (Figure 44). Forty-five percent (22) were sharing a sleeping surface at time of death, only 36% (17) were found on their backs, and only 24% (12) slept in a crib or bassinet (Figures 45-47). These findings highlight the need for education on infant safe sleep.

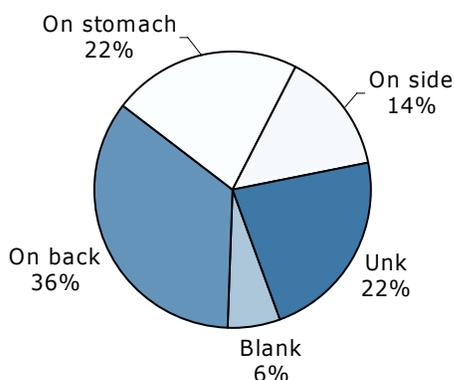
**Figure 44: All Infant Sleep-Related Deaths by Any Cigarette Exposure, 2004-2005**



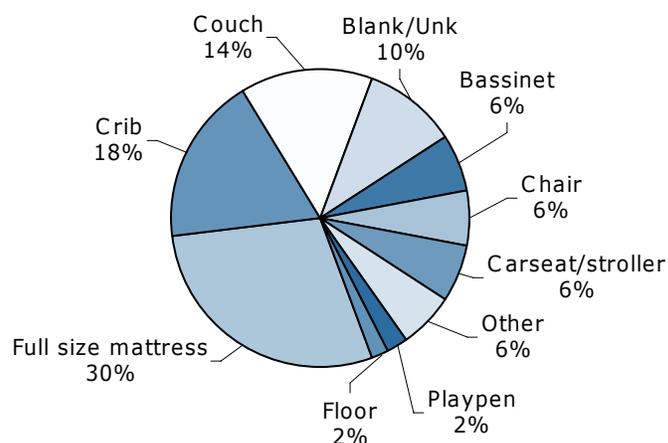
**Figure 45: All Infant Sleep-Related Deaths by Any Bed Sharing, 2004-2005**



**Figure 46: All Infant Sleep-Related Deaths by Sleep Position Found, 2004-2005**



**Figure 47: All Infant Sleep-Related Deaths by Sleep Place Found, 2004-2005**

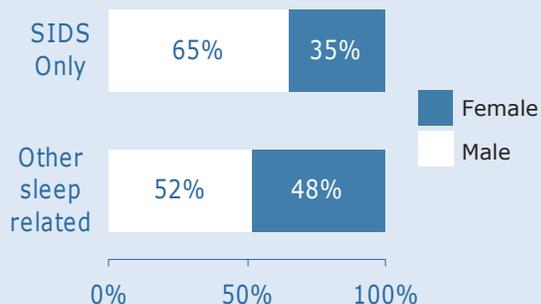


## SIDS vs. Other Infant Sleep-Related Deaths

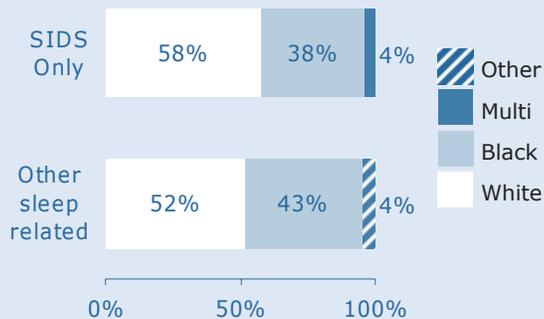
If these deaths are separated into two groups, SIDS and all other sleep-related deaths, clear differences in demographic characteristics and risk factors can be seen. While a greater percentage of SIDS deaths were male, there is nearly an equal representation between males and females in other sleep-related deaths (Figure 48). There appears to be no difference in distribution among races between SIDS and other sleep-related deaths (Figure 49). As would be expected, other sleep-related deaths were far more likely to be found preventable by the FCCFR (Figure 50). The higher percentage of SIDS deaths exposed to tobacco smoke illustrates the understanding that exposure to tobacco smoke may increase the chance for SIDS (Figure 51). Also, children who died of other sleep-related deaths were less likely to be found on their backs, were more likely to be sharing a sleep surface at time of death, and were more likely to have been placed to sleep on a surface that is considered unsafe (Figure 52-54).

