



INDIANA

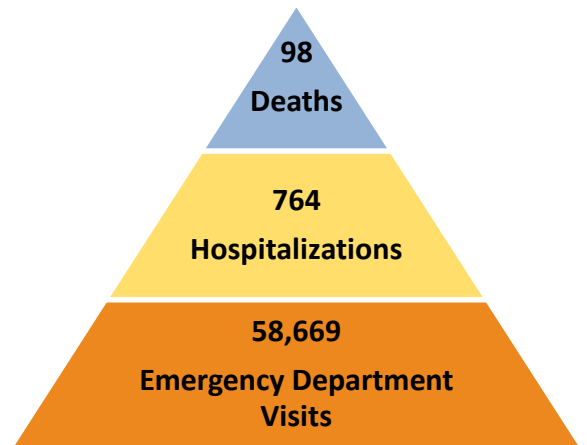
Special Emphasis Report: Infant and Early Childhood Injury, 2012

Injury is a Leading Cause of Death in Children

Injuries are a major public health problem across the United States and in Indiana. Injuries are not random chance events, but follow a predictable sequence of events, and can be prevented using specific strategies. In 2012, 98 Indiana children ages 0-5 years died due to injury. There were 42 deaths among infants less than one year of age and 56 among children ages 1-5 years.

In addition to these injury deaths, there were 764 injury-related hospitalizations, of which 201 were among infants and 563 were among children ages 1-5 years. There were also 58,669 emergency department (ED) visits. These numbers do not include children who received treatment in physician offices or at home.

Figure 1: Annual Injuries* among Children Ages 0-5 Years, Indiana, 2012

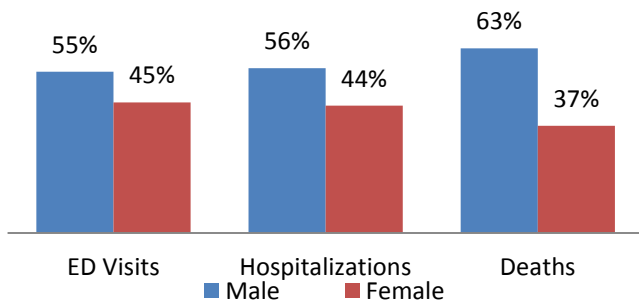


For every child that dies, 8 children are hospitalized and nearly 600 are treated in emergency departments.

2012 Indiana Injury Facts

- 98 children ages 0-5 died due to injury
- 43% of the children who died were infants
- There were 764 child injury-related hospitalizations
 - 74% were children ages 1-5
- 58,669 child emergency department visits were made due to injury
- More male children were injured, treated in emergency departments, hospitalized and died than female children

Figure 2: Percent of Injury Deaths, Hospitalizations and Emergency Department Visits among Children Ages 0-5 Years, by Sex, Indiana, 2012



Child Injury by Sex

Males accounted for a greater number of injuries and had higher rates of injury-related medical treatment in Indiana among children ages 0-5 years compared to females. More male children ages 0-5 years were treated in emergency departments, hospitalized, and died due to injury compared to females of the same age.



*Hospitalizations and emergency department visit data are based on ICD-9 primary diagnostic code of injuries and poisoning.

This document was produced in conjunction with CDC's Core Violence and Injury Prevention Program under Cooperative Agreement 11-1101.



