CHILD FATALITY REVIEW

ANNUAL REPORT

2011 DEATHS

STARK COUNTY, OHIO

Report Prepared By:
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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

John Aller
Executive Director
Mental Health and Recovery Services Board of Stark County

Julie Barnes, M.Ed., LSW
Executive Director
Stark County Job & Family Services

Emily Caniford, RN , MSN
Director, Administration & Support Services
Stark County Health Department

Raymond Harple
Battalion Chief
Canton City Fire Department

Jack Liberator, RN
Consultant
Mercy Medical Center

Robin Mingo-Miles
Resident Initiatives Supervisor
Stark County Metropolitan Housing

P. S. Murthy, MD
Stark County Coroner

Donald Snyder
Chief
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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Debbie Hamilton, Administrative/Personnel Coordinator

Summary of 2011 Deaths

In 2011 there were a total of 48 deaths in children age 17 and younger in Stark County, Ohio residents. These 48 deaths are steady from the total number of deaths in 2010 (49 deaths).

In 2011:

- 62.5% (30 of 48 deaths) were due to natural causes
- 37.5% (18 of 48 deaths) occurred in females
- 77.1% (37 of 48 deaths) occurred in white children
- 18.8% (9 of 48 deaths) occurred in black children
- 64.6% (31 of 48 deaths) were in infants less than 1 year old

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.

Figure 1. Manner of Death in children 17 years or younger, Stark County, Ohio 2011

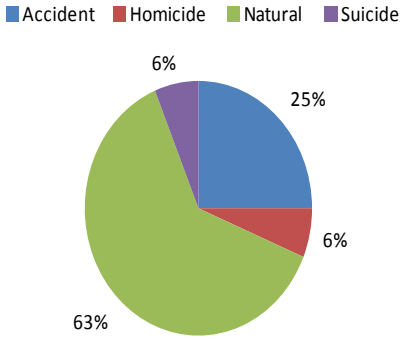


Table 1. Manner of Death in children 17 years or younger, Stark County, Ohio 2011

		Suicide	Accident	Homicide	Natural	Total
Age Group	<1	0	5	0	26	31
	1-4	0	0	1	2	3
	5-9	0	0	0	0	0
	10-14	0	2	0	2	4
	15-17	3	5	2	0	10
	Total	**3**	**12**	**3**	**30**	**48**
Sex	Male	1	8	2	19	30
	Female	2	4	1	11	18
	Total	**3**	**12**	**3**	**30**	**48**
Race	White	3	11	1	22	37
	Black	0	1	1	7	9
	Other	0	0	1	1	2
	Total	**3**	**12**	**3**	**30**	**48**

Summary of 2011 Deaths

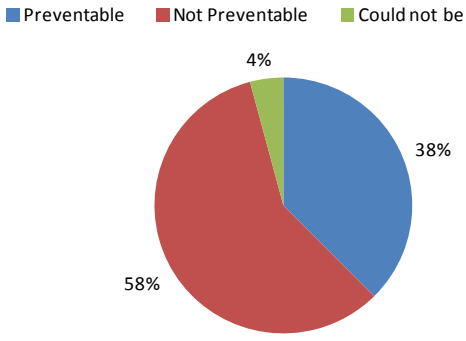
Table 2. Summary of All Deaths in Children 17 years or younger, Stark County, Ohio, 2011

	Accident	Homicide	Natural	Suicide	Grand Total
Accident - MVA	6	0	0	0	6
Accident - other	1	0	0	0	1
Homicide	0	3	0	0	3
Medical	0	0	4	0	4
Medical - Under 1 year	0	0	8	0	8
Prematurity	0	0	17	0	17
Sleep-related (Asphyxia)	5	0	0	0	5
Sleep-related (SIDS)	0	0	1	0	1
Suicide	0	0	0	3	3
Total	**12**	**3**	**30**	**3**	**48**

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 48 deaths reviewed from 2011, it was determined that 28 of the 48 deaths (58.3%) were probably not preventable and 18 deaths (37.5%) probably could have been prevented. The preventability of the remaining 2 deaths (4.2%) could not be determined.

Figure 2. Preventability of Deaths in Children 17 years and younger in Stark County, Ohio, 2011



Infant Deaths

Infants (children less than 1 year old) accounted for 64.6% of all child deaths in Stark County in 2011 (31 deaths). Of these infants, 20 (64.5%) died at <28 days old and 11 (35.5%) 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); 18 of 31 (58.1%) infants were premature, and of those premature infants, 15 of 18 were 0-28 days old (83.3%).

