STARK COUNTY, OHIO
Child Fatality Review
&
Fetal Infant Mortality Review
2016-2017 Report

2016-2017 CFR & FIMR ANNUAL REPORT

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Child Fatality Review & Fetal Infant Mortality Review Members

CFR BOARD CHAIR:

Stark County Health Department…….. Kirkland Norris, RS, MPH; *Health Commissioner*

CFR BOARD MEMBERS:

Canton City Health Department……..…… James Adams, RS, MPH; *Health Commissioner*
Canton Police Department…….. Joe Mongold; *Detective*
Stark County Mental Health and Addiction Recovery….. John Aller M.Ed., PCC, LICDA; *Executive Director*
Plain Township Fire and Rescue……. Charles Shalenberger; *Chief*
Stark County Coroner's Office…….. Anthony Bertin, DO; *Coroner*
Stark County Educational Services Center…… Anju Mader, MD; *Director, Related Services*
Stark County Job & Family Services……. Deborah Forkas, M.Ed.; *Executive Director*
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Stark County Health Department…….. Kay Conley, MPA, CHES; *Director of Administration and Support Service*
Stark County Sheriff's Office…….. Ron Springer; *Captain*
Stark Metropolitan Housing Authority…… Robin Mingo-Miles; *Director of Resident and Community Affairs*

FIMR TEAM MEMBERS:

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Stark County Health Department…… Sherry Smith, RN, BSN, MS; *Director of Nursing Services*
Canton City Health Department…….. Diane Thompson; RN, MSN, *Director of Nursing*
Canton City Health Department…… Dawn Miller MBA; *Thrive Project Manager*
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Aultman Hospital……. Melinda Wiles, RN, MSN, CPLC; *Outreach and Bereavement Coordinator*
Mercy Medical Center…… Linda Heitger, BA, BSN, RN
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ACES (Academic and Community Emergency Specialists)…….. Daniel Celik, MD, FACEP; *Emergency Physician, Emergency Medical Services Director*
Stark County Health Department……..Angie Schapiro, LSW; *Social Worker, FIMR Maternal Interviewer*

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Purpose of Child Fatality Review
&
Fetal Infant Mortality Review Members

The primary goal of the Child Fatality Review (CFR) process is to reduce the incidence of preventable child deaths in Stark County through a detailed comprehensive local review of the circumstances surrounding the deaths of all children in our community. These reviews are completed by a multidisciplinary team made up of representatives from various local agencies. It's our hope that through this process of reviews and recommendations we can raise community awareness about the circumstances surrounding preventable child deaths and ultimately eliminate or decrease these deaths from continuing to occur.

The Objectives of Child Death Review-

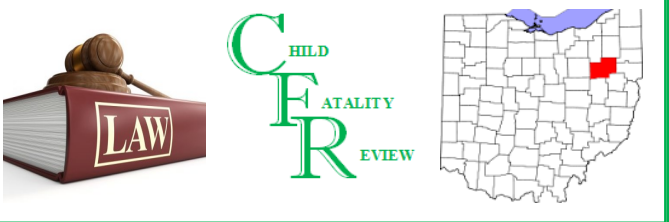
(The National Center for the Review and Prevention of Child Deaths)

1. Ensure the accurate identification and uniform, consistent reporting of the cause and manner of every child death.
2. Improve communication and linkages among local and state agencies and enhance coordination of efforts.
3. Improve agency responses in the investigation of child deaths.
4. Improve agency response to protect siblings and other children in the homes of deceased children.
5. Improve criminal investigations and the prosecution of child homicides.
6. Improve delivery of services to children, families, providers and community members.
7. Identify specific barriers and system issues involved in the deaths of children.
8. Identify significant risk factors and trends in child deaths.
9. Identify and advocate for needed changes in legislation, policy, practices, and expanded efforts in child health and safety to prevent child deaths.
10. Increase public awareness and advocacy for the issues that affect the health and safety of children.

Ohio Child Fatality Review Law

ORC: 307.621-307.629

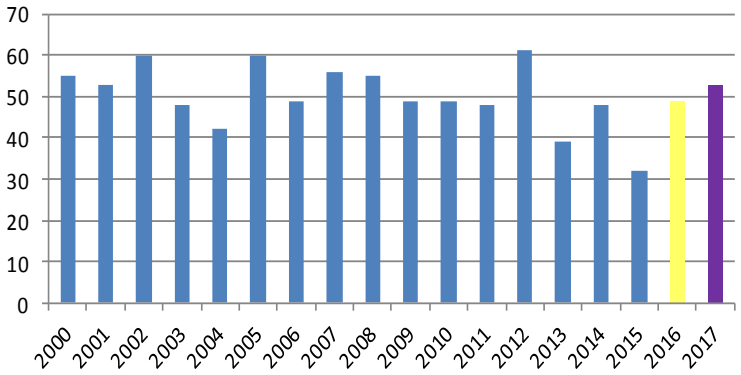
This legislation requires every county in Ohio to review the deaths of all children under the age of 18 in order to decrease the incidence of preventable child deaths



Summary of Deaths

There were 49 infant and child deaths in Stark County, Ohio in 2016. This is an increase of 17 deaths from the 2015 total of 32. To many individuals this may appear as a large increase, however, when you look at the 10 year average of 48.5 deaths a year, it is consistent with the county's trend of child deaths ranging from the lowest number of deaths that occurred in 2015 (32 deaths) to the highest which occurred in 2012 (61 deaths). Below you will find a comparison of 2016 deaths for Stark County with those that occurred across the State of Ohio.

Figure 1: Total Child Deaths 2000-2017



2016 Stark County	2016 Ohio*
♦ 49 Deaths	♦ 1,294 Deaths
♦ 84% of deaths reviewed	♦ 85% of deaths reviewed
♦ 90% less than 5 years of age	♦ 79% less than 5 years of age
♦ 61% Male	♦ 56% Male
♦ 73% White	♦ 59% White
♦ 20% Black	♦ 36% Black

As seen in Figure 1 above there were 53 infant and child deaths in 2017. Although there were 53 deaths, only 40 were able to be reviewed prior to the completion of this report due to open investigations.

Ohio Revised Code section 307.625 prohibits the review of any child death that is pending investigation or prosecution of a person for causing the death unless the prosecuting attorney agrees to allow the review.

For the remaining pages of this report, statistics will be calculated from those 40 deaths reviewed during 2017.

Figures 2 & 3 below show the breakdown of percentages of death by manner of death for 2016 and 2017. Natural deaths accounted for the majority of deaths during this time frame.

Figure 2: 2016 Percentage of Death by Manner of Deaths

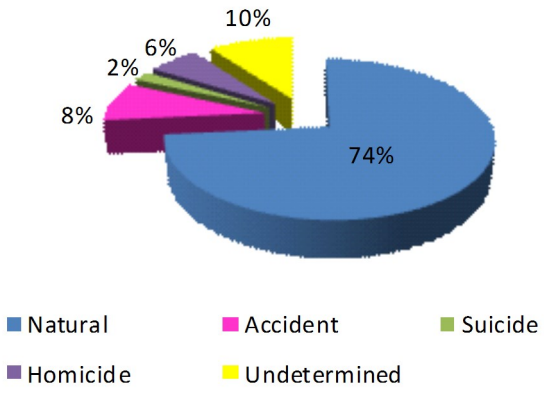
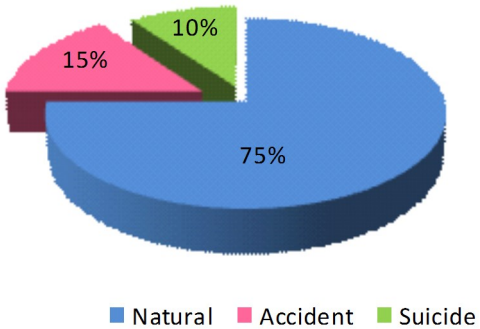


Figure 3: 2017 Percentage of Death by Manner of Death



*Ohio Child Fatality Review Seventeenth Annual Report: Ohio Department of Health http://www.odh.ohio.gov/odhprograms/cfhs/cfr/cfrrept.aspx

Summary of Deaths

Table 1: 2016 & 2017 Counts of Death by Manner and Age of Death

	Manner	Natural	Accident	Suicide	Homicide	Undetermined	Total
2016 Deaths	<1	33	2	0	0	4	39
	1-4	1	0	0	3	1	5
	5-9	0	0	0	0	0	0
	10-14	0	0	1	0	0	1
	15-17	2	2	0	0	0	4
	2016 Total	36	4	1	3	5	49
2017 Deaths	<1	26	4	0	0	0	30
	1-4	1	0	0	0	0	1
	5-9	2	0	0	0	0	2
	10-14	0	0	1	0	0	1
	15-17	1	2	3	0	0	6
	2017 Total	30	6	4	0	0	40

Manner of Death– The official state vital statistics classification of death: natural, accident, homicide, suicide, or undetermined.

Natural– Death resulting from an existing condition or natural disease such as a congenital anomaly, or other medical cause.

Accident– Death resulting from non-intentional trauma.

Homicide- Death caused by another individual with the intent to harm or kill.

Suicide– Death caused by inflicting harm on oneself.

Undetermined- Death in which the manner of death was not clear to investigators.