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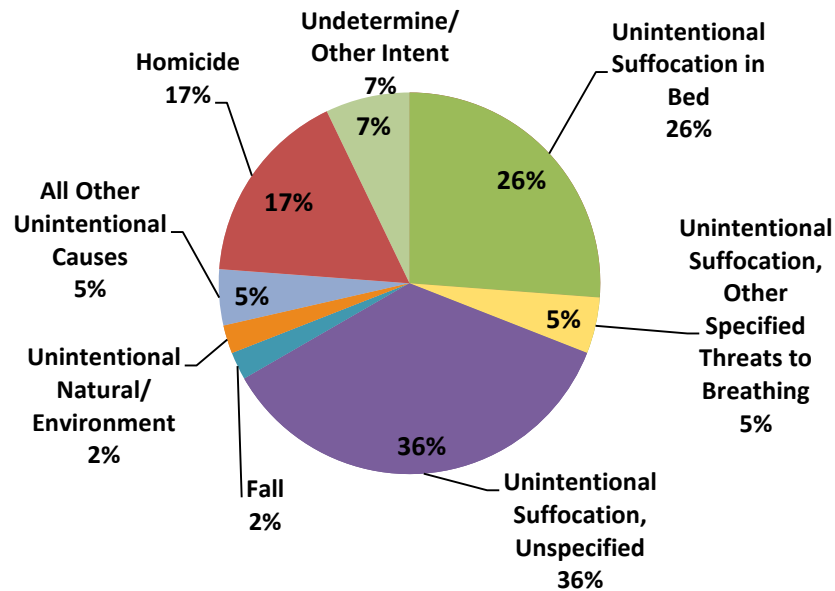
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Injury Deaths in Infants

Infants <1 Year Injury Facts

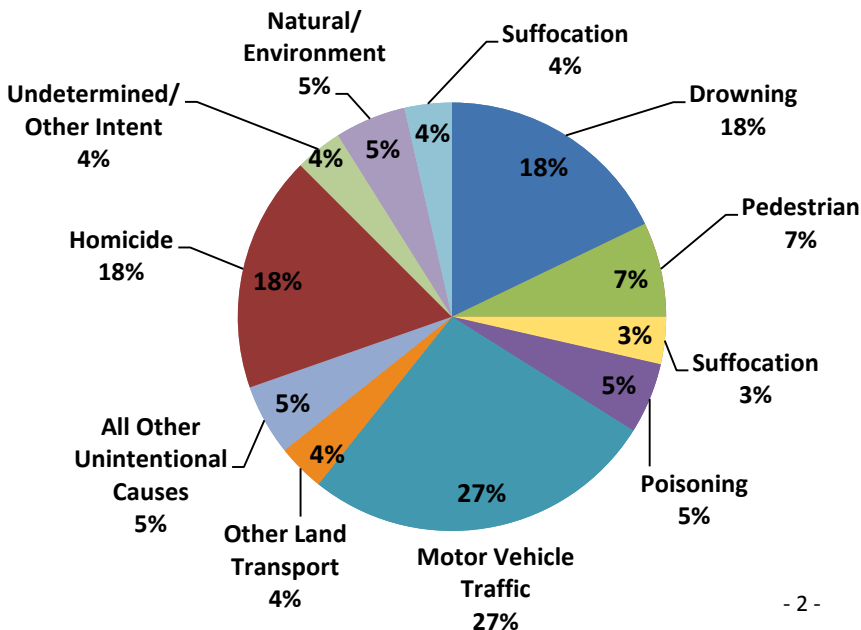
- 42 infant deaths in 2012
- 32 unintentional deaths and 7 homicides
- Suffocation was the leading cause (67%) of injury death for infants
- Suffocation deaths are preventable
- Unsafe sleep environments which include linens, pillows, or other items in the crib, or another body in the bed or on the same sleeping surface often result in suffocations
- Plastic bags, and other specified threats to breathing, also result in infant suffocation deaths

Figure 3: Injury Deaths among Infants Less than 1 Year, Indiana, 2012 (N=42)



Injury Deaths in Young Children

Figure 4: Injury Deaths in Children Ages 1 – 5 Years, Indiana, 2012 (N=56)



Ages 1-5 Injury Facts

- 56 deaths in 2012
- 44 unintentional deaths and 10 homicides
- Motor vehicle traffic-related injuries were the leading cause of injury death
- Car seat use reduces the risk of death by as much as 54%
- Drowning and homicide were the second leading causes of injury deaths
- Children 1-4 have the highest drowning rates