- 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 13.9 per 1000 live births, down more than 50% from 2010. The infant mortality rate of white infants was 6.8 per 1000 live births, which is steady from 2010.
- Infant deaths due to prematurity ranged from 17 to 36 weeks gestation with time of life lived ranging from 2 minutes to 5 months.

Table 3. Deaths in Children <1 by Risk Factor, Stark County, Ohio, 2011

	Natural	Accident	Homicide	Undetermined	Total
Premature (<37 weeks)	17	1	0	0	18
Low Birth Weight (<2500g)	18	2	0	0	20
Multiple Birth	4	0	0	0	4
Intrauterine Smoke Exposure	3	1	0	0	4
No Prenatal Care	4	0	0	0	4

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 31.

Table 4. Deaths in Children <1 by Residence, Stark County, Ohio, 2011

	All Deaths	Live Births	Rate per 1000*
Alliance	3	284	10.6
Canton	13	1095	10.7
Massillon	7	414	18.3
Remainder of Stark County	8	2265	3.5
Total	**31**	**4058**	**7.6**

Table 5. Deaths in Children <1 by Race, Stark County, Ohio, 2011

	All Deaths	Live Births	Rate per 1000*
Black	6	429	13.9
White	24	3523	6.8
Other	1	106	9.4
Total	**31**	**4058**	**7.6**

*Source of live birth data: Ohio Department of Health

Of the 31 deaths reviewed for children less than 1 year of age, 26 were due to natural causes (83.9%). 5 were accidental infant deaths due to suffocation in unsafe sleep environments (16.1%)

Natural Deaths

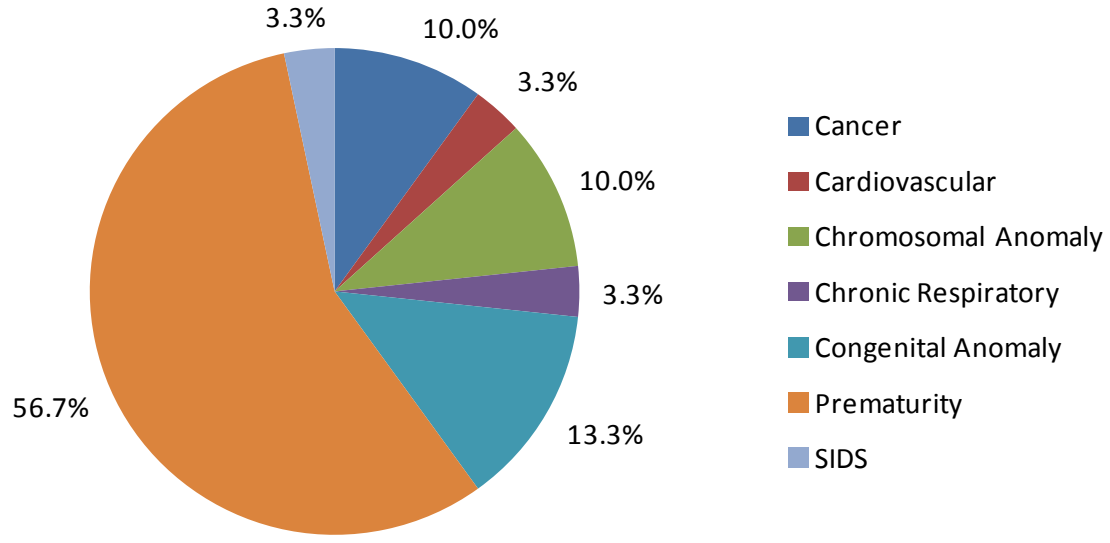
Since the Child Fatality Review process began in 2000, natural deaths have represented the largest percentage of deaths each year. This trend continued in 2011 with 30 of 48 total deaths (62.5%) due to natural causes.

- Of the 30 natural deaths, 17 (56.7%) were related to prematurity.
- Chromosomal anomalies accounted for 10.0% of all natural deaths.
- Congenital anomalies accounted for 13.3% of all natural deaths.
- 3 natural deaths were due to cancer (10.0%).