Throughout this report we will discuss the deaths that occurred from 2016-2017 and provide comparisons between Stark County and the State of Ohio for a timeframe of 2012-2016. For more specifics regarding the State level data mentioned in this report, please view Ohio Department of Health's Seventeenth Annual Child Fatality Review report at http://www.odh.ohio.gov/odhprograms/cfhs/cfr/cfrrept.aspx

Table 2: Percent of Death 2012-2016

Manner of Deaths	Stark County	Ohio[1]
Natural	76.42%	72%
Accident	8.30%	14%
Suicide	3.49%	3%
Homicide	4.37%	4%
Undetermined	7.42%	7%

Figure 4: Child Deaths by Age Group 2012-2016

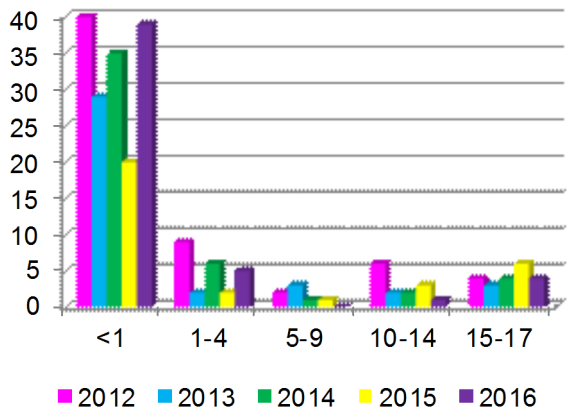
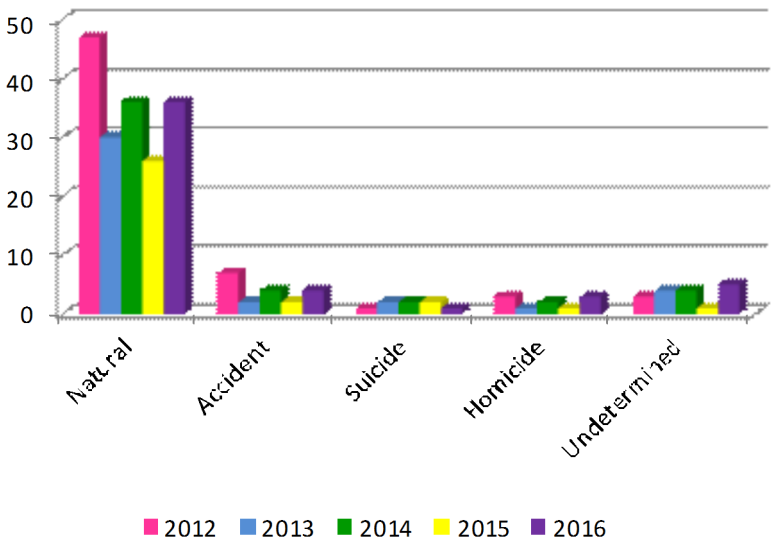
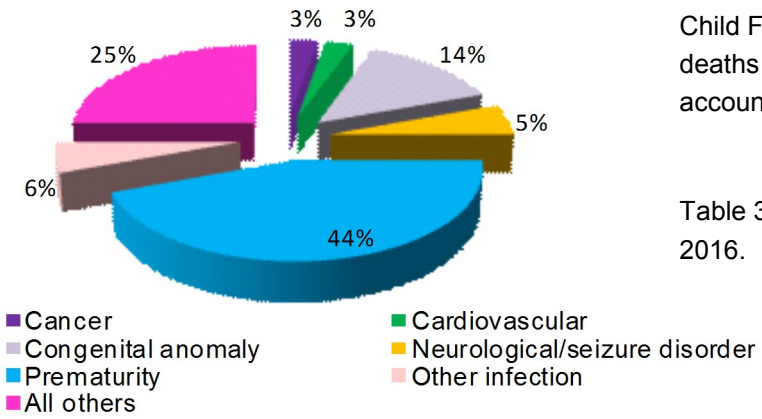


Figure 5: Manner of Death 2012-2016



Natural Deaths

Figure 6: 2016 Natural Deaths by Type



Figures 6 & 7, to the left, and Table 4 below, show a breakdown of all natural deaths to infants and children that occurred in 2016 and 2017. Natural deaths due to prematurity, congenital anomalies, and other medical issues such as cardiovascular or neurologic disorders have been the leading cause of death for infants in Stark County since the Child Fatality Review process began in 2000. During 2016, 85% of deaths to infants were from natural causes and in 2017, they accounted for 87% of all infant deaths in the county.

Table 3 lists the 10 leading causes of death in the US for infants in 2016. Natural deaths* accounted for nine of the ten leading causes.

Figure 7: 2017 Natural Deaths by Type

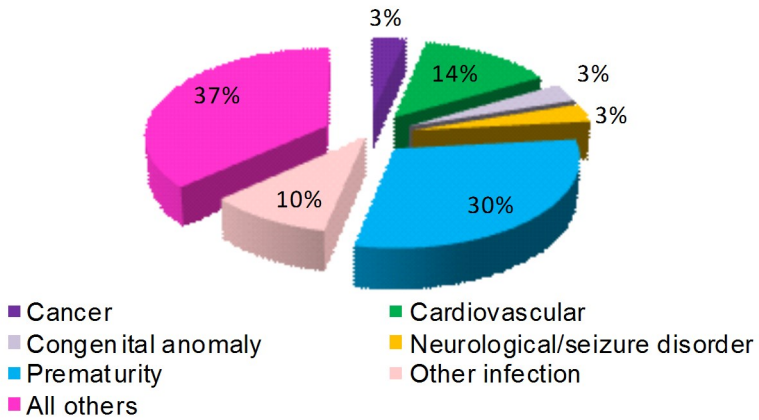


Table 3: Leading Causes of Death <1 year of Age, United States- 2016 [2]

Rank	<1 year of age
1	Congenital Anomalies*
2	Short Gestation (Prematurity)*
3	SIDS*
4	Maternal Pregnancy Complications*
5	Unintentional Injuries (Accidents)
6	Placenta Cord. Membranes*
7	Bacterial Sepsis*
8	Respiratory Distress*
9	Circulatory System Disease*
10	Neonatal Hemorrhage*

Table 4: 2016 & 2017 Natural Death by Age Group

Year of Death	<1 year of age	1-4 years of age	5-9 years of age	10-14 years of age	15-17 years of age	Total
2016	33	1	0	0	2	36
2017	26	1	2	0	1	30

Natural Deaths

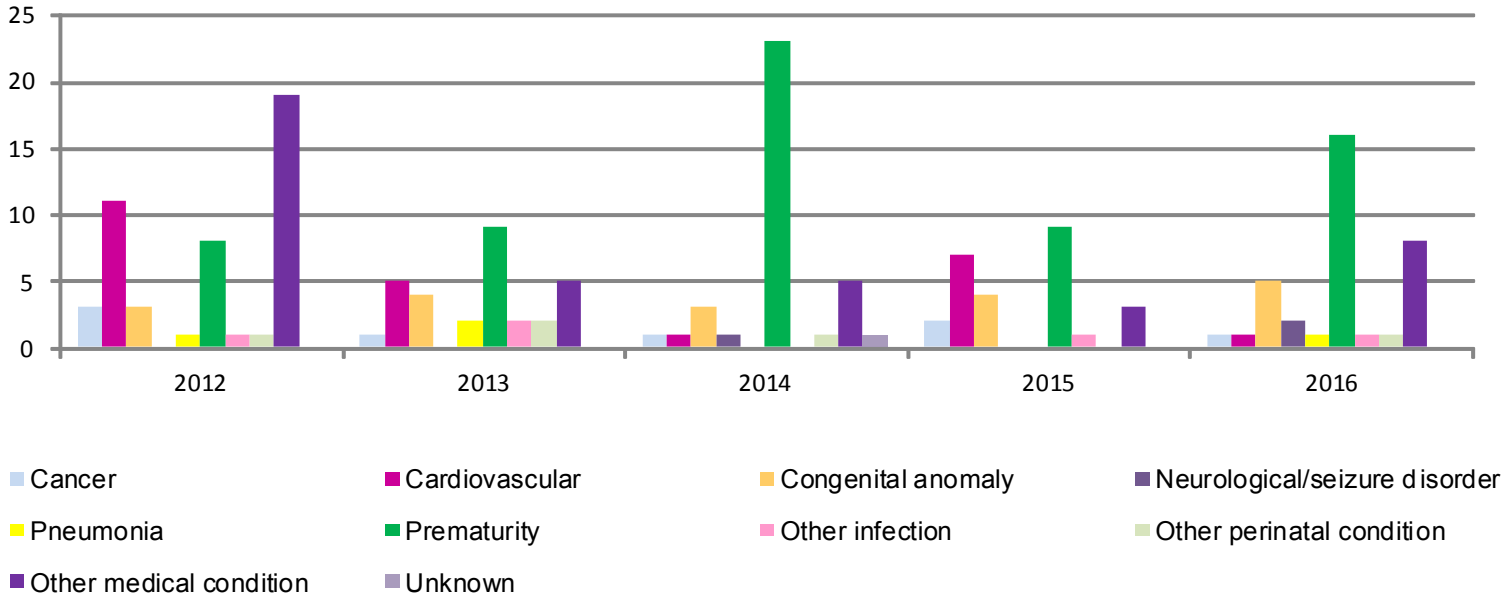
As seen in Table 5, to the right, Prematurity continues to be the main contributor to natural deaths for both Stark County and across the State of Ohio, accounting for nearly half of all natural deaths from 2012 through 2016.

Health problems such as cardiovascular issues and congenital anomalies were ranked second and third in the natural causes of death for Stark County and across the state as well.

Table 5: 2012-2016 Percent of Natural Death by Type

Types of Natural Deaths	Stark County	Ohio[1]
Natural Death	175	4,915
Prematurity	37.14%	45%
Cardiovascular	14.29%	6%
Congenital anomaly	10.86%	18%
Other infection	5.14%	3%
Cancer	4.57%	5%
Neurological/seizure disorder	1.71%	3%
All others	26.29%	20%

Figure 8: 2012-2016 Natural Deaths



Recommendations

Recommendations for the prevention of natural deaths to infants under one year of age will be included in the Infant Mortality section of this report.

Genetic Counseling

The Stark County CFR Board and Stark County FIMR Team recommend genetic counseling and testing for families of infants and children who die from genetic defects/disorders.

Accidental Deaths
(Unintentional Injuries)

Accidents (unintentional Injuries) were the leading cause of death for children 1-17 years of age in Stark County in 2016 and 2017. Table 6, below, shows the top 4 leading causes of death for children 1-14 years of age for the US during 2016 with Unintentional Injuries being the leading cause for all three age groups.

2016– 2 Motor Vehicle Accidents
2 Accidental Asphyxia

2017– 2 Motor Vehicle Accidents
4 Accidental Asphyxia

The accidental asphyxia deaths will be discussed in greater detail in the Infant Safe Sleep section of this report on pages 16-17.

This page provides an overview of those accidental deaths that occurred from 2012-2016.