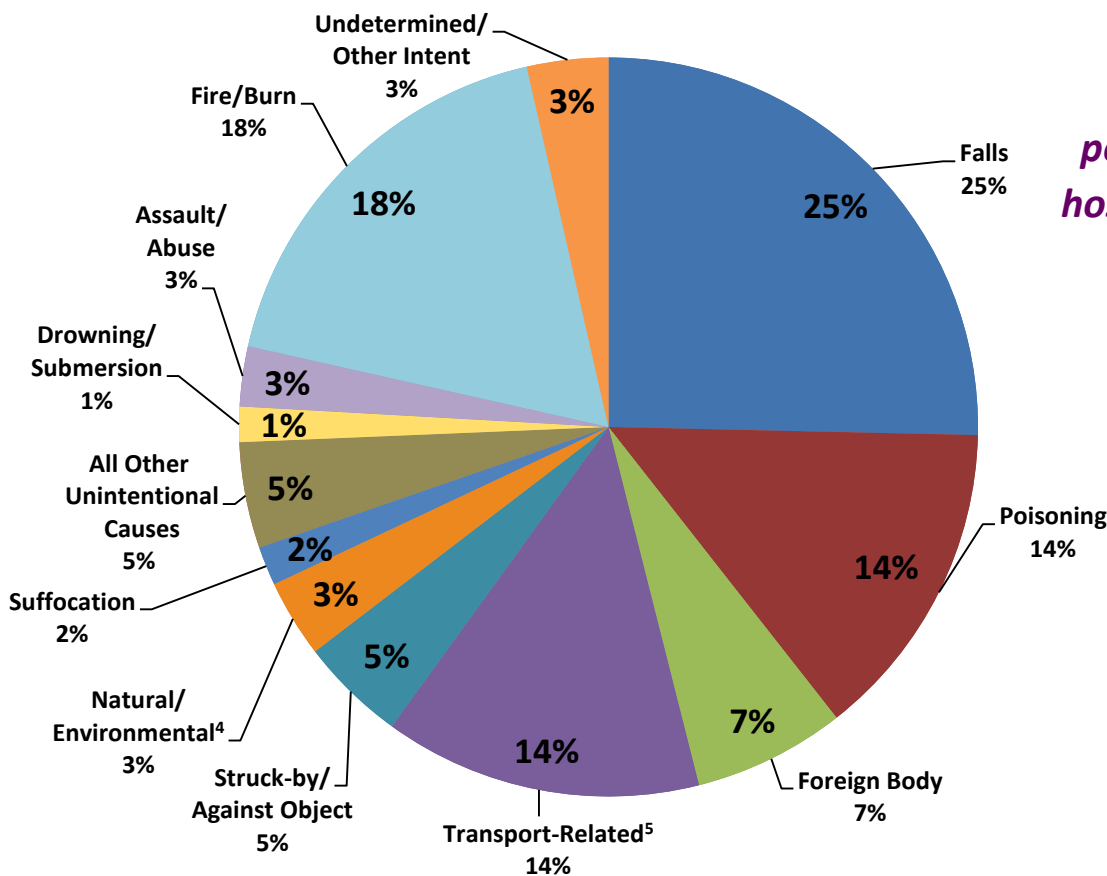
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Injury-Related Hospitalizations

Figure 5: Injury-Related Hospitalizations** among Children Ages 0 – 5 Years, Indiana, 2012 (N=647)

- In 2012, there were 647 injury-related hospitalizations of Indiana children ages 0-5 years, with 143 hospitalizations among infants and 504 among children ages 1-5 years. Most injury-related hospitalizations were unintentional in nature (93.8%).
- Falls were the leading cause of injury-related hospitalizations among both infants (32.9%, n= 47) and young children (23.2%, n=117). The next leading cause of hospitalizations was fire/burns (17.9%, n=116), poisoning (14.1%, n =91) and transport-related injuries (13.9%, n =90).
- Of the 91 hospitalizations due to poisonings, 83.5% were due to drugs, medicinal substances and biologics and 16.5% were by other solid and liquid substances, gases and vapors.
- Prevent child falls by using home safety devices such as window guards, making sure your child wears appropriate protective gear during sports and recreation, and supervising your child at home and at play.