Table 6. Natural Deaths in Children 17 years or younger by age group, Stark County, Ohio, 2011

	<1	1-4	5-9	10-14	15-17	Total
Cancer	2	0	0	1	0	3
Cardiovascular	1	0	0	0	0	1
Chromosomal Anomaly	2	1	0	0	0	3
Chronic Respiratory	0	0	0	1	0	1
Congenital Anomaly	3	1	0	0	0	4
Prematurity	17	0	0	0	0	17
SIDS	1	0	0	0	0	1
Total	**26**	**2**	**0**	**2**	**0**	**30**

Figure 3. Natural Deaths in Children 17 years and younger, Stark County, Ohio 2011



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 2010 suicide was the third leading cause of death in youth age 10-17. In 2011 there were 3 suicide among all deaths in Stark County in children age 17 and younger (6.3%).

Child Abuse / Homicide Deaths

3 deaths in 2011 were categorized as a homicide (6.3%), with one death the result of child abuse. Two of the homicides were in the age group 15-17 years old. One was the result of a gunshot wound, believed to be the result of a random violent act, and the other was the result of a physical altercation in which head injuries were sustained another juvenile. One homicide was in the age group 1-4 years old, and was the result of blunt force trauma due to child abuse and neglect. .

Accidental Deaths

Males accounted for 8 of the 12 deaths due to an accidental cause (67.0%). 5 of the deaths were in the <1 year age category (41.5%), 2 in the 10-14 year old age group (17.0%), and 5 in the 15 -17 year age group (41.5%).

Table 7. Accidental Deaths in Children Age 17 or younger, Stark County, Ohio, 2011

Category	Number of Deaths
Sleep-related (asphyxia)	5
Motor Vehicle Accident	6
Unspecified Accident	1
Total	**12**

http://www.cdc.gov/injury/wisqars/pdf/10LCID_All_Deaths_By_Age_Group_2010-a.pdf

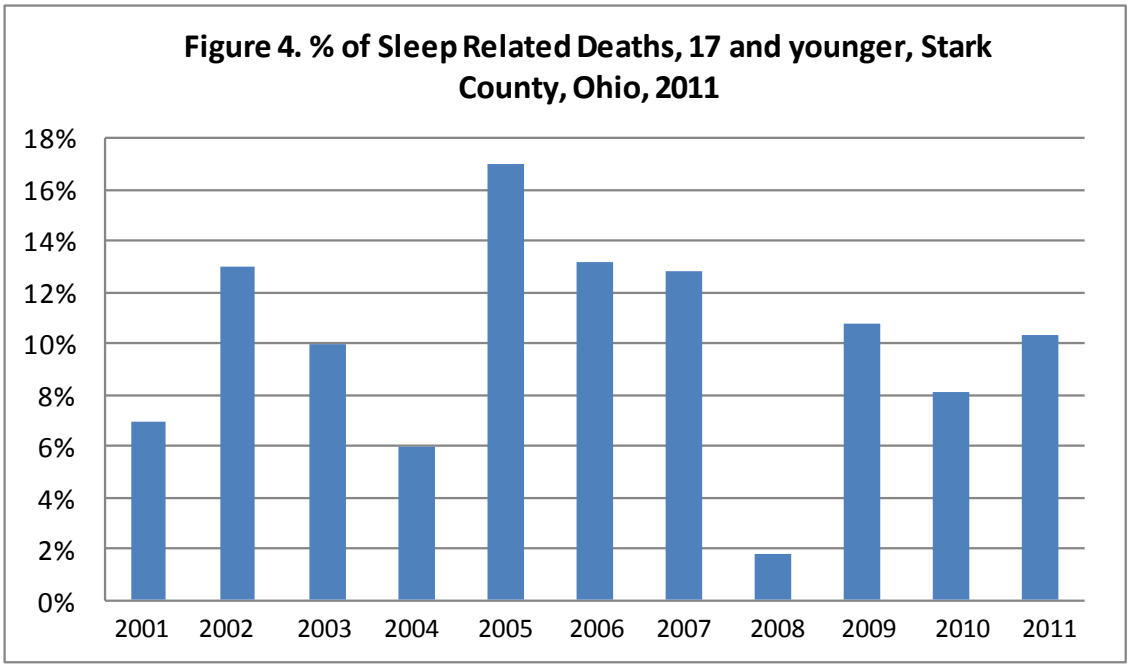
Sleep-Related Deaths: A Decade in Review

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 2001 and 2011 child deaths from Sudden Infant Death Syndrome (SIDS), asphyxia, and undetermined deaths in a sleep environment accounted for 58 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, 2001-2011