Figure 9: 2012-2016 Accidental Deaths by Cause

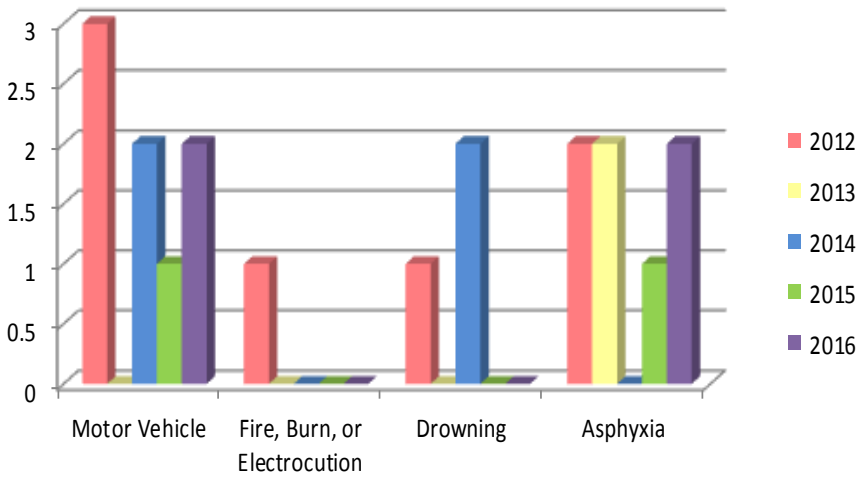


Table 6: Leading Causes of Death 1-14 Years of Age, United States- 2016 [3]

Rank	1-4	5-9	10-14
1	***Unintentional Injuries***	***Unintentional Injuries***	***Unintentional Injuries***
2	Congenital Anomalies	Malignant Neoplasms	Suicide
3	Malignant Neoplasms	Congenital Anomalies	Malignant Neoplasms
4	Homicide	Homicide	Homicide

Figure 10: 2012-2016 Motor Vehicle Accidents by Age Group

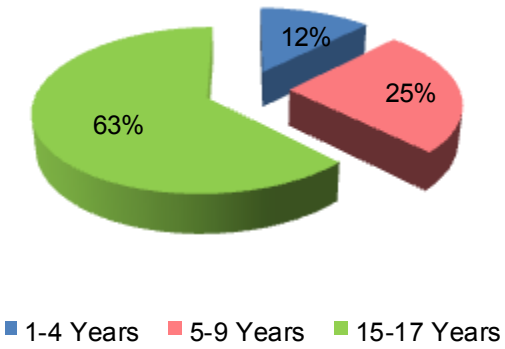


Figure 11: 2012-2016 Motor Vehicle Accidents Type of Vehicle

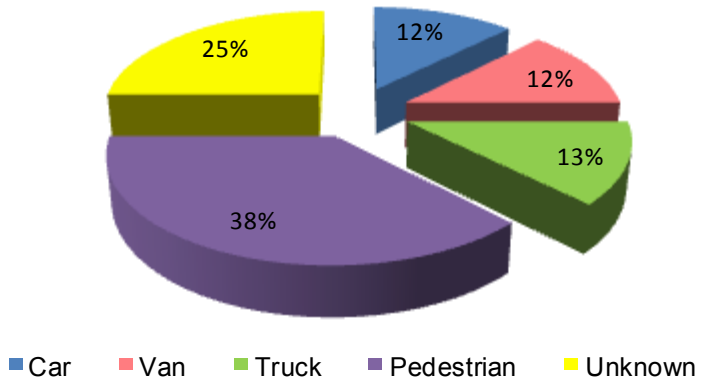


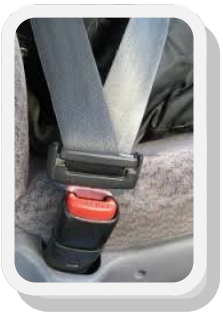
Table 7: 2012-2016 Percentage of Accidental Deaths by Cause

Types of Accidental Deaths	Stark County	Ohio[1]
Motor Vehicle	42.11%	37%
Asphyxia	36.84%	30%
Drowning	15.79%	14%
Fire, Burn, or Electrocution	5.26%	7%

Accidental Deaths
(Unintentional Injuries)

Recommendations

Drivers Education for Teens
Peer to Peer Safe Driving Programs



The Stark County CFR Board recommends that teenage drivers be reminded of the importance of responsible and safe driving practices through their driver's education classes and periodic school programming.

The Board supports the peer to peer programming recommended in the 2018 Ohio Highway Safety Plan which can be found at the link below: http://ohiohighwaysafetyoffice.ohio.gov/doc/OH_FY18_HSP.pdf While the Board understands the difficulty of implementing a peer to peer program in our local high schools, the 2018 Ohio Highway Safety Plan program would help to reduce those risky behaviors that contribute to injuries and fatalities.

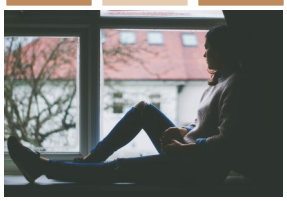
The Stark County CFR Board supports the National Highway Traffic Safety Administrations (NHTSA) recommendations on the use of seatbelts, and recognize that they significantly reduce the risk of fatal injury. http://ohiohighwaysafetyoffice.ohio.gov/doc/OH_FY18_HSP.pdf

Daycare Selection

All Stark County families should be encouraged to choose wisely when selecting childcare providers for their children. Selecting a safe and supportive environment for your child is essential in assuring their safety and development. Use of the Step Up To Quality five–star quality rating and improvement system administered by the Ohio Department of Education and the Ohio Department of Job and Family Services helps families locate the type of early care and education program that meets their needs.

To learn more about a programs' licensing status, their Step Up To Quality rating, and inspection results go to the Early Care and Education Tool at http://childcaresearch.ohio.gov/ .The Board also would like to remind hospitals, physicians' offices, child birth educators, Help Me Grow programs, and child care centers about the requirement of parent education set forth in Claire's Law Ohio Revised Code 3701.63. The educational tool required by this statute includes helpful information for families on choosing a childcare provider and can be found at: http://www.odh.ohio.gov/odhprograms/cfhs/shaken/baby.aspx .

Additional information on childcare selection can be found on the Early Childhood Resource Centers website: http://www.ecresourcecenter.org/tips-on-finding-quality-child-care



Suicide Deaths

In late 2017 and early 2018, Stark County, Ohio, experienced an increase in the number of deaths due to youth suicide. While four of those deaths are included in the statistics of this report, the additional deaths occurred during 2018 and will be reviewed by the CFR Board during 2018 and reported at a later date. Figure 14, on page13, shows the number of youth suicides in Stark County from 2000-2017.

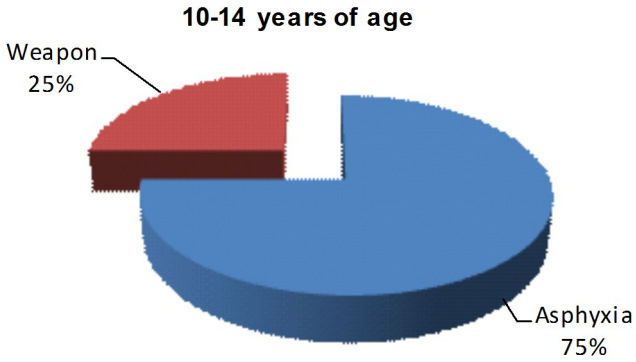
For 2012-2016, CFR Boards from across the State of Ohio reviewed 239 deaths to children from suicide.[1] This represents 3% of the total deaths reviewed during this timeframe. Eight of these deaths were to Stark County children, accounting for 3.49% of the deaths that occurred during this same timeframe in our local community. Table 8, to the right, shows the factors that were reported to be involved in those Stark County youth suicide deaths from 2012-2016.

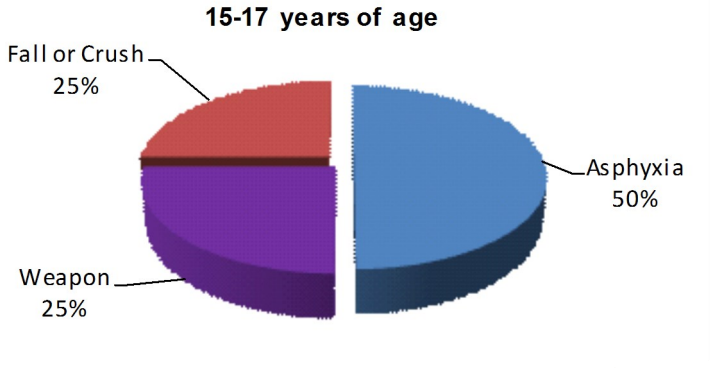
Table 8: 2012-2016 Factors involved in Suicide Deaths

Deaths Reviewed	8
History of maltreatment as victim	2
History of substance abuse	1
Talked about suicide	1
Prior suicide threats were made	1
Received prior mental health services	2
Receiving mental health services at time of death	1
On medications for mental illness	1
Contributing Factors	
Family discord	1
Argument with parents/caregivers	2
Other serious school problem	1
Unknown	1

*It is important to note that the many suicide deaths included more than one of the factors notated above.

Figures 12 & 13: 2012-2016 Methods of Suicide by Age group





Know the warning signs

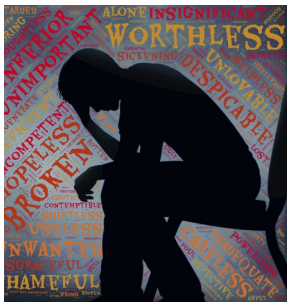
- Talking or writing about suicide
- Giving away belongings
- Withdrawing from loved ones and activities
- Feeling hopeless, helpless, worthless
- Seeking ways to suicide, such as guns or pills
- Major eating or sleeping changes
- Increasing use of alcohol or other drugs
- Losing interest in things previously enjoyed

Who is at risk for suicide?

Individuals may be more likely at risk of suicide if they:

- Have attempted suicide before
- Have family or friends who have attempted or completed suicide
- Experienced a recent breakup, loss or other major change
- Have severe problems at work or school
- Have an untreated mental illness such as depression or bipolar disorder
- Have problems with alcohol or other drugs

Suicide Deaths



There is no single cause of suicide

No one cause or event makes a person suicidal. Suicide is a result of multiple stressors that make an individual feel out of control, trapped or unable to change what is happening.

