CHILD FATALITY REVIEW

ANNUAL REPORT

2010 DEATHS

STARK COUNTY, OHIO

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Purpose of Child Fatality Review

In 2000, legislation was enacted that required every county in Ohio to create a Child Fatality Review Board to review the deaths of all children age 17 and younger. The ultimate purpose of the Child Fatality Review Board is to decrease the incidence of preventable child deaths by:

- Promoting cooperation, collaboration, and communication between all groups, professions, agencies, and entities that serve families and children.
- Maintaining a comprehensive database of all infant and child deaths that occur in Stark County in order to develop an understanding of the causes and incidence of those deaths.
- Making recommendations to local agencies for the development of new programs and changes to current programs that will help to prevent infant and child deaths.
- Advising the Ohio Department of Health of aggregate data, trends, and patterns concerning child deaths.

Stark County Child Fatality Review Board Members

Board Chair:
Kirkland Norris, MPH
Health Commissioner
Stark County Health Department

James Adams, MPH
Health Commissioner
Canton City Health Department

Maureen Ahmann, DO
Medical Director
Stark County Health Department

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Executive Director
Mental Health and Recovery Services Board of Stark County

Julie Barnes, M.Ed., LSW
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Emily Caniford, RN , MSN
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Stark County Health Department

Raymond Harple
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Jack Liberator, RN
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Mercy Medical Center

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Plain Township Fire Department

Tim Swanson
Sheriff
Stark County Sheriff's Office

Reich Watterson, MD
Retired Pediatrician

Stark County Health Department
Staff Assistance:
Christina Gruber, MS, BSN, RN
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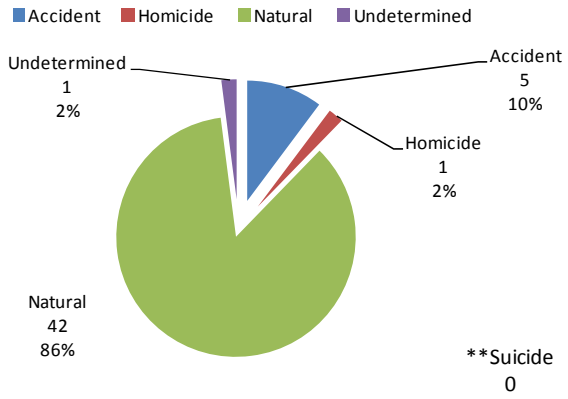
Summary of 2010 Deaths

In 2010 there were a total of 49 deaths in children age 17 and younger in Stark County, Ohio residents. These 49 deaths are steady from the total number of deaths in 2009 (48 deaths).

In 2010:

- 85.7% (42 of 49 deaths) were due to natural causes
- 51.0% (25 of 49 deaths) occurred in males
- 65.3% (32 of 49 deaths) occurred in white children
- 26.5% (13 of 49 deaths) occurred in black children
- 79.6% (39 of 49 deaths) were in infants less than 1 year old
- 100% (49 of 49) were children of Non-Hispanic ethnicity

Figure 1. Deaths in children 17 years and younger, Stark County, Ohio 2010, by Manner of Death



Manner of Death classifications are defined as follows:

Natural: Death resulting from inherent, existing conditions (congenital anomalies, disease, SIDS, etc.).

Accident: Death resulting from non-intentional trauma.

Suicide: Intentional, self-caused death.

Homicide: Death caused by another.

Undetermined: Unable to determine manner of death.

Table 1. Deaths in children 17 years and younger in Stark County, Ohio, 2010

		Manner of Death					
		Suicide	**Accident**	**Homicide**	**Natural**	**Undetermined**	**Total**
Age Group	<1	0	3	0	35	1	39
	1-4	0	0	0	1	0	1
	5-9	0	0	1	1	0	2
	10-14	0	2	0	4	0	6
	15-17	0	0	0	1	0	1
	Total	**0**	**5**	**1**	**42**	**1**	**49**
Sex	Male	0	3	0	22	0	25
	Female	0	2	1	20	1	24
	Total	**0**	**5**	**1**	**42**	**1**	**49**
Race	White	0	5	1	26	0	32
	Black	0	0	0	12	1	13
	Other	0	0	0	4	0	4
	Total	**0**	**5**	**1**	**42**	**1**	**49**