As more data continues to be collected, a better understanding of this category of deaths will be gained.

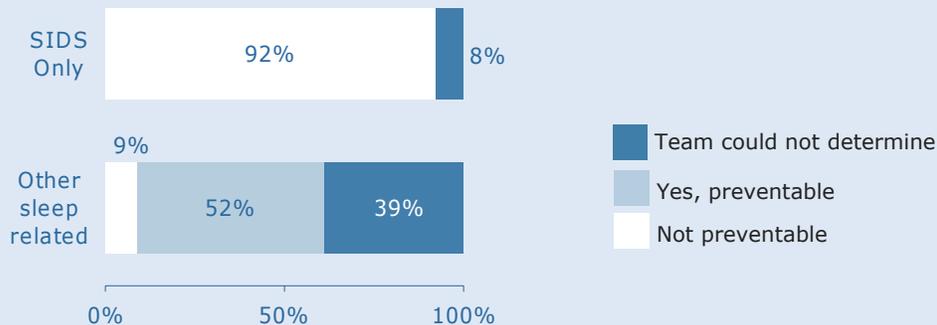
**Figure 48: SIDS and Other Sleep-Related Deaths by Gender, 2004-2005**



**Figure 49: SIDS and Other Sleep-Related Deaths by Race, 2004-2005**

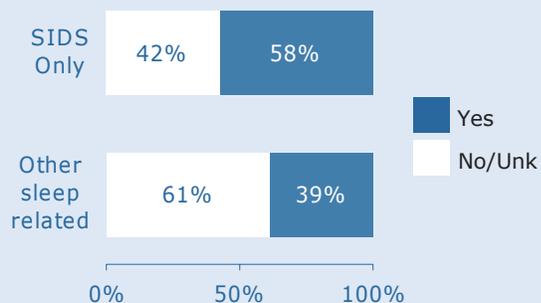


**Figure 50: SIDS and Other Sleep-Related Deaths by Preventability, 2004-2005**

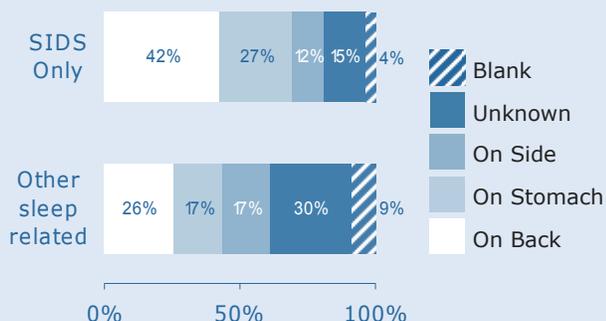


SIDS vs. Other Infant Sleep-Related Deaths, *continued*

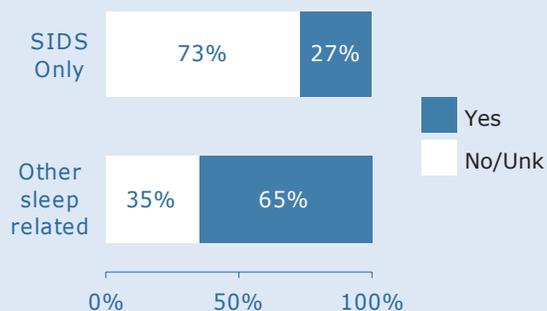
**Figure 51: SIDS and Other Sleep-Related Deaths by Any Cigarette Exposure, 2004-2005**