Get emergency help immediately by calling:

Stark County Crisis Center Hotline

330-452-6000

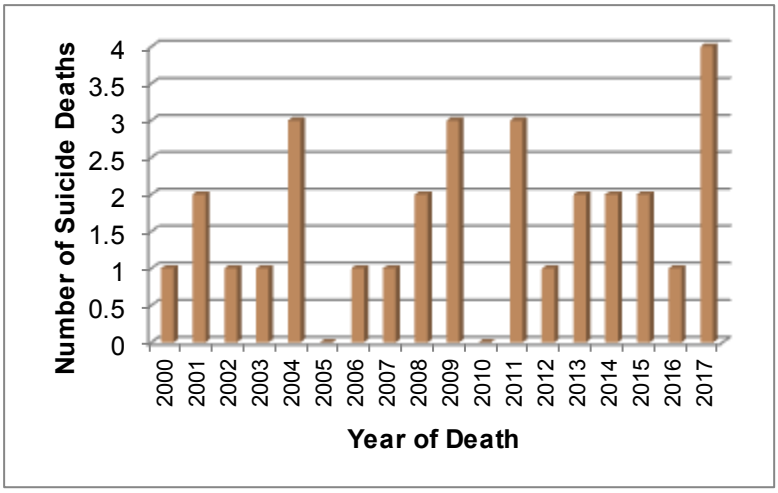
or

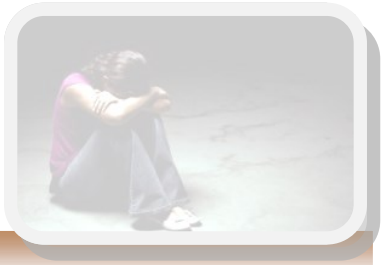
Text 4HOPE to 741741

Stark County Mental Health and Addiction Recovery-

https://starkmhar.org/prevention-resources/suicide-prevention-coalition/

Figure 14: 2000-2017 Stark County Youth Suicide Deaths





Recommendations

Stark County Plan for the Prevention of Youth Suicide

Due to the increased incidence of suicide deaths occurring in Stark County during the 2017/2018 school year, Stark County has convened a Coordinating Committee. Members of the committee represent mental health, departments of public health, law enforcement, hospitals, and education. Coordinating Committee members met with individuals from Ohio Department of Health and the Centers for Disease Control and Prevention in early April 2018. During this time, a survey was implemented in high schools across the county. The Stark County CFR Board supports the committee that is tasked to discuss and find the root causes of teenage deaths and school violence in our community. Additional community wide recommendations will be implemented after the results of the survey are reviewed. Until county specific recommendations are formed, the CFR Board recommends that local school districts implement policies, procedures, including evidenced based prevention programs, and follow-up plans to assure that at-risk students for suicide and/or a history of depression receive the appropriate assessment and intervention.

Mobile Youth Crisis Team

The Stark County CFR Board supports the suicide prevention services and programs provided by the Stark County Suicide Prevention Coalition and Stark County Mental Health and Addiction Recovery (Stark MHAR). The Board recommends that parents and guardians visit Stark MHAR's website to find local resources and educational materials regarding youth suicide prevention: https://starkmhar.org/help/youth-suicide-prevention/

The Stark County CFR Board supports the development and use of a county Mobile Youth Crisis Team to be called in to area schools to assist with suicide prevention, counseling, and support.

Homicide

As seen in Figure 1, on page 6, there were 53 infant and child deaths in 2017. Although there were 53 deaths, only 40 were able to be reviewed prior to April 1, 2018, due to open investigations. Ohio Revised Code section 307.625 prohibits the review of any child death that is pending investigation or prosecution of a person for causing the death unless the prosecuting attorney agrees to allow the review. Due to these restrictions, the homicide section of this report only includes homicide deaths through 2016. Homicides accounted for 4.37% of the total deaths that occurred to infants and children in Stark County from 2012-2016. While the majority, 80% of those homicide deaths, were to children under five years of age, this is not true for the statistics across the state. The 2017 Ohio Child Fatality Review Report showed only 45.5% of homicides occurring to children under the age of five.[1] During 2016, approximately 671,622 children across the United States were confirmed to be victims of maltreatment.[4] Of these child maltreatment cases, 23,635 were residents of Ohio. Over 1/3 of these cases were to children under 5 years of age, re-emphasizing that this age group is our most vulnerable population.

Table 9: 2012-2016 Homicides by Cause and Age Group

Causes	<1 Year	1-4 Years	5-9 Years	10-14 Years	15-17 Years	Total
Any Medical Cause	1	0	0	0	0	1
Asphyxia	0	1	0	0	0	1
Weapon	1	5	1	0	1	8
Sub-Total	2	6	1	0	1	10

Figure 15: 2012-2016 Percentage of Deaths Due to Homicide

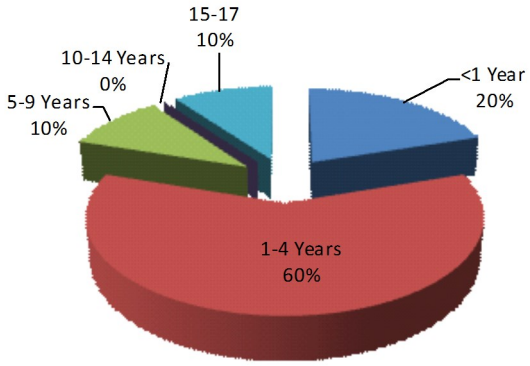
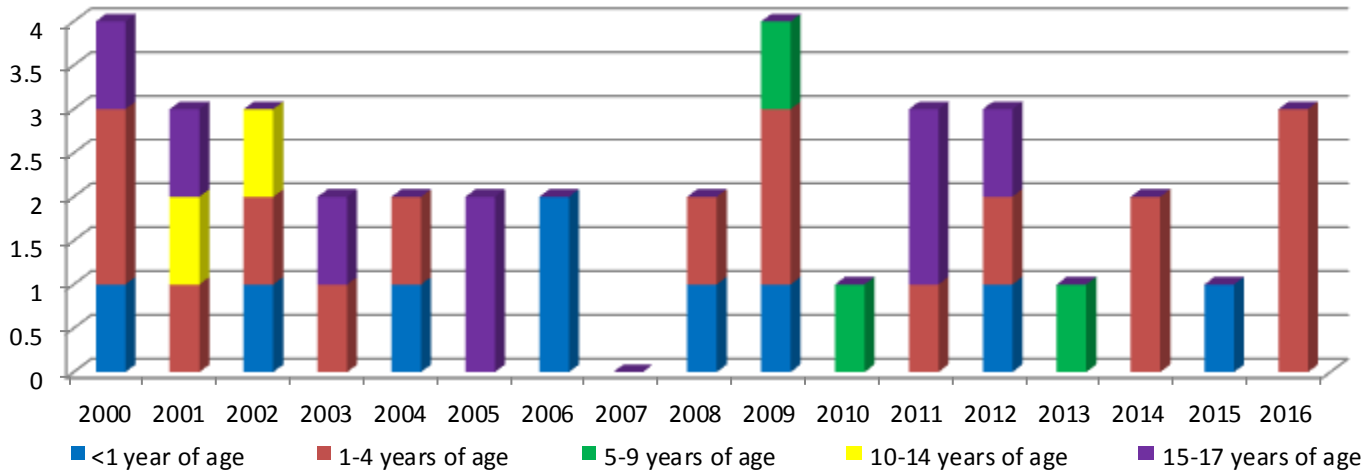
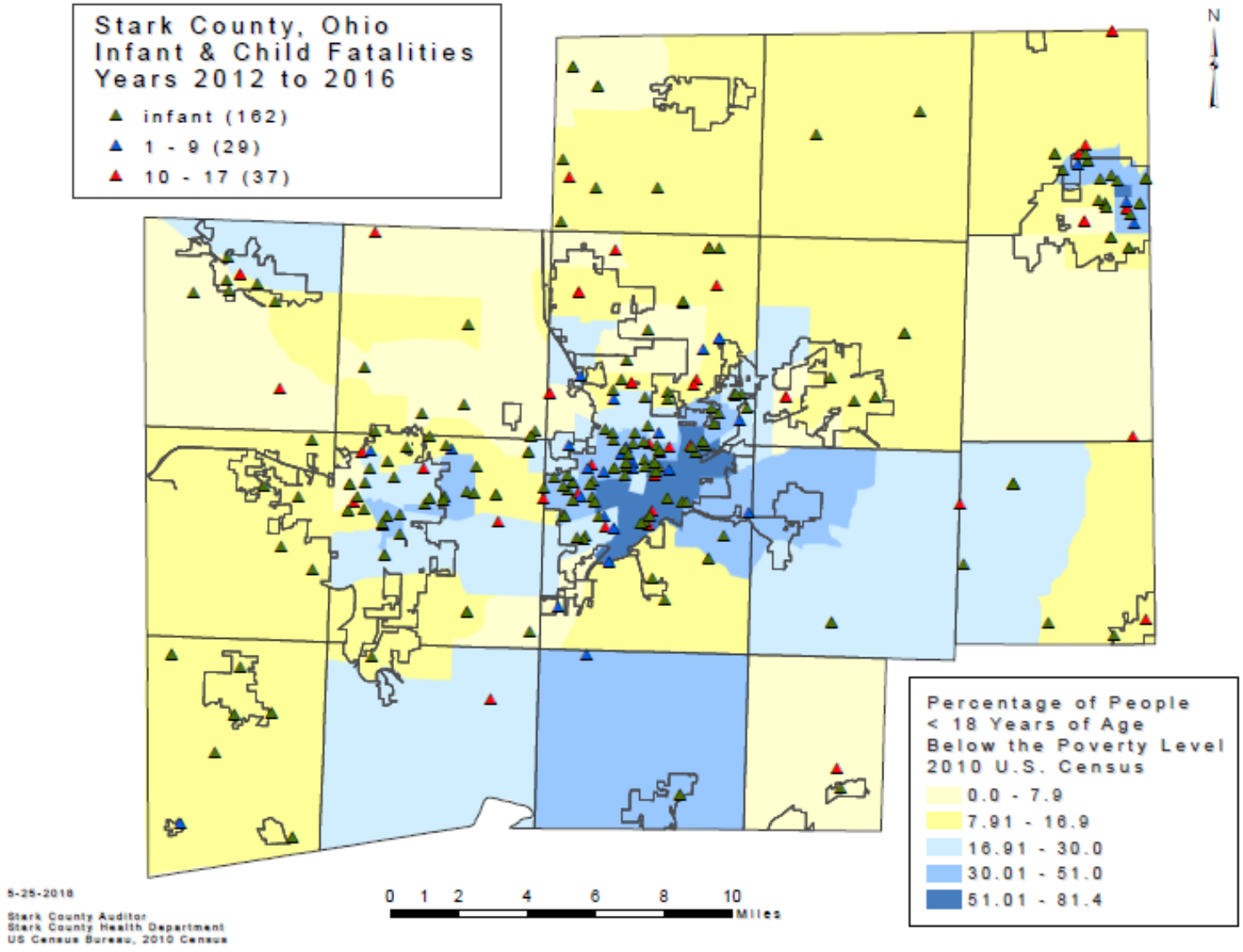