Summary of 2010 Deaths

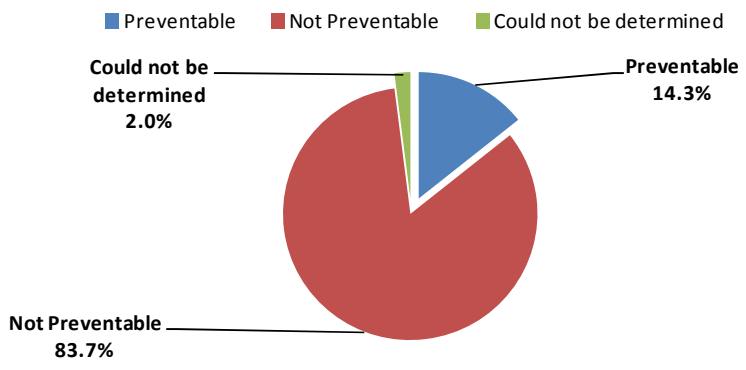
Table 2. Summary of All Deaths in Children 17 years or younger, Stark County, Ohio, 2010

	Accident	Homicide	Natural	Undetermined	Grand Total
Accident - Drowning	1	0	0	0	1
Accident - other	1	0	0	0	1
Homicide	0	1	0	0	1
Medical	0	0	6	0	6
Medical - Under 1 year	0	0	8	0	8
Prematurity	0	0	26	0	26
Sleep-related (Asphyxia)	3	0	0	0	3
Sleep-related (SIDS)	0	0	1	1	2
Undetermined	0	0	1	0	1
Total	**5**	**1**	**42**	**1**	**49**

Preventability of Deaths

After circumstances surrounding each child death are examined, the board attempts to make a determination about the preventability of the death. Of the 49 deaths reviewed from 2010, it was determined that 41 of the 49 deaths (83.7%) were probably not preventable and 7 deaths (14.3%) probably could have been prevented. The preventability of the remaining 1 death (2.0%) could not be determined.

Figure 2. Preventability of Deaths in children 17 years and younger in Stark County, Ohio, 2010



Infant Deaths

Infants (children less than 1 year old) accounted for 79.6% of all child deaths in Stark County in 2010. Of these infants, 31 (79.5%) died at <28 days old and 8 (20.5%) died at 28 days to 1 year of age. The most common risk factors for these infant deaths were prematurity (born at <37 weeks gestation) and low birth weight (<2500 g or 5 lbs 8 oz); 28 of 39 (71.2%) infants were premature, and of those premature infants, 25 of 28 were 0-28 days old (89.3%).

- Infant mortality rate is a measure of the number of infant deaths for a specific group relative to the number of live births for that group. The infant mortality rate for black infants in Stark County was 32.3 per 1000 live births, over 5 times the infant mortality rate of white infants in Stark County which was 6.5 per 1000 live births.
- Infant deaths due to prematurity ranged from 18 to 34 weeks gestation with time of life lived ranging from 10 minutes to 1 day.

Table 3. Deaths in Children <1 by Risk Factor, Stark County, Ohio, 2010

	Natural	Accident	Homicide	Undetermined	Total
Premature (<37 weeks)	28	0	0	0	28
Low Birth Weight (<2500g)	24	0	0	0	24
Multiple Birth	5	0	0	0	5
Intrauterine Smoke Exposure	8	2	0	0	10
No Prenatal Care	2	0	0	0	2

Note: The data displayed represents select risk factors from all infant deaths reviewed. Each child could have had one or more risk factors, thus the total does not equal 39.

Table 4. Deaths in Children <1 by Residence, Stark County, Ohio, 2010

	All Deaths	Live Births	Rate per 1000*
Alliance	6	278	21.6
Canton	21	1,215	17.3
Massillon	3	382	7.9
Reminder of Stark County	9	2,200	4.1
Total	**39**	**4075**	**9.6**

Table 5. Deaths in Children <1 by Race, Stark County, Ohio, 2010

	All Deaths	Live Births	Rate per 1000*
Black	15	464	32.3
White	23	3,510	6.5
Other	1	101	9.9
Total	**39**	**4075**	**9.6**

Of the 39 deaths reviewed for children less than 1 year of age, 35 were due to natural causes (89.7%). 3 were accidental infant deaths due to suffocation in unsafe sleep environments (7.7%), and 1 was to an undetermined cause of death.