Falls, burns, and poisonings led to 371 hospitalizations among young children.

Fall Circumstances:

Other One Level To Another ¹ :	28.7%
Furniture (bed, chair, etc.):	23.8%
Other/Unspecified ² :	11.6%
Slipping, tripping, stumbling ³ :	9.8%
Steps/Stairs:	8.5%
With Strike Against Object:	7.9%
Playground Equipment:	7.3%
Building:	2.4%

**Injury-related Hospitalization cases selected based on ICD-9 primary diagnosis codes with external cause of injury codes.

1. Fall from one level to another not already included in another fall category, which includes: falls from cliff, wheelchair, commode, or embankment, haystack, stationary vehicle or tree.
2. Fall from ladder or scaffolding; into hole or other opening in surface; from collision, pushing, or shoving, by or with another person; or other or unspecified fall
3. Fall from non-motorized scooter, roller skates, skateboard, ski, snowboard, and other slipping and tripping or stumbling, such as on moving sidewalk, etc.
4. Natural and Environmental causes such as excessive heat, dog bites, insect stings, exposure to cold, tornado, etc.
5. Transport-related includes motor vehicle occupant, bicycle/tricycle (MV & non-MV), pedestrian (MV & non-MV), and other transport.



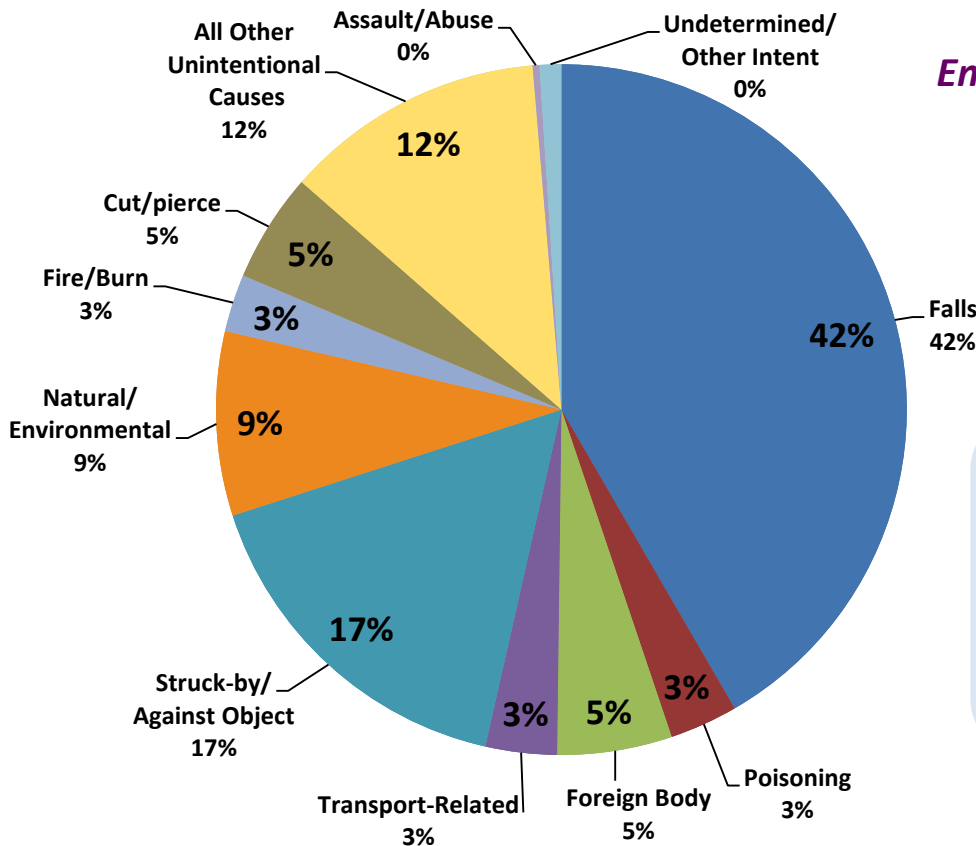
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Injury-Related Emergency Department Visits