Figure 16: 2000-2016 Homicides by Age Group



Child Fatality Map

Map 1: Stark County Child Fatality Map 2012-2016



Map 1, above, shows the distribution of poverty and child fatalities in Stark County, Ohio for (2012-2016). As expected, there is a higher incidence of child and infant deaths in those areas of higher population density and lower economic status. According to the US Census data from 2017, Stark County, Ohio has approximately 372,542 residents. The most recent data reports show that 21.6% of those residents are under the age of 18. [5]

Rate= $\frac{\text{Incidence}}{\text{Population}}$

Sleep Related Deaths

Sleep related deaths can include deaths from any of the following causes: Asphyxia, Suffocation, Entrapment, or Strangulation. Figures 17, & 18, below, show the breakdown of sleep related deaths to infants and young children between 2012-2016.

2016

8 sleep related deaths

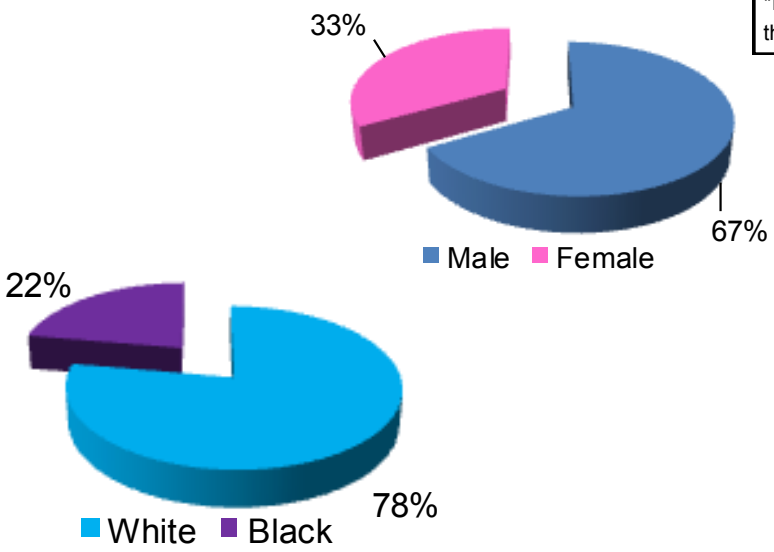
- 7 involved unsafe bedding
- 3 were sleeping with other people
- 3 were not sleeping on their back

2017

4 sleep related deaths reviewed however, there are several open investigations in deaths that might have involved sleep environments.

*It is important to note that sleep related deaths can included more than one of the factors listed above.

Figure 17 & 18: 2012-2016 Sleep Related Death Demographics



18 Sleep Related Deaths occurred between 2012- 2016

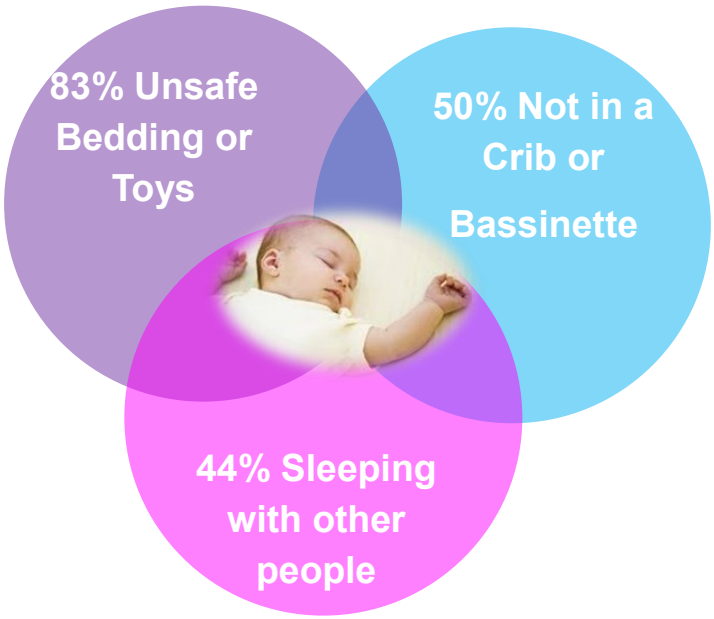
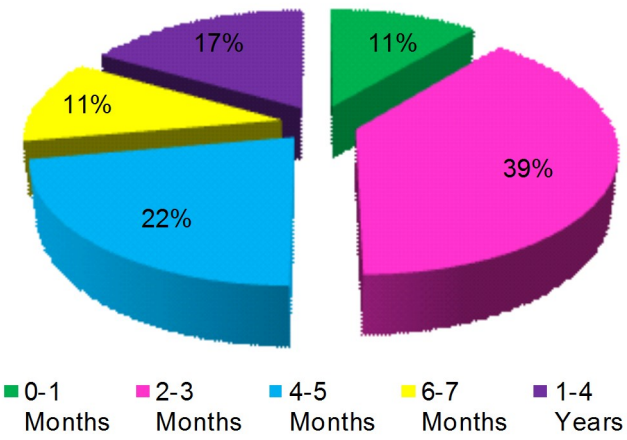


Table 10: 2012-2016 Risk Factors for Infant Sleep Related Deaths

Sleep Related Risk Factor	Total
Unsafe bedding or toys	13
Not sleeping in a crib or bassinette	8
Sleeping with other people	7
Not sleeping on back	6
Caregiver fell asleep while bottle feeding	1
Caregiver fell asleep while breast feeding	1

*It is important to note that sleep related deaths can included more than one of the factors listed above, therefore the total does not add up to the 18 deaths from 2012-2016.

Figure 19: 2012-2016 Percent of Sleep Related Deaths by Age Group



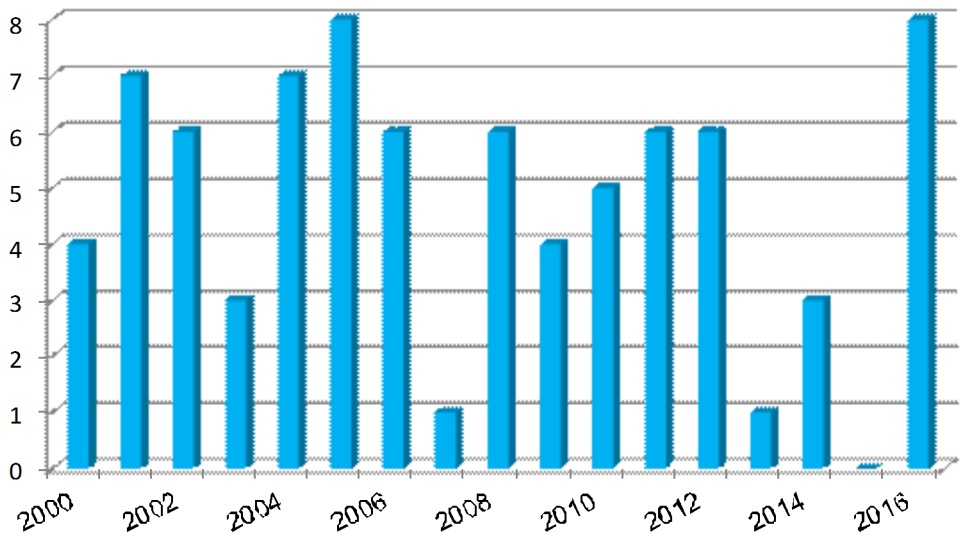
Sleep Related Deaths

From **2000– 2016** there were 90 sleep related deaths that occurred to Stark County infants and young children under five years of age. Of those 90 deaths, 50% were to children less than 4 months of age. Figure 20, below, shows the number of sleep related deaths each year from 2000-2016 and Table 11 shows the deaths by location of incident.

Table 11: Reviews of Infant Sleep Related Deaths by Incident Location, 2012-2016

Sleep Location	Stark County (n=15)	Ohio [1] (n=714)
Unsafe Crib	46%	17%
Adult Bed	6%	43%
Couch	33%	14%
Missing/ Unknown	0%	4%
Bassinette	0%	8%
Other	13%	14%

Figure 20: 2000-2016 Sleep Related Deaths



Recommendations

Infant Safe Sleep Education

The Stark County Child Fatality Review (CFR) Board and Stark County Fetal Infant Mortality Review (FIMR) Team continue to support the THRIVE Advisory Group in their effort to educate parents and caregivers about safe sleep practices. Agencies are encouraged to provide educational programming and brochures about the ABC's of Safe Sleep- Alone, on their Back, in a Crib. All babies should be placed to sleep in a safety-approved crib with a firm mattress covered by a fitted sheet that is empty of blankets, pillows, bumper pads, or stuffed animals. Early education childcare providers and healthcare facilities are encouraged to adopt the Ohio Department of Health's Policies on Infant Safe Sleep and Infant Feeding. Prior to discharge, all labor and delivery hospitals must ensure new mothers receive safe sleep education. In addition, hospital personnel must model the safe sleep practices within the hospital setting this includes use of an appropriately sized sleep sack. Distribution of infant safe sleep educational materials with all new birth certificates printed at local health departments is recommended.

Infant Mortality

Infant Mortality has been an issue plaguing our community for many years. Infant Mortality is defined as the death of an infant before his or her first year of life. With the enactment of Substitute House Bill 448 in 2000, Stark County began to review the deaths of all resident infants and children. Although this review process initially focused most of the boards efforts on those infant and child deaths that were due to non-natural circumstances, in the past few years a much more detailed review was implemented with the assistance of our local FIMR Team.