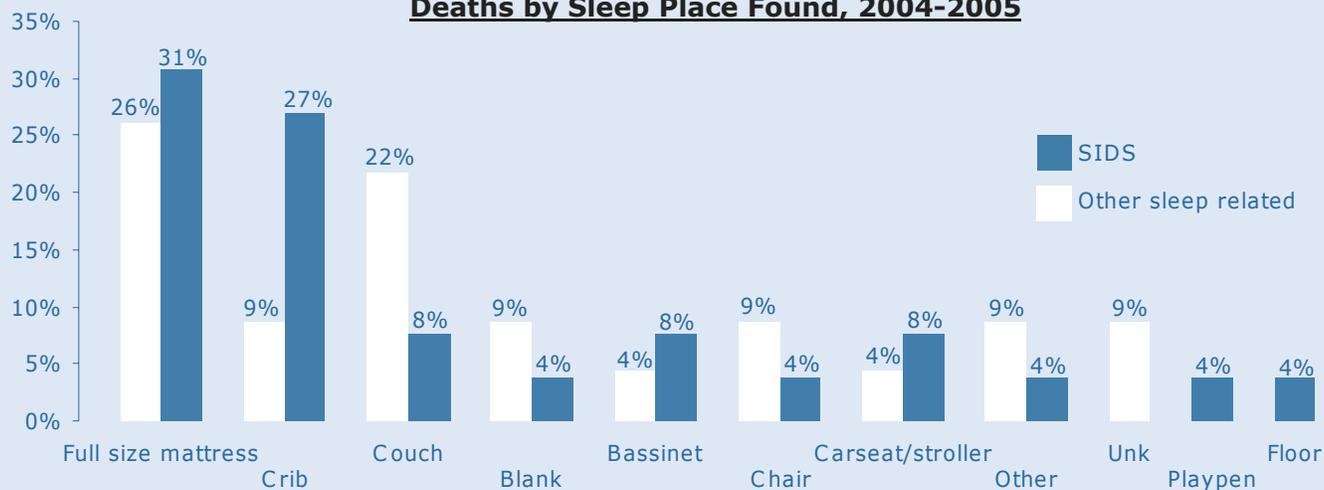
**Figure 52: SIDS and Other Sleep-Related Deaths by Sleep Position Found, 2004-2005**



**Figure 53: SIDS and Other Sleep-Related Deaths by Any Bed Sharing, 2004-2005**



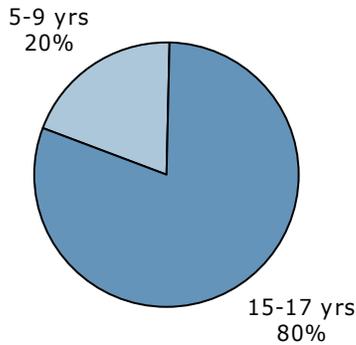
**Figure 54: SIDS and Other Sleep-Related Deaths by Sleep Place Found, 2004-2005**



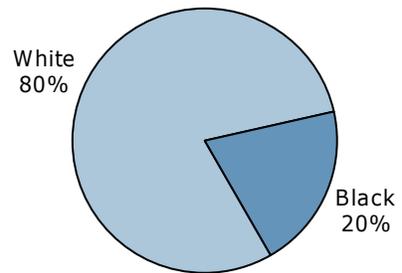
## Manner of Death: Suicide

In 2005, there were a total of five suicides. Eighty percent (4) were 15-17 years of age and white (Figures 55 and 56). All of these deaths occurred in males and were considered preventable by the FCCFR. Eighty percent (4) were caused by suffocation or strangulation (Table 9).

**Figure 55: Suicide Deaths by Age**



**Figure 56: Suicide Deaths by**



Suicide Deaths by Cause	2005 Frequency	2004 Frequency
Suffocation or Strangulation	4	3
Weapons	1	1
Poisoning	0	1
<b>Total Suicides</b>	<b>5</b>	<b>5</b>

**Table 9: Suicide Deaths by Cause**

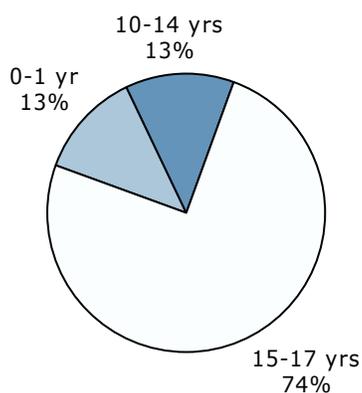
### Recommendations

To prevent suicides, the FCCFR recommends that children be educated in school about warning signs and how to get help.