Figure 5: Injury-Related Emergency Department Visits among Children Ages 0 – 5 Years, Indiana, 2012 (N= 45,101)**

- In 2012, there were 45,101 injury-related emergency department (ED) visits of Indiana children ages 0-5 years, with 4,047 visits among infants and 41,054 among young children.
- The leading causes of injury-related ED visits in children ages 0-5 were falls (42%, n = 18,788), striking against or being struck by an object or person, (17%, n = 7,440) and natural or environmental causes, including insect stings and dog bites (9%, n = 3,646).
- Of the 16,644 ED visits of children ages 1-5 years for falls in 2012, one in five (21%, n = 3,563) involved falls from with striking against an object and 18% involved slipping, tripping, or stumbling.
- Of the 2,134 ED visits of infants for falls in 2012, two in five (41%, n = 865) involved falls from furniture and nearly one in ten involved falls down steps or stairs (8%, n = 176).



Injuries result in more than 45,000 Emergency Department visits among young children**

Fall Circumstances:
 Other/Unspecified: 23.8%
 With Strike Against Object: 20.2%
 Furniture (bed, chair, etc.): 18.5%
 Slipping, tripping, stumbling: 16.4%
 Other One Level To Another: 8.9%
 Steps/Stairs: 6.6%
 Playground Equipment: 5.5%
 Building: 0.2%

**Injury-related emergency department cases selected based on ICD-9 primary diagnosis codes with external cause of injury codes.



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Table 1: Injury-Related Hospitalizations and Emergency Department (ED) Visits among Children Ages 0 -5 Years, by Age Group, Indiana, 2011-2012**

	Infants less than 1 Year		Children Ages 1-5 Years	
	Hospitalizations	ED Visits	Hospitalizations	ED Visits
Unintentional Injuries	237	7,994	991	80,041
Cut/pierce	0	219	10	4,142
Drowning/submersion	U	5	17	102
Falls (off/from):	94	4,190	272	32,807
<i>Furniture</i>	32	1,620	57	5,140
<i>Steps/stairs</i>	8	347	34	2,180
<i>With strike against object</i>	8	493	23	7,610
<i>Slipping/tripping/stumbling</i>	U	221	32	5,391
<i>Playground equipment</i>	U	18	21	1,838
<i>Building</i>	U	U	9	73
<i>Other fall from one level to another</i>	38	758	57	2,631
<i>Other/unspecified</i>	U	732	39	7,944
Fire/Burn	34	301	195	2,060
Foreign Body	40	403	42	4,421
Natural and Environmental	5	462	39	7,286
<i>Excessive heat</i>	U	17	U	26
<i>Dog bites</i>	U	80	17	1,965
<i>Other bites/stings/animal injury</i>	U	348	17	5,260
<i>All other natural/environmental</i>	U	17	U	35
Poisoning	12	240	157	2,532
Struck-by/against object	12	1,008	47	13,762
Suffocation	12	47	18	119
Transport-related	8	138	151	2,846
<i>Motor vehicle (MV)-occupant</i>	6	103	70	1064
<i>Bicycle/tricycle (MV & non-MV)</i>	U	U	16	939
<i>Pedestrian (MV & non-MV)</i>	U	U	30	163
<i>Other transport</i>	U	34	35	680
All other unintentional causes	19	981	43	9,964
Assault/Abuse	23	34	20	230
Undetermined/Other Intent	22	52	24	756
Total Injury-Related Cases	282	8,080	1,035	81,027

Counts fewer than 5 are suppressed (U)

**Injury-related hospitalization cases selected based on ICD-9 primary diagnosis codes with external cause of injury codes. Injury-related emergency department cases selected based on ICD-9 primary diagnosis codes with external cause of injury codes.