FIMR is a multidisciplinary approach to the review of infant deaths to help identify the root causes that might impact a local communities infant mortality rate. Stark County's local FIMR team is comprised of a group of dedicated individuals from public health agencies, community based programs, local physicians, and hospitals.

This report discusses the statistics discovered with our local review of those infant deaths that occurred in 2016 & 2017 and will detail the recommendations made by both the FIMR Team and Stark County Child Fatality Review Board.

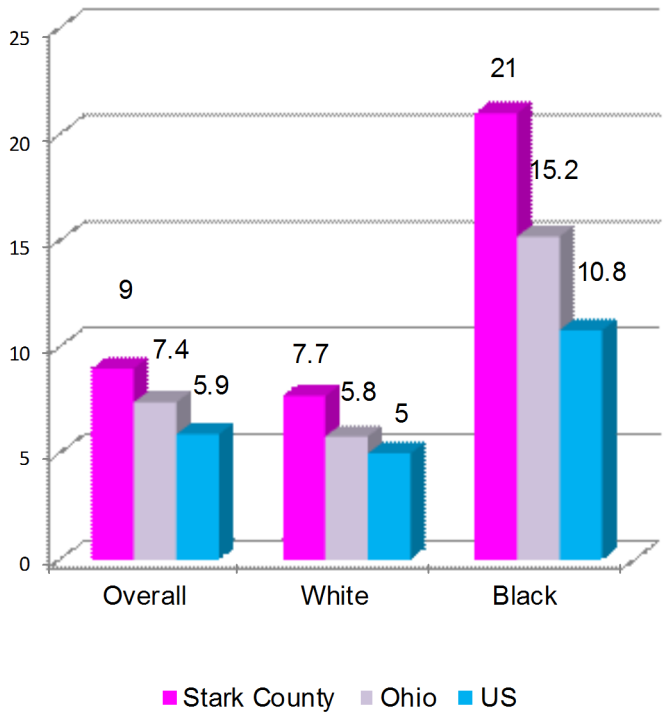
Stark County Black infants die at a rate that is over 2X that of White infants

Deaths to children can often be considered a good predictor of a communities health and wellbeing. The raw numbers can tell us the overall picture but only through a detailed look at each and every infant and child death, can we learn how to respond best as a community to prevent further tragedies from occurring.

Over the past eighteen years, the Stark County Child Fatality Review Board has reviewed the deaths of nearly 600 infants. These infant deaths were classified by manner in one of four ways: natural, accident, homicide or undetermined.

Of those 600 deaths: 523 (87%) were from natural causes, 42 (7%) were due to accidents, 9 (2%) were homicides, and 17 (3%) cases the official classification was unable to be determined, and 7 (1%)are yet to be reviewed.

Figure 21: 2016 Infant Mortality [6]



Infant Mortality

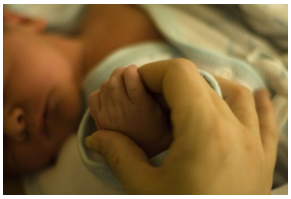


Table 12: 2016 & 2017 Infant Mortality Rates

Stark County	2016	2017	Ohio 2016	Ohio 2017
*Overall Infant Mortality	9.0	9.2	7.4	7.2
White Infant Mortality Rate	7.7	8.4	5.8	5.2
Black Infant Mortality Rate	21.0	17.6	15.2	15.7
**Disparity Ratio	2.7	2.1	2.6	3.0
Ohio IM Goal - Healthy	6.0	6.0		
5-year Average Number of Births to White Women	3,580	3,566		
5-year Average Number of Births to Black Women	485	485		
5-year Average Number of	30.2	29.8		

*IMR: The number of deaths in a year divided by the number of births in the same year, and multiplied by 1,000.

What the IMR means in words: For every 1,000 babies born in Stark County in 2016, 9 babies died.

What the disparity rate means: In 2016, nearly three black babies died for every one white baby that died. Our goal is to decrease the disparity rate to 1.0. We saw improvement from 2016 to 2017, as the disparity rate dropped to two black babies dying for every one white baby that died.

Table 13: Counts of Natural Infant Death by Cause

Natural Cause	2016	2017
Prematurity	16	9
Other medical condition	8	10
Congenital anomaly	5	1
Cardiovascular	1	4
Neurological/seizure disorder	1	0
Pneumonia	1	0
Other infection	0	2
Other perinatal condition	1	0
Total Natural Infant Deaths	33	26

2016 (39 infant deaths reviewed)

- 1 (3%) mother was 19 years of age or younger
- 26 (67%) were less than 2,500 grams
- 9 (23%) mom's were participating in the WIC program during their pregnancy
- 24 (62%) were receiving assistance through the Medicaid system
- 29 (74%) were less than 37 weeks gestation
- 18 (46%) died in the first 24 hours of life
- 27 (69%) died in the first 28 days of life

*Infant deaths can include more than one of the factors listed above.

2017 (30 infant deaths reviewed)

- 1 (3%) mother was 19 years of age or younger
- 15 (50%) were less than 2,500 grams
- 15 (50%) mom's were participating in the WIC program during their pregnancy
- 14 (47%) were receiving assistance through the Medicaid system
- 20 (67%) were less than 37 weeks gestation
- 7 (23%) died in the first 24 hours of life
- 24 (80%) died in the first 28 days of life

*Infant deaths can include more than one of the factors listed above.

Infant Mortality

Figure 22, to the right, shows the mortality rate of infants who were born premature, separated by race, from 2012-2016. Prematurity was the leading case of death for infants in Stark County from 2012-2016. Figure 23 and Table 14, below, show the infant mortality rate of Stark County over the past 10 years. These figures illustrate that our Stark County's black infant mortality rate continues to be a major concern for our community with a mortality rate twice, and some years, three times that of white infants.

Figure 22: Mortality Rate of Premature Infants (<37 weeks), by Race

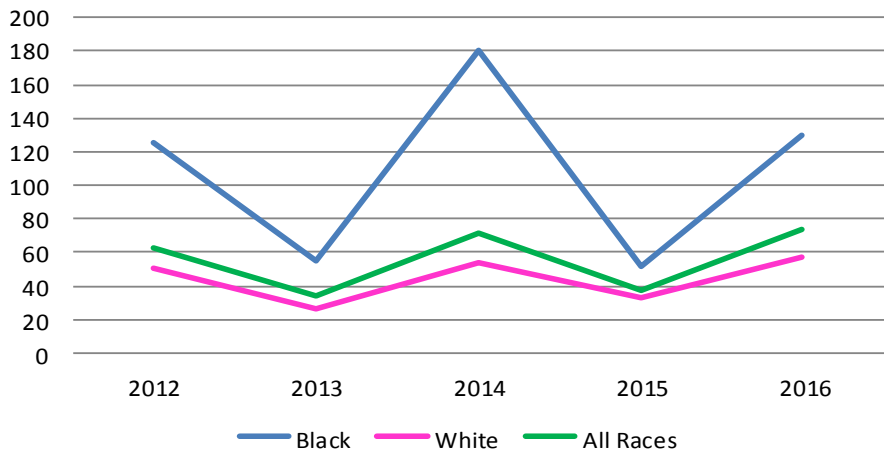


Figure 23: 5-Year Averages of Infant Mortality Rates by Race in Stark County, Ohio, 2008-2017