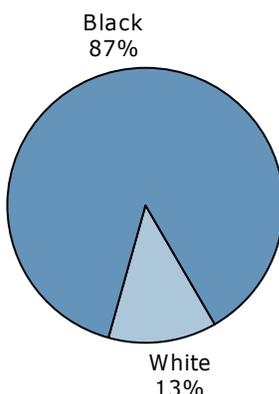
## Manner of Death: Homicide

A total of eight deaths due to homicide occurred in 2005. Seventy-four percent (6) of these children were 15-17 years of age, 87% (7) were black, and 59% (5) were male (Figures 57-59). Weapons, including body parts, caused 87% (7) of these deaths (Table 10). Eighty-seven percent (7) were determined preventable by the FCCFR (Figure 60). When compared to 2004, the number of homicides has decreased. However, this decrease is not statistically significant.

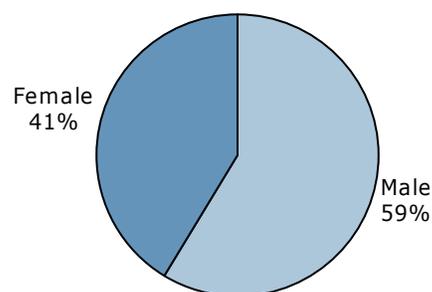
**Figure 57: Homicide Deaths by Age**



**Figure 58: Homicide Deaths by Race**



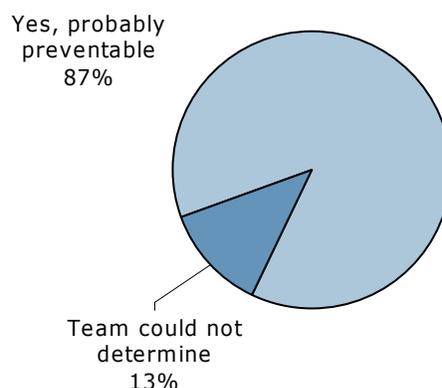
**Figure 59: Homicide Deaths by Gender**



Homicide Deaths by	2005	2004
Weapon, including body part	7	9
Fire, burn, or electrocution	0	3
Suffocation or strangulation	0	1
Other	1	0
<b>Total Homicides</b>	<b>8</b>	<b>13</b>

**Table 10: Homicide Deaths by Cause**

**Figure 60: Homicide Deaths by Preventability**



### Recommendations

To prevent homicides, the FCCFR recommends stricter gun control laws including stiffer penalties for weapons charges and community education about the danger of firing guns into the sky within city limits. The FCCFR also recommends that nurses educate fathers about shaken baby syndrome.

## Additional Recommendations

In response to other significant cases reviewed in 2005, the FCCFR also recommends the following:

1. Availability of affordable childcare to ensure that children's safety is not compromised due to care by unqualified individuals.
2. A greater availability of appropriate facilities for children who need them, so that a child needing care for mental illness can be consistently treated and safely detained when necessary.
3. Development of a protocol involving more aggressive attempts to make contact with parents who are uncooperative with Children Services, so that the safety of children can be guaranteed.
4. Development of a protocol for greater inter-agency communication and sharing of information, to ensure that professionals who have contact with a child have the maximum amount of information available when determining a course of action.
5. Increased follow-up by Children Services on their referrals and recommendations to make sure that linkages to services occur.
6. Children Services should be given the authority to require actions of a non-custodial caregiver when those actions might prevent harm to the child.
7. Development of a standard protocol for autopsy rulings regarding manner and cause of death, for Sudden, Unexplained Infant Deaths, so that consistent data on infant sleep-related deaths might be collected.