Details of cause categories are in Appendix A and B of Gabella BA, Proescholdbell SK, Hume B, et. al. State Special Emphasis Report: Instructions for Preparing Infant and Early Childhood Injury Data. Atlanta (GA): Centers for Disease Control and Prevention, National Center for Injury Prevention and Control; 2012.



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Indiana Child Injury Prevention Activities

Because Injury is the leading cause of death for Hoosiers ages 1 to 44 years, the Division of Trauma and Injury Prevention at the Indiana State Department of Health (ISDH) works to prevent injuries and create a healthier and safer Indiana.

Actions: The **Indiana Statewide Trauma System** Injury Prevention Plan is currently being drafted, and will include statewide direction and focus for child injury prevention, specifically safe sleep, child passenger safety and bullying.

Surveillance: The Division of Trauma and Injury Prevention conducts statewide injury surveillance through death certificates, hospitalizations, and ED visits. The Indiana Trauma Registry captures statewide trauma data for all seriously injured for the purposes of identifying the trauma population, statewide process improvement activities, and research.

Partnerships: The **Indiana Injury Prevention Advisory Council**, made up of members working in injury and violence prevention, works to reduce the number and severity of preventable injuries in Indiana through leadership and advocacy.



Maternal and Child Health - Indiana Infant Mortality Initiatives

Indiana has the 6th worst infant mortality rate in the nation. Because Indiana's infant mortality rate is consistently one of the worst in the nation, reducing infant mortality is the number one priority of the ISDH. The Maternal and Child Health (MCH) division focuses on expanding the use of and replicating current solutions across the state, as well as developing new ways to encourage survival of healthy mothers and infants. Numerous initiatives are underway to address reducing infant mortality:

- **Early Elective Delivery initiative:** ISDH worked with Anthem and the State Office of Medicaid Policy and Planning early in 2014 to change Medicaid payment policy which no longer pays for early elective delivery without medical indication.
- **Infant mortality grantees:** As a result of our 1st annual Infant Mortality Summit in November 2013, ISDH MCH made \$1 million available in funding for infant mortality initiatives. Following a competitive Request for Proposal process, 11 organizations received funding through October 2015 to provide prenatal care coordination, infant mortality education, and pilot a delayed cord clamping project.
- **Cribs for Kids program:** Suffocation deaths continue to be a contributor to our overall infant mortality rate in Indiana. ISDH works collaboratively with the Department of Child Services' (DCS) regarding safe sleep. The MCH Safe Sleep Coordinator works collaboratively between both agencies to provide statewide education on safe sleep in accordance with the ISDH infant mortality plan, and to provide oversight of the Cribs for Kids distribution program for DCS.
- **IPQIC Levels of Care/Perinatal centers/Ambulance standards:** The Indiana Hospital Standards were created out of the 2010-2012 Levels of Care Task Force and approved in 2014 by the Indiana Perinatal Quality Improvement Collaborative (IPQIC) Governing Council. Through this initiative, a method for certifying hospital OB and NICU levels of care has been developed and nurse surveyors have joined the team to begin piloting the standards in preparation for certification in 2016. Recommendations are being finalized for coordinated perinatal centers to improve risk-appropriate care across the state and reduce costs for high risk newborns. Likewise, perinatal transport standards are being finalized to ensure proper coverage statewide with standardized competencies, quality and certification.
- **"Labor of Love" public awareness campaign:** A sustained, statewide information effort begins in November 2014 through December 2015. The goal is to raise awareness of the problem of infant mortality and encourage support for education and prevention. The fundamental premise of the campaign is to educate citizens that everyone has a role to play to ensure our babies reach their first birthdays.