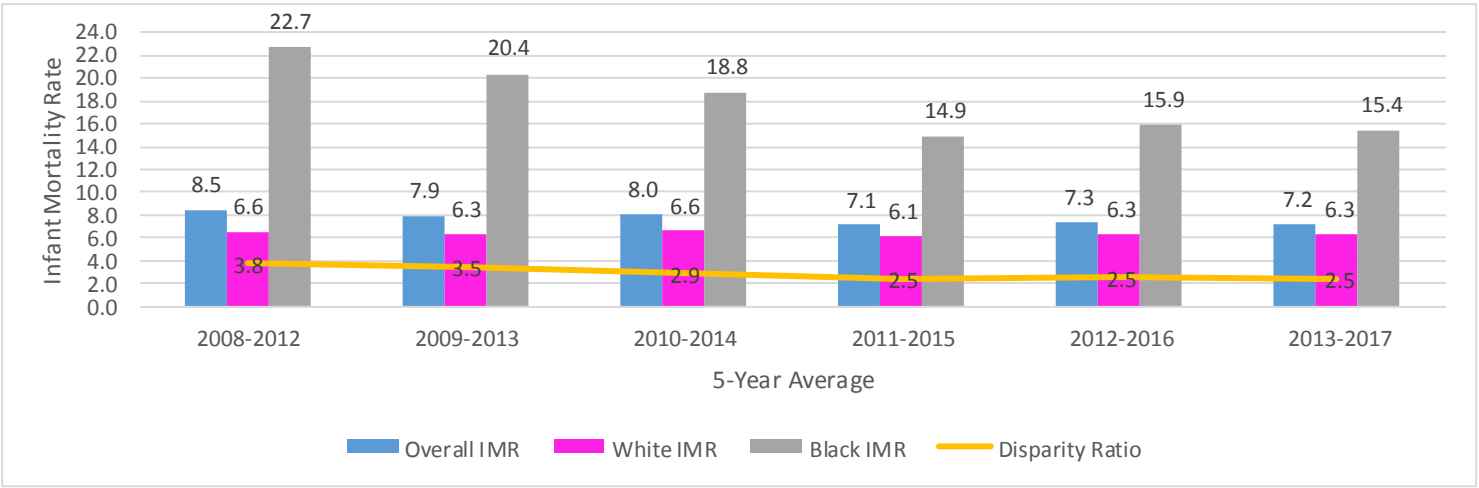
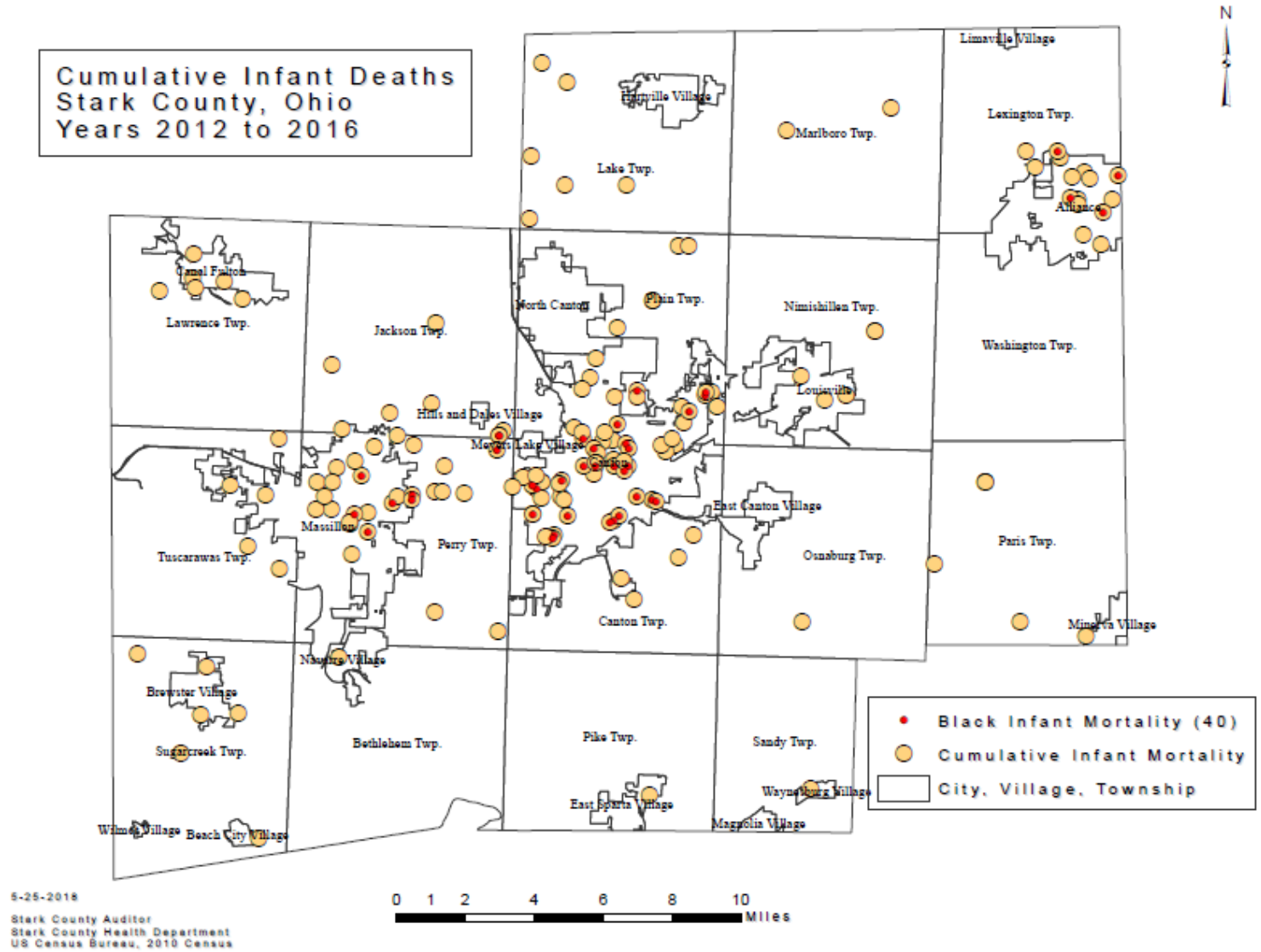


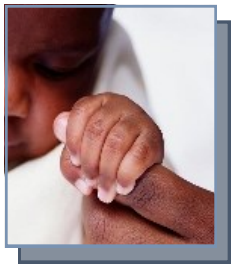
Table 14: 10 Year History of Infant Mortality by Race with Disparity in Stark County, Ohio, 2008-2017

Infant Mortality	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Overall IMR	8.6	7.0	9.1	7.9	9.8	5.9	7.5	4.5	9.0	9.2
White IMR	7.0	4.3	6.3	6.8	8.5	5.6	5.8	3.9	7.7	8.4
Black IMR	18.9	28.2	30.2	16.3	19.7	7.4	20.2	11.0	21.0	17.6
Disparity Ratio	2.7	6.6	4.8	2.4	2.3	1.3	3.5	2.8	2.7	2.1

Infant Mortality Map

Map 2: Stark County Infant Mortality Map 2012-2016





Map 2, above, shows the distribution of infant deaths in Stark County over a five year period from 2012-2016. The majority of those infant deaths that occurred during this five year timeframe occurred inside the cities of Alliance, Canton, and Massillon.

According to the United States Census Bureau, Stark County, Ohio has a population under 18 years of age of approximately 80,469 children. Of these children 6% live in the city of Alliance, 22% live in the city of Canton and 9% live in the city of Massillon accounting for just over 1/3 of the childhood population of Stark County. [8]

Recommendations

Early and Comprehensive Prenatal Care

The death of an infant in their first year of life is devastating to both the family and the community at large.

Through early comprehensive prenatal care, and patient education, many of these needless infant deaths could be prevented in the future. The CFR Board and FIMR Team are recommending early comprehensive prenatal care that follows the American College of Obstetricians and Gynecologists (ACOG) guidelines and includes the following components:

- Depression screening
- Tobacco cessation programs
- Progesterone
- Complete workup for all females with a history of preterm birth or previous loss to determine the potential cause
- Education
  - Symptoms of preterm labor
  - Infant Safe Sleep
  - Benefits of appropriate birth spacing
  - Contraceptive options
  - Risks of delivering outside of hospital setting

Contraception Education for Women

Education is recommended for all women of childbearing age on the approved methods of contraception regardless of whether they are offered at the provider's office. Educating clients on the most effective methods, (long-acting reversible contraceptive (LARC) should be done before educating clients on less effective methods. This information should be presented in an accurate, easily understood, and nonjudgmental manner in order to ensure that the client understands each methods rate of effectiveness, correct use, benefits, side effects, and protection from sexually transmitted infections.

Education on Signs of Preterm Labor

Providing education to all pregnant females about the signs and symptoms of preterm labor, emphasizing when to seek medical attention is a key component in lowering our infant mortality rate.

The March of Dimes Action Sheet- Signs and Symptoms of Preterm Labor could be helpful as a take home reminder.

The action sheet mentioned above can be found at: https://www.marchofdimes.org/complications/signs-and-symptoms-of-preterm-labor.aspx

Birth Spacing

All Primary Care Physicians as well as Obstetricians are encouraged to educate families about the importance of proper birth spacing between pregnancies. Research suggests that women should wait a minimum of 18 months from the live birth of a child to the conception of the next child. Further information regarding birth spacing can be found at https://www.acog.org/Clinical-Guidance-and-Publications/Committee-Opinions/Committee-on-Obstetric-Practice/Optimizing-Postpartum-Care

An educational fact sheet on this topic from the March of Dimes can be found at https://www.marchofdimes.org/materials/MOD-Birth-Spacing-Factsheet-November-2015.pdf

Progesterone

The use of progesterone during the second and third trimesters of pregnancy for women with a history of previous preterm births and/or miscarriages is recommended.

https://www.acog.org/About-ACOG/ACOG-Districts/District-II/Preventing-Preterm-Birth-Series

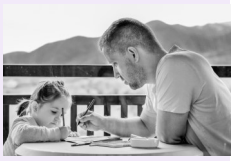
Recommendations

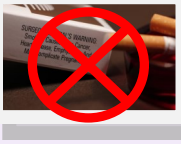
Depression Screening for all Pregnant Women

Depression assessment/ screening is recommended for all pregnant patients. This recommendation aligns with the American College of Obstetricians and Gynecologists Committee Opinion Number 630 from May 2015 on Screening for Prenatal Depression. Tools such as the PHQ-2/PHQ-9 should be completed on all pregnant females at least once during the pregnancy. Ideally these screenings would be completed during each trimester to assess for depression and anxiety. Referrals for mental health counseling services should be made when indicated by the screening tool used.

Parenting Classes

The Stark County CFR Board and Stark County FIMR Team recommend parenting classes provided by the following agencies: Early Childhood Resource Center, Goodwill, and Child and Adolescent Behavioral Health.





Tobacco Cessation Programming

Women of child bearing age should be urged to participate in smoking cessation programs, such as: the BABY& ME™ Tobacco Free Program located at the Stark County Health Department. In addition, the Board recommends that obstetrician/ gynecological practices implement smoking cessation programs, such as the Ohio Smoke Free Families-5 A's. Information on these programs can be found at:

Stark County Health Department

http://starkcountyohio.gov/public-health/nursing-services/baby-me-tobacco-free

Ohio Department of Health

https://www.odh.ohio.gov/odhprograms/cfhs/psmok/presmoke1.aspx

Home Visiting Programs for Pregnant Women

Home-visiting programs to address the racial disparities of infant mortality across Stark County are highly recommended.

The efforts and initiatives being implemented by Stark County THRIVE. For further information regarding THRIVE please visit their Facebook page at: https://www.facebook.com/StarkCoTHRIVE/?ref=aymt_homepage_panel

OR

Twitter or Instagram

@ starkcountythrive

Fetal Death vs. Live Birth Certificate

Physicians, hospitals, and funeral homes are requested to follow the definitions and guidelines for an infant death declaring a fetal death verses a live birth. These definitions can be found in Ohio Revised Code Section 3701-5-01 and are included below:

- (A)"Live birth" means the complete expulsion or extraction from its mother of a product of human conception, that after such expulsion or extraction, breathes or shows any other evidence of life such as beating of the heart, pulsation of the umbilical cord, or definite movement of voluntary muscles, whether or not the umbilical cord has been cut or the placenta is attached.

- (B) "Fetal death" means death prior to the complete expulsion or extraction from its mother of a product of human conception, of at least twenty weeks of gestation, which, after such expulsion or extraction does not breathe or show any other evidence of life such as breathing of the heart, pulsation of the umbilical cord, or definite movement of voluntary muscles.