*Source of live birth data: Ohio Department of Health

Natural Deaths

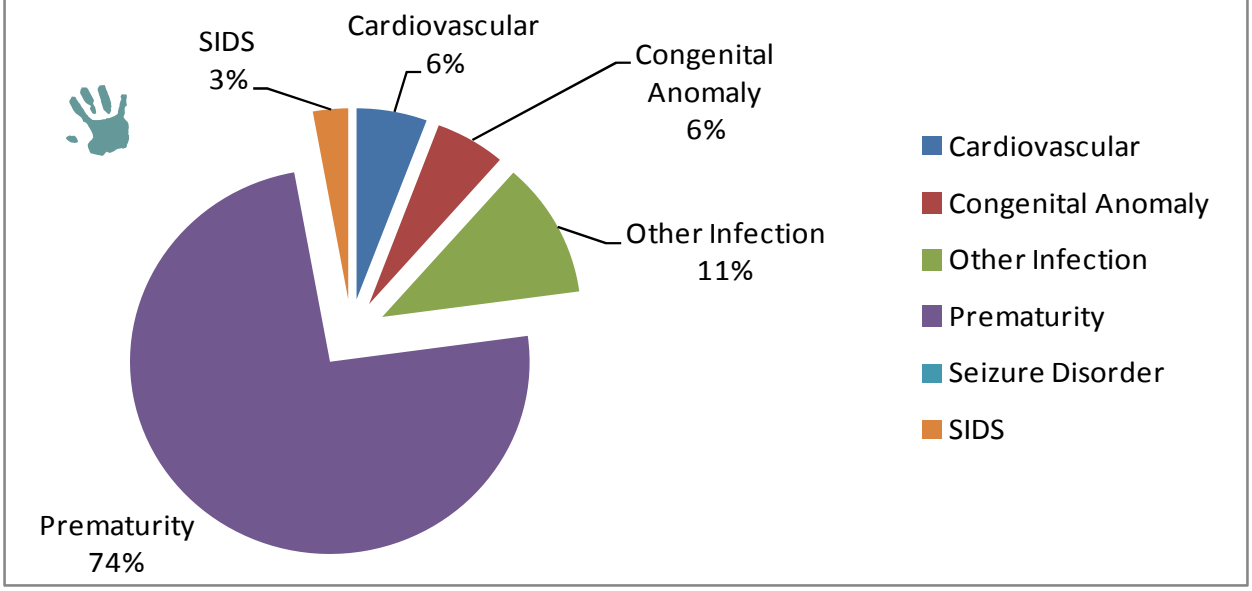
Since the Child Fatality Review process began in 2000, natural deaths have represented the largest percentage of deaths each year. This trend continued in 2010 with 42 of 49 total deaths (85.7%) due to natural causes.

- Of the 42 natural deaths, 26 (61.9%) were related to prematurity.
- Acute infections accounted for 7 of 42 (16.7%) of all natural deaths.
- 0 natural deaths were due to cancer.

Table 6. Natural Deaths in children 17 years and younger by age group, Stark County, Ohio, 2010

	Age Group					
Sub-Category	**<1**	**1-4**	**5-9**	**10-14**	**15 -17**	**Total**
Cardiovascular	2	1	0	1	0	4
Congenital Anomaly	2	0	0	0	1	3
Other Infection	4	0	1	2	0	7
Prematurity	26	0	0	0	0	26
Seizure Disorder	0	0	0	1	0	1
SIDS	1	0	0	0	0	1
Total	**35**	**1**	**1**	**4**	**1**	**42**

Figure 3. Natural Deaths in children 17 years and younger, Stark County, Ohio 2010



Suicide Deaths

Suicide deaths are the result of intentional, self-inflicted injuries. Data from the National Vital Statistics System, National Center for Health Statistics, and Centers for Disease Control and Prevention indicated that in 2009 suicide was the third leading cause of death in youth age 10-17. In 2010 there were no suicide deaths in Stark County. This is the first time Stark County has reached this goal in five years.

Child Abuse / Homicide Deaths

1 death in 2010 was categorized as a homicide, while no deaths were a direct result of child abuse. This one homicide was the result of a gunshot wound to a child in the 5-9 year old age category. This homicide was believed to have been the result of adult domestic violence which included an additional murder and suicide. As a result, there were no criminal convictions.

