LOUISIANA CHILD DEATH REVIEW

2015-2017

Annual Report

Submitted To:

Governor, State of Louisiana

Health and Welfare Committee, Louisiana Senate

Health and Welfare Committee, Louisiana House of Representatives

Louisiana Child Death Review Panels

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Acknowledgements:

This report was made possible by the contributions of the Bureau of Family Health Regional Maternal and Child Health Coordinators (see pg. 49). Devin George of the State Registrar and Joan Borstell of the Louisiana Center for Records and Statistics provided the vital records data presented. The work of the parish coroners, forensic pathologists, death scene investigators, law enforcement personnel, first responders, state and local Child Death Review Panel members, hospital administrators, health care providers, social service agencies, and all others who have assisted in the process of gathering data has been invaluable in creating meaningful death reviews and prevention recommendations. Substantial information on risk factor prevalence would not be available without the Louisiana Pregnancy Risk Assessment Monitoring System (PRAMS) team; Rosaria Trichilo, U. Vance, Shirley Washington, and Ana Dal Corso. Finally, many thanks to those providing care and bereavement assistance to families affected by the loss of a child.

Table of Contents

Executive Summary
Child Death Review, 2015 – 2017

Mission Statement
The mission of the Louisiana Child Death Review is to understand how and why children die unexpectedly in Louisiana in order to prevent as many future injuries and deaths as possible. This is accomplished through comprehensive, multidisciplinary review of the circumstances that contributed to each death.

Background
The Louisiana Department of Health (LDH), Office of Public Health (OPH), Bureau of Family Health (BFH), coordinates the Child Death Review (CDR) Program. Per Louisiana Revised Statute 40:2019, CDRs are mandated for unexpected deaths of children under 15 years of age. State and local panels meet to review child deaths, identify risk factors, and provide recommendations for preventive action. The Louisiana CDR Program is funded through the Federal Title V Maternal and Child Health Block Grant and the Centers for Disease Control and Prevention's Sudden Unexpected Infant Death Case Registry grant.

Summation of Data and Statistics
Every year in Louisiana, an average of 61,000 infants are born alive. Of these infants, approximately **487 die before their first birthday**, and **another 228 children do not survive to their 15th birthday**. From 2015-2017, **2,145 children died**, and 719 of those deaths were due to injury. This represents a **yearly average of 715 infant and child deaths.** During this time period, Louisiana ranked in the top ten states with the **highest mortality rates for infants and children** in almost all age groups.

The CDR program focuses on preventable and unexpected deaths. **About one third of deaths to infants and children (from birth through age 14) in Louisiana are due to injury and are potentially preventable.** In infants (< 1 year of age), most injury-related deaths occur in the sleep environment and are classified as Sudden Unexpected Infant Deaths (SUIDs). SUID is a term used to describe any sudden and unexpected death, whether explained or unexplained (including Sudden Infant Death Syndrome [SIDS], Accidental Suffocation or Strangulation in Bed [ASSB], and deaths coded as ill-defined), occurring during infancy. Motor vehicle crashes, drowning, and homicide are the leading causes of death for children ages 1 to 14.

About This Report
To achieve sufficient sample size for statistical reporting, the 2015-2017 Louisiana CDR Report reflects infant and child mortality over a three year period. Multi-year state and regional rates are provided as well as annual averages of deaths, and the leading causes of child death. Annual averages are provided to help estimate the magnitude of the issue in a one-year timeframe. When available, U.S. rates, Louisiana rates, Louisiana rankings in the U.S., and Healthy People (HP) Goals are provided for comparison. The report is organized into sections by age groups, risk factors and prevention recommendations for leading causes of death, and a summary of current efforts to address infant and child mortality. The report highlights preventable injury fatalities, and additional data are included to provide context on contributing factors. Key points and recommendations are derived from Louisiana CDR data and panel findings, national research, and the established public health evidence base. New to this year's report is the addition of more detailed information on child homicides and suicides, a section on injury prevention considerations for children and youth with special health care needs, and regional data profiles. In addition to Vital Records and Child Death Case Reporting System data, Louisiana Pregnancy Risk Assessment Monitoring System (Louisiana PRAMS) data have been used to augment risk factor findings and prevention recommendations for infant mortality.

Data Sources and Methodology

Data Methods

Data from LDH's Health's Office of State Registrar and Vital Records were used to categorize causes of death. BFH adheres to the International Classification of Diseases (ICD-10) guidelines for determination of cause of death. In addition to furnishing cause of death, death certificates were used to provide age, race, gender, date of death, and parish of residence. Data were analyzed using SAS software version 9.2.

Louisiana Child Death Review Case Reporting System

Data related to Louisiana's Child Death Review are maintained in the National Center for Fatality Review and Prevention's National Fatality Review Case Reporting System.

Louisiana Pregnancy Risk Assessment Monitoring System (PRAMS)

Louisiana PRAMS is a survey cooperatively managed by the Centers for Disease Control and Prevention and LDH-BFH.

National Data

National level data are from the National Vital Statistics System database, CDC WONDER. Louisiana rankings are based on national data, and national rates may vary slightly from state rates due to timing of reporting.

Healthy People 2