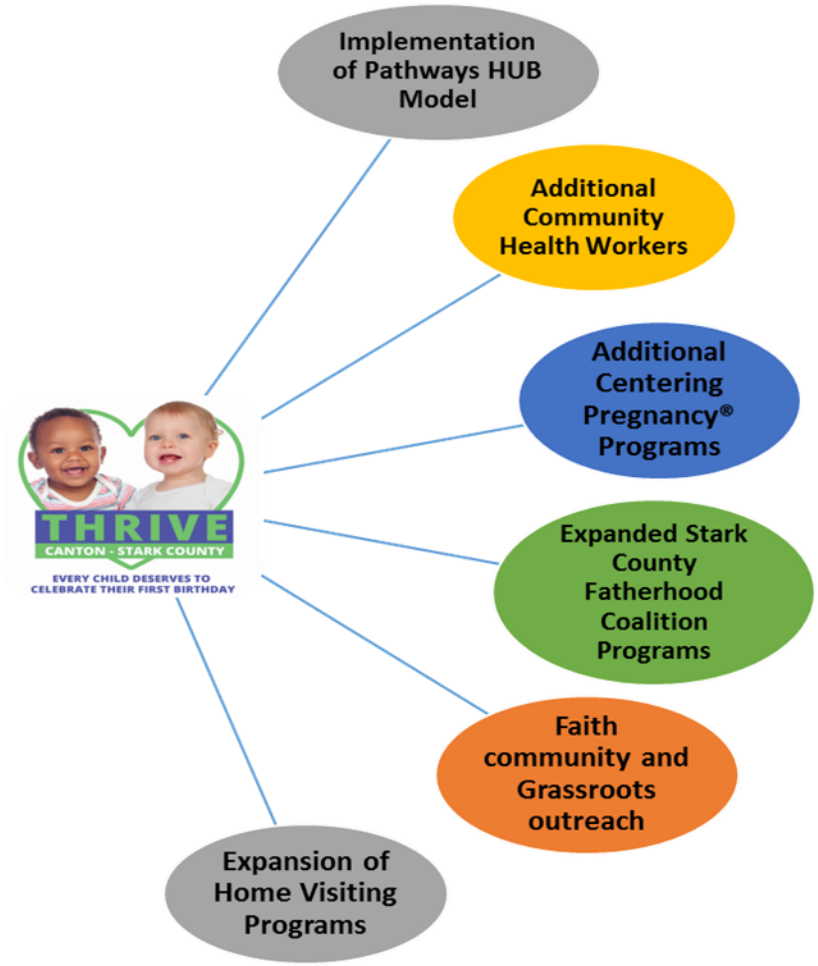
Stark County THRIVE

(Toward Health Resiliency for Infant Vitality and Equity)

Since 2013, Stark County THRIVE has been working closely with partners in Stark County to identify local causes of infant deaths and disparity. In 2016 Canton City Public Health was awarded $2.9 M from the Ohio Department of Medicaid to expand this important work.

Stark County THRIVE is a broad-based coalition of residents, government organizations, faith-based and grassroots agencies, providers, health systems and funders. Using data and the results from the implementation of evidence-based interventions we have gained a much deeper understanding of infant mortality and the disparity occurring in Stark County.

Our work has only just begun. It will take the sustained and focused work of many to improve birth outcomes for our community. Together we are moving the needle on infant mortality and disparities by:



- **Implementing strong evidence based interventions**
- **Building broad based community support**
- **Measuring and evaluating results**
- **Leveraging local and state investments**
- **Developing a model for sustainable interventions**

Preventability

As mentioned on page 5 of this report the primary goal of the Child Fatality Review (CFR) process is to reduce the incidence of preventable child deaths in Stark County through a detailed comprehensive local review of the circumstances surrounding the deaths to all children in our community. The graphs below show the results of the review process for 2016, 2017 and the five year timeframe of 2012-2016 based on whether or not the review team believed that the death was preventable, not preventable, or if the preventability could not be determined by the information that was available at the time of the review. It is important to remember that for every child that dies in our community, there are many others who may have been injured or disabled. For information regarding childhood injuries please see the yearly childhood injury reports available on Stark County Health Department's website: http://www.starkcountyohio.gov/public-health/reports-statistics .

Figure 24: 2016 Preventability

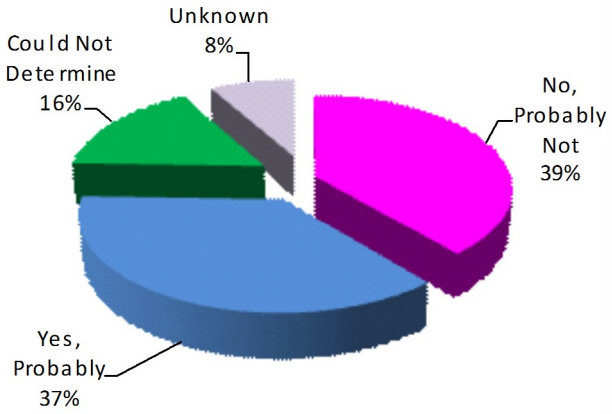


Figure 25: 2017 Preventability

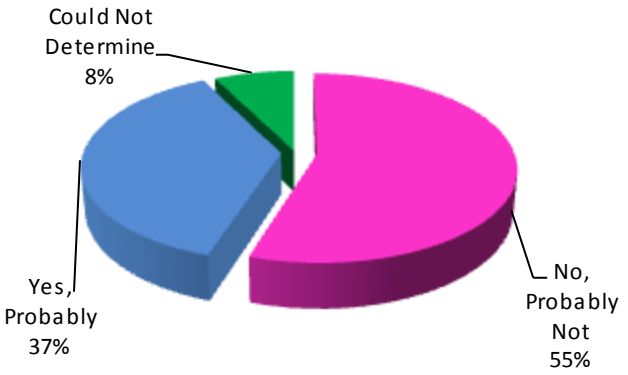
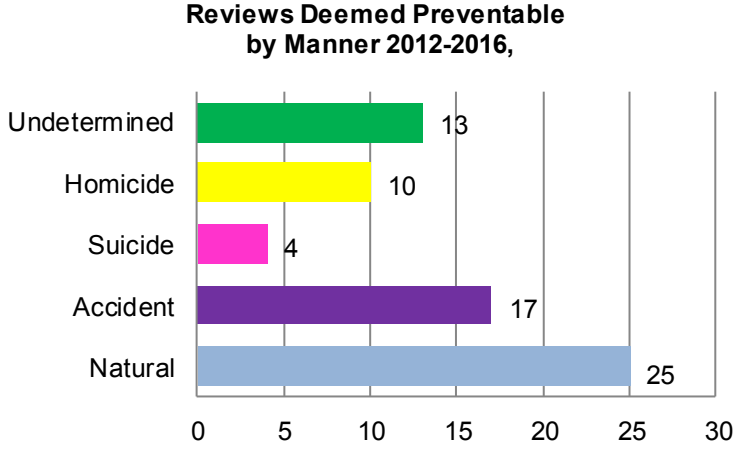
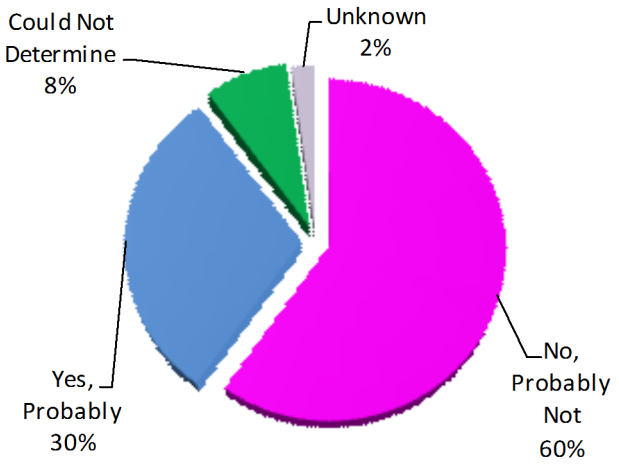


Table 15: Case Investigations 2012-2016

Investigation Information	2012-2016
Number of Deaths Reviewed	229
Death was referred to medical examiner or Coroner	75
Death was NOT referred to ME or Coroner	154
Autopsy was performed	71
Scene investigation was conducted	42
Toxicology screen was conducted	54
Imaging conducted	38
CPS record check was conducted as result of death	123
Investigation found prior evidence of abuse	12
CPS action taken because of death	9

Figure 26 & 27: 2012-2016 Preventability (n=229)





References

[1] Ohio Child Fatality Review Seventeenth Annual Report: Ohio Department of Health http://www.odh.ohio.gov/odhprograms/cfhs/cfr/cfrrept.aspx

[2] Centers for Disease Control and Prevention: Injury Prevention & Control-Ten Leading Causes of Death and Injury https://www.cdc.gov/injury/wisqars/leadingcauses.html

[3] Centers for Disease Control and Prevention: Injury Prevention & Control-Ten Leading Causes of Death and Injury https://www.cdc.gov/injury/wisqars/leadingcauses.html

[4] Child Welfare Outcomes 2016 Data U.S. Department of Health and Human Services Administration for Children and Families Administration on Children, Youth and Families Children's Bureau https://cwoutcomes.acf.hhs.gov/cwodatasite/childrenReports/index

[5] US Census Quick Facts https://www.census.gov/quickfacts/fact/table/starkcountyohio,US/AGE295217#viewtop

[6] Centers for Disease Control and Prevention: Infant Mortality https://www.cdc.gov/nchs/pressroom/sosmap/infant_mortality_rates/infant_mortality.htm

[7] ODH Secure Data Warehouse, https://odhgateway.odh.ohio.gov/

[8] US Census Quick Facts: https://www.census.gov/quickfacts/fact/table/alliancecityohio,massilloncityohio,cantoncityohio,starkcountyohio,US/AGE295217

STARK COUNTY CHILD FATALITY REVIEW & FIMR BOARD MEMBER ORGANIZATIONS

Stark County Health Department — "Striving Toward a Healthier Community."

Canton Police — Canton, Ohio

Plain Township Fire Rescue — Education Service Protection — Stark Co Ohio

Public Health — Prevent. Promote. Protect. — Canton City Public Health

Stark County Sheriff's Office — Sheriff George T. Maier

Canton Fire Dept. — Ohio

The Stark County Coroner

Stark County Mental Health & Addiction Recovery — StarkMHAR.org

SMHA — Stark Metropolitan Housing Authority

Aultman

Stark County Job & Family Services

ACES — Academic & Community Emergency Specialists

Stark County educational service center

United Way of Greater Stark County

Mercy Medical Center

My Community Health Center