## Prevention

Since its ultimate goal is to prevent future child deaths, the FCCFR works to develop prevention strategies based on its recommendations. The following is information about strategies that have been implemented since the release of the last report:

### *Top 10 Tips for Healthier, Safer Children*

Based on the information collected through the review of all the child deaths in Franklin County, the FCCFR has identified important threats to child health and safety. Since many parents may not be aware of these issues, the FCCFR has developed information on the top ten of these threats in the form of tips. These tips have been compiled in a booklet, called the *Top 10 Tips for Healthier, Safer Children*, along with information about why each tip is important and additional community resources. The FCCFR hopes this booklet will help educate parents so that they are able to anticipate these threats and prevent them. To disseminate this information, forty-thousand copies of the booklet were produced, in three languages, and are currently being distributed to parents through many health-based venues throughout Franklin County, including area hospitals, WIC offices, and Women's Health Clinics. A full text of the *Top 10 Tips for Healthier, Safer Children* can be found online at [http://www.publichealth.columbus.gov/resources/Community\\_health\\_data.asp](http://www.publichealth.columbus.gov/resources/Community_health_data.asp) under the heading "Injury."

### *Sudden, Unexplained Infant Death Investigation Protocol*

A need has long been recognized by the FCCFR for the use of a standard protocol for the investigation of Sudden, Unexplained Infant Deaths (SUID), including SIDS and other infant sleep-related deaths. To address this need, the FCCFR has worked with the Columbus Police Department, other investigating agencies including the Franklin County Coroner's Office and the Columbus Fire Department, the Ohio Department of Health, and the Cuyahoga County Coroner's Office to adopt and train investigators in a protocol designed by the Centers for Disease Control and Prevention (CDC). As stated by the CDC, the utilization of this protocol, including a data collection form, is important because: 1) it contains 25 questions that medical examiners and coroners should ask before beginning an autopsy, 2) it guides investigators through the steps involved in investigation, 3) it allows investigators to document their findings easily and consistently, 4) it improves classification of SIDS and other SUIDs by standardizing data collection, and 5) it produces information that researchers can use to recognize new health threats and risk factors for infant death so that future deaths can be prevented.

### *Infant Safe Sleep and SIDS Risk Reduction Task Force*

Developed as a result of recommendations by the FCCFR, the goal of the Infant Safe Sleep and SIDS Risk Reduction Task Force is to reduce infant sleep-related deaths by promoting safe sleep and SIDS risk reduction techniques, and educating healthcare professionals about safe sleep environments. Understanding that safe sleep practice is strongly influenced by nurse modeling and verbal instruction, the task force developed a standardized education component for use in hospitals. Specific activities include assessing current hospital practice and policies regarding safe sleep, developing a hospital-based education component addressing safe sleep, educating hospital staff regarding safe sleep through implementation of the educational component, and evaluating hospital practice and policies post intervention. Preliminary post intervention data indicate program success as the percentage of babies being placed on their backs to sleep in hospitals has increased dramatically, and the percentage of hospital cribs with toys and excessive blankets has decreased.

The work of the Task Force has been promoted nationally at the Healthy Start grantee meeting and the CityMatCH maternal and child health conference, at which a poster highlighting the initiative was recognized with an award for “Science Translated to Action and Results.” The task force has also secured funding from the CJ Foundation for SIDS to host a community forum on infant safe sleep and SIDS risk reduction in the spring of 2008.



## Technical Notes and Data

### *Data*

Data for this report represent fatalities to children 17 years of age and younger, residing in Franklin County, Ohio. The majority of this report includes information from child deaths occurring in 2005 and reviewed by the Franklin County Child Fatality Review (FCCFR) Committee in 2006. At the time of the report analysis, there were a total of 205 child death reviews in the registry, with 204 fully completed by the FCCFR Committee.

According to the Ohio Department of Health Vital Statistics and statewide Child Fatality Review, 206 total deaths occurred among persons seventeen years of age or younger in 2005, thus the 204 fully completed cases reviewed from 2005 represent 99% of all deaths seventeen years old and younger residing in Franklin County for the same time period. Information from the non-completed case, such as demographics, were used in the general aggregate analysis, but not in the cause specific analysis.

Also, starting with child deaths in 2004, a new registry information system was used to collect CFR data. Along with the new registry system, the data collection forms, type of information, and the coding format of the information collected have been modified. Thus, at the time of publication, differences between the new registry system and the old registry system hindered the ability to compare 2005 data with previous years' data. As a crude comparison, Table 11 shows 2004 and 2005 cause of death data translated into the cause of death categories used in the old system.

### *Frequencies and Percentages*

Although the purpose of this annual report is an account of child deaths occurring in 2005, in some situations aggregating years (2004 and 2005) was done to help strengthen the frequencies and percentages. The year(s) used for frequencies and percentage calculations are noted within the text and in chart headings. Also, in certain sections, 2004 frequencies are shown for reference, although caution is advised when trying to compare frequencies, percentages and rates using small numbers.

### *Rates*

The CFR rates by year presented in this report are calculated by dividing each year's frequency of Franklin County CFR deaths by the appropriate 2000-2005 National Center for Health Statistics Population Bridged file estimates of 0-17 year olds, and multiplying this figure by 100,000 to achieve the rate per 100,000 population.

Note: Rates are subject to chance variation. The variation of the rate is directly related to the number of events used to calculate the rate. The smaller the number of events used to calculate the rate, the higher the variability of the rate. Rates based on unusually small numbers of events over a specified time should be interpreted cautiously.

**Table 11: Frequency and Percentage of Child Fatality Reviews by Cause of Death, 2000-2005\*, Franklin County, Ohio**

Primary Cause of Death	2000	% of Total	2001	% of Total	2002	% of Total	2003	% of Total	2004*	% of Total	2005*	% of Total
Natural Death to Child Age >1	25	13.0	28	15.0	28	14.2	24	12.6	33	15.7	31	15.1
Natural Death to Child Age 0-1 Year - No SIDS	117	60.6	118	63.1	110	55.8	113	59.2	115	54.8	124	60.5
SIDS	16	8.3	8	4.3	18	9.1	15	7.9	19	9.0	7	3.4
Child Abuse and Neglect	2	1.0	5	2.7	5	2.5	2	1.0	**		**	
Vehicular	4	2.1	13	7.0	14	7.1	7	3.7	8	3.8	13	6.3
Fire and Burn	8	4.1	2	1.1	2	1.0	6	3.1	4***	1.9	2***	1.0
Drowning and Submersion	5	2.6	2	1.1	4	2.0	4	2.1	4	1.9	2	1.0
Falls	1	0.5	0	0.0	0	0.0	0	0.0	2	1.0	1	0.5
Poisoning	2	1.0	0	0.0	2	1.0	1	0.5	3	1.4	4	1.9
Electrocution	0	0.0	0	0.0	0	0.0	2	1.0	1***	0.5	0***	0.0
Firearms and Weapons	5	2.6	3	1.6	5	2.5	12	6.3	11	5.2	8	3.9
Suffocation and Strangulation	6	3.1	5	2.7	2	1.0	0	0.0	7	3.3	10	4.9
Any Other Cause	2	1.0	3	1.6	7	3.6	5	2.6	3	1.4	3	1.5
<b>Total Number</b>	<b>193</b>		<b>187</b>		<b>197</b>		<b>191</b>		<b>210</b>		<b>205</b>	

\*A new registry system with new variables and coding changes is being used to capture child fatality reviews from 2004 and on. Differences between the old and new system include the way cause of death is captured in the system. Previously, each cause of death listed above was a separate yes/no field, data for the new registry system has cause of death broken down into categories within two fields based on whether it was an external injury cause or medical condition. For continuity, the 2004 and 2005 data were categorized above based on the contents of these two fields to match, as closely as possible, the categories for the old system.

\*\*Child Abuse and Neglect is not included in the Official Manner and Primary Cause of Death section and fields of the new registry. It is located in a section entitled Acts of Omission and Commission and is not exclusive of causes listed in Table 11 (could have been assigned cause above and also have indication of child abuse/neglect); thus causes above may include Child Abuse and Neglect cases.

\*\*\*Electrocution in 2004 and 2005 is not included in the Official Manner and Primary Cause of Death section and fields (external injury cause, medical condition cause fields), it is located in fields in a section entitled Fire, Burn or Electrocution. There were a total of 5 cases coded as Fire and Burn in the external injury cause field in 2004 and 2 cases in 2005. In 2004, the fire incident field in the Fire, Burn or Electrocution section indicates 5 cases, one coded as electrocution, while the other 4 coded as fire. In 2005, there were no cases coded as electrocution in the fire incident field.



City of Columbus

Mayor Michael B. Coleman