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Indiana Home Visiting Program

The Indiana Home Visiting program is jointly led by ISDH and Department of Child Services' (DCS). The Maternal Infant Early Childhood Home Visiting (MIECHV) grant is an evidence-based policy initiative providing Indiana with resources to expand home visiting services in our state. The overall goal of MIECHV is to improve health and development outcomes for children and families who are at risk. To date, the MIECHV funds have provided home visiting services to more than 4,000 families.

MIECHV-funded families are of the highest risk – many of whom are 250% of federal poverty level or less (many below 100%); single, unmarried mothers of infants – many of whom are teens; living in unstable housing; possess less than 12 years of education; with a history of/current depression, substance abuse, and/or psychiatric care; living with interpersonal violence and/or no support system. Home visitors provide qualified families education and tools to address risk factors, referrals to appropriate services beyond home visiting, and support in developing and attaining appropriate goals. Indiana provides MIECHV funded home visiting services in Marion, Lake, Scott, St. Joseph, Grant, LaPorte, and Elkhart Counties via nine Healthy Families Indiana (HFI) providers and a Nurse Family Partnership (NFP) program.

The MIECHV program requires that grantees demonstrate improvement among eligible families participating in the program in six **benchmark** areas:

- Improved maternal and newborn health;
- Prevention of child injuries, child abuse, neglect, or maltreatment, and reduction of ED visits;
- Improvement in school readiness and achievement;
- Reduction in crime or domestic violence;
- Improvements in family economic self-sufficiency; and
- Improvements in the coordination and referrals for other community resources and supports.



Indiana Safe Sleep

ISDH in collaboration with DCS has implemented a statewide program that provides education and Infant **Survival Kits** to infant caregivers and families. The survival kits contain one infant portable crib, fitted sheet with imprinted safe sleep messaging, wearable blanket, pacifier, and safe sleep recommendations for those who are financially in-need with an infant at risk for SIDS or sleep-related death.

The educational messages focus on three key risk reduction recommendations –**ABC: babies sleep safest alone, on their backs and in a separate, safe sleep environment**. The messaging encourages breastfeeding and safe bonding practices that can occur while the baby and mother are awake – both in and outside of the adult bed. By June 2013, there were 105 education/survival kit distributing agencies reaching families in all 92 counties. ISDH and DCS provided 7,979 infant survival kits to Indiana’s infant caregivers and families.

Safe Sleep Action Plan

Work with agencies to distribute infant survival kits and provide safe sleep education throughout the state

Work with external partners to expand and standardize safe sleep training for nurses, caregivers and childcare providers

Provide first responders with safe sleep training/education to help expand safe sleep messaging

Establish partnerships with agencies to improve the well-being of infants and children in the community.



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Indiana Child Fatality Review Program

Mission

The Indiana Child Fatality Review Program attempts to better understand how and why children die, take action to prevent other deaths, and improve the health and safety of our children.

Operating Principles

- The death of a child is a community responsibility and should motivate community members into action to prevent future injury and death
- Review requires multidisciplinary participation and should lead to an understanding of the risk factors involved in the death
- Reviews should focus on prevention and lead to effective recommendations and action steps to keep children safe and protected

Objectives

- Ensure the accurate identification and uniform, consistent reporting of cause and manner of death of every child
- Improve agency responses in the investigation of child deaths
- Identify significant risk factors and trends in child deaths
- Identify and advocate for needed changes in legislation, policy, and practice to prevent child deaths
- Increase public awareness of the issues that affect the health and safety of our children

Overview of the Program

Child Fatality Review (CFR) is a collaborative process that can help us better understand why children die within the community, and help us identify how we can prevent future deaths. CFR teams are multidisciplinary, professional teams which conduct a comprehensive, in-depth review of a child's death and the circumstances and risk factors involved, and then seek to understand how and why the child died so that future injury and death can be prevented.