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	Total
Male	6	3	2	5	6	3	1	4	2	2	4	38
Female	1	3	1	2	2	3	0	2	2	3	2	21
Total	**7**	**6**	**3**	**7**	**8**	**6**	**1**	**6**	**4**	**5**	**6**	**59**

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	Total
White	4	4	3	5	6	3	1	3	1	4	6	40
Black	2	2	0	2	2	3	0	2	3	1	0	17
Other	1	0	0	0	0	0	0	1	0	0	0	2
Total	**7**	**6**	**3**	**7**	**8**	**6**	**1**	**6**	**4**	**5**	**6**	**59**



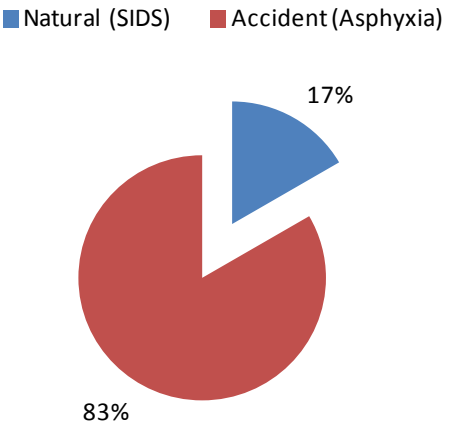
Sleep-Related Deaths

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. A total of 5 sleep-related deaths occurred in Stark County in 2011.

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).

Figure 5. Sleep-related deaths, Stark County, Ohio, 2011



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 2011 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

- Since the Stark County Child Fatality Review process began in 2000, 18 Stark County children have died as a result of suicide. The suicide methods used have included: asphyxia, firearms, and poisonings. While the deaths from these suicides are tragic they may be showing a much deeper public health problem in our community. According to the Centers for Disease Control and Prevention many more teens survive suicide attempts than die. A nationwide survey of teens in high school in the United States (U.S.) showed that 16% of students had considered suicide, 13% had a plan for suicide, and 8% had attempted suicide in the previous 12 months. During 2011 there were 3 suicide deaths to children between the ages of 15 and 17 years of age. The board recommends that all schools in Stark County provide some form of suicide prevention or depression screening and education to children in middle and high school on a yearly basis. The board feels that it is imperative for the teachers and students in our schools to know and recognize the warning signs of depression.
- Two of the three suicides above involved the use of firearms. The board recommends community education on the need to lock all firearms in a secure cabinet and to store ammunition in a separate location.
- One of the three suicides was due to an overdose of prescription medications. The board recommends continued community education on the importance of locking up prescription and non-prescription medications. In addition the board recommends the proper disposal of all medications when the prescription is no longer needed.
- Other than natural causes such as prematurity and birth defects, infant sleep related deaths were the only other cause of death for children less than 1 year of age, accounting for 5 infant deaths during 2011. The board recommends that all health and social service agencies in Stark County who deal with infants and their families educate parents on the dangers of placing infants in an unsafe sleeping environment. The board recommends that agencies follow the standards and guidelines on infant safe sleep provided by the American Academy of Pediatrics. The board recommends the continuation of the Stark County Safe Sleep Task Force and requests that the group make preparations to assure that all healthcare agencies providing services to infants and their families be made aware of the new American Academy of Pediatrics Infant Safe Sleep recommendations.
- Motor vehicle accidents (MVA) accounted for 6 deaths to children between the ages of 10 and 17 during 2011. These deaths involved cars, bicycles, all terrain vehicles, and pedestrians. The board has several recommendations for these MVA deaths which are listed below:
- More intense drivers education for teens specifying the dangers of letting underage unlicensed drivers operate vehicles, dangers of drinking and driving, the need for wearing seat belts, and how to drive in bad weather.
- Bicycle, all terrain vehicle, and pedestrian safety classes in schools for students between the ages of 10 and 15. Classes should discuss: the importance of stopping at stop signs, the importance of making sure that bicycle or all terrain vehicle is in proper working order prior to riding, the need to wear bright clothing while riding, not riding on city or rural roads after dark, and for pedestrians to only cross roads where cross walks are clearly marked or during daylight hours.
- Ultimately we could add the two drowning deaths to the motor vehicle death category as well however the recommendation is for local or state legislation requiring guard rails to be placed along roads when ponds or other bodies of water are close to the road.

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/