Accidental Deaths

Males accounted for 3 of the 5 deaths due to an accidental cause (60.0%). 3 of the deaths were in the <1 year age category (60.0%), and 2 were in the 10 -14 year old age group.

Table 7. Accidental Deaths in Children Age 17 and younger, Stark County, Ohio, 2010

	Number of Deaths
Sleep-related (asphyxia)	3
Motor vehicle accident	1
Drowning	1
Total	**5**

Source: *http://www.cdc.gov/Injury/wisqars/pdf/10LCD-Age-Grp-US-2009-a.pdf

Sleep-Related Deaths: A Decade in Review

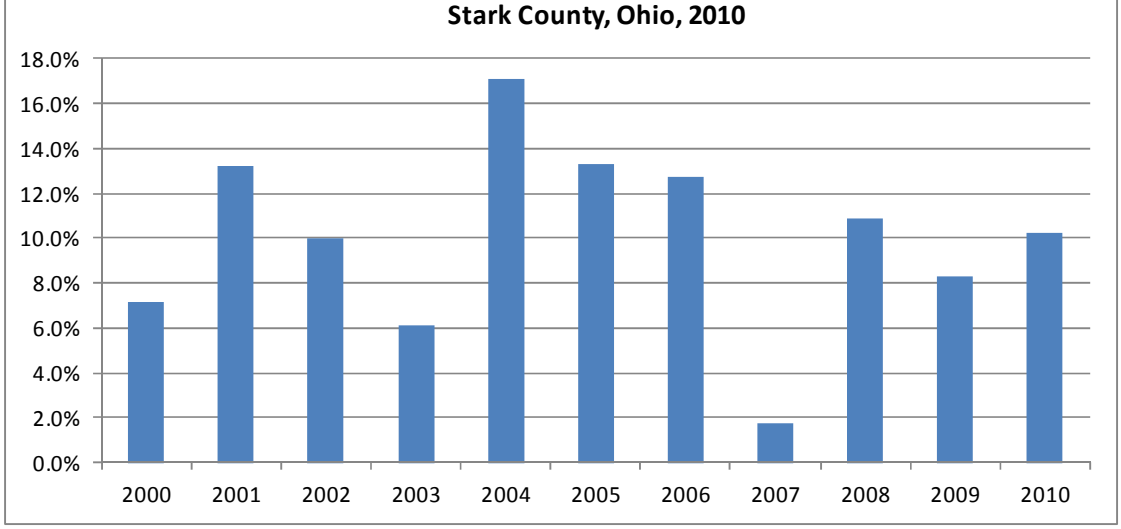
Sleep-related deaths have accounted for varying percentages of total deaths since Child Fatality Review began in 2000, ranging from 17.1% of deaths in 2004 to 1.8% of deaths in 2007. Between the years of 2000 and 2010 child deaths from Sudden Infant Death Syndrome (SIDS), asphyxia, and undetermined deaths in a sleep environment accounted for 57 deaths to Stark County children. In most of these cases an unsafe sleep environment may have contributed to the death.

Table 8. Sleep-Related Deaths in Children, Stark County, Ohio, 2000-2010

		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	
Sex	Male	1	6	3	2	5	6	3	1	4	2	2	28
	Female	3	1	3	1	2	2	3	0	2	2	3	18
	Total	**4**	**7**	**6**	**3**	**7**	**8**	**6**	**1**	**6**	**4**	**5**	**57**

		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	
Race	White	2	4	4	3	5	6	3	1	3	1	4	30
	Black	2	2	2	0	2	2	3	0	2	3	1	15
	Other	0	1	0	0	0	0	0	0	1	0	0	1
	Total	**4**	**7**	**6**	**3**	**7**	**8**	**6**	**1**	**6**	**4**	**5**	**57**

Figure 4. % of Sleep Related Deaths , age 17 and younger, Stark County, Ohio, 2010

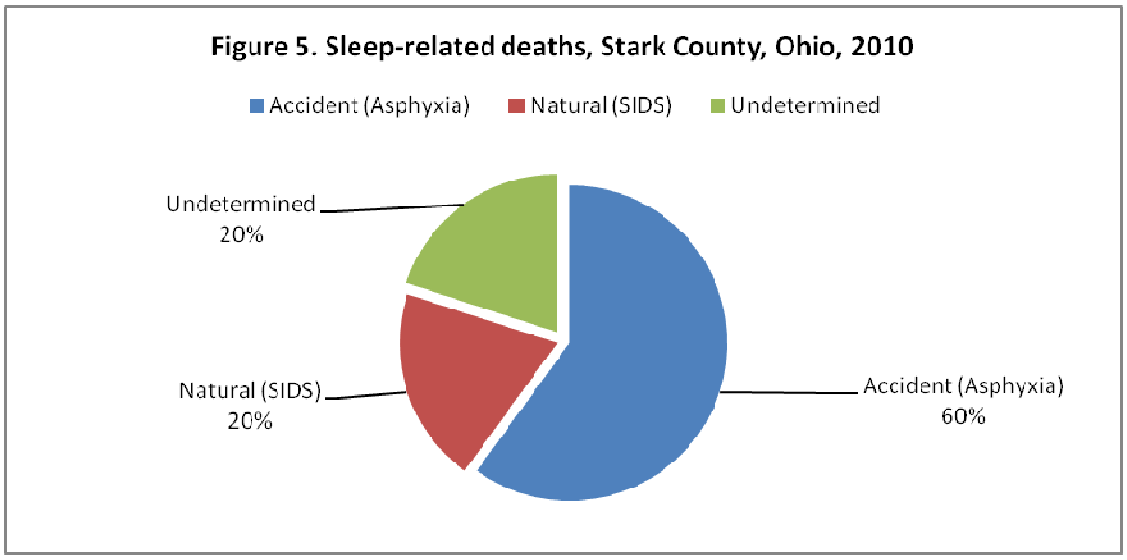


Sleep-Related Deaths

Sudden Infant Death Syndrome (SIDS) is the sudden death of an infant under one year of age that remains unexplained after a comprehensive investigation. Some of the known risk factors for SIDS include: infants sleeping on their stomachs, soft infant sleep surfaces and bedding, maternal smoking during pregnancy, second-hand smoke exposure, overheating, and prematurity or low birth weight.

SIDS is a diagnosis of exclusion, therefore an extensive investigation must be conducted through autopsy, death scene investigation, review of the infant's health history. A review of the infants health history can help to eliminate other potential causes, such as suffocation or other medical conditions.

Deaths due to suffocation in a sleep environment can fall into several categories: *overlay*, (defined as a person who is sleeping with a child and rolls onto the child, unintentionally smothering the child), and *positional asphyxia*, (defined as a child's face becoming trapped or wedged in soft bedding or small space such as a mattress, wall or couch cushion).



Stark County Safe Sleep Task Force recommends that an infant always sleep alone on his/her back in an empty crib, portable crib, or bassinet with a firm mattress. Blankets, loose-fitting sheets, pillows, bumper pads, stuffed animals, etc. should be avoided.

In 2010 the unsafe sleep environments in which infants died included the following: blankets, pillows, sleeping on couches and futons, and sleeping on the same surface as an adult. Many infants were in environments with multiple hazards.

Recommendations

- Infant sleep related deaths continue to be an issue in Stark County with 5 infants dying in 2010. Despite all of the educational information currently being provided, infants continue to die in unsafe sleep environments, often in homes where a safer sleep option was available but not being used. The board continues to support the Stark County Safe Sleep Task Force in their effort to educate parents and caregivers about safe sleep practices, especially focusing on the use of a sleep environment with no blankets, pillows, bumper pads, or other children or adults every time the child is put to sleep. In addition, the Safe Sleep Task Force should and does include reminders to parents during its educational classes about checking their children ' s sleep environment to ensure that the temperature is appropriate. It would be helpful if first responders were able to more clearly document the location of the infant when they were found, as well as a description of the environment which included what other items were found.
- Reinforce the need for Domestic Violence Prevention Educational material to be provided to families in all healthcare settings.
- Stricter enforcement of laws- against riding dirt-bikes on city streets unless licensed. The Board also recommends that an educational packet be provided for Parents when purchasing a dirt bike. This packet should include information on current laws as well as, information on how to safely operate a dirt bike.
- Training requirements for lifeguards on how to avoid distractions when on duty and the importance of keeping their eyes on the swimming pool at all times while on duty.

Resources

- National Center for Child Death Review: http://www.childdeathreview.org/
- Ohio Department of Health Child Fatality Review: http://www.odh.ohio.gov/odhPrograms/cfhs/cfr/cfr1.aspx
- Stark County Health Department: http://www.starkhealth.org/