On July 1, 2013, a new Indiana law (IC 16-49) went into effect, requiring child fatality review teams in each county, with coordination and support for these teams to be provided by the Indiana State Department of Health (ISDH). IC 16-49 also required that a coordinator position be created under the ISDH to help support and coordinate the local teams and Statewide Child Fatality Review Committee--whose members are appointed by the Governor.

Each local child fatality review team is required to have representation from the coroner/deputy coroner, pathologist, pediatrician or family practice physician, and local representatives from law enforcement, the local health department, Department of Child Services (DCS), emergency medical services (EMS), a school district within the region, fire responders, the prosecuting attorney's office, and the mental-health community. The teams are required to review all deaths of children under the age of 18 that are sudden, unexpected or unexplained, all deaths that are assessed by DCS, and all deaths that are determined to be the result of homicide, suicide, accident, or are undetermined.

The local teams provide data collected from their reviews to the Statewide Child Fatality Review Committee, which then classifies the details of these deaths, identifies trends, and informs efforts to implement effective statewide prevention strategies.

By working together to understand the circumstances involved in a child's death, we can prevent child injury and death, and make Indiana a healthier and safer place for our children.





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Resources

Indiana State Department of Health

2 North Meridian Street
Indianapolis, Indiana 46204

Indiana Child Fatality Review Program

Phone: (317)233-1240
Email: GMartin1@isdh.IN.gov
Website: <http://www.in.gov/isdh/26349.htm>

Maternal and Child Health Division

Phone: (317)233-7940
Email: bfranklin@isdh.IN.gov
Website: <http://www.in.gov/isdh/19571.htm>

Trauma and Injury Prevention Division

Phone: (317)233-7716
Email: Indianatrauma@isdh.IN.gov
Website: <http://www.in.gov/isdh/19537.htm>

Indiana Department of Child Services

402 W. Washington Street
Indianapolis, IN 46204
Email: Communciations@dcs.IN.gov
Website: <http://www.in.gov/dcs/2869.htm>



Indiana Family Helpline

Phone: 1-855-HELP-1ST (1-855-435-7178)
Website: <http://www.in.gov/isdh/21047.htm>

Indiana Child Abuse/ Neglect Hotline:

Phone: 1-800-800-5556

Indiana Poison Center

Poison Helpline: 1-800-222-1222
<http://indianapoison.org/>

American Academy of Pediatrics

www.aap.org

Automotive Safety Program

<http://www.preventinjury.org/>

Children's Safety Network

www.childrensafetynetwork.org

Cribs for Kids

<http://www.cribsforkids.org/>

First Candle

<http://www.firstcandle.org/>

Safe Child Program

www.cdc.gov/safekids

Safe Kids Indiana/ Safe Kids Worldwide

<http://www.safekids.org/>

Safe to Sleep

<http://www.nichd.nih.gov/sts/Pages/default.aspx>

This report and other Indiana injury data reports are available on the ISDH website. Requests for data may also be submitted to the ISDH Trauma and Injury Prevention Division.

Data Notes: All data in this report are based on the CDC injury definition, whereby injury cases are based on ICD-10 underlying cause codes (deaths), ICD-9-CM primary diagnosis codes (hospitalizations), or either an ICD-9-CM primary diagnosis code or an external cause of injury code (E-codes) (ED visits). Not every injury case may be coded with an E-code, and because the analysis of the mechanism of injury is dependent upon the E-code, the aggregate numbers may be different. Deaths and transfers may be included in hospitalization and ED visit data. All data in this report are based on calendar years. *All injuries are considered unintentional unless otherwise specified.*

Data Sources: Indiana State Department of Health, Epidemiology Resource Team Data Analysis Team. Document prepared by ISDH Division of Trauma and Injury Prevention, Division of Maternal and Child Health, and Child Fatality Review Program.

INDIANA STATE DEPARTMENT OF HEALTH

<http://www.indianatrauma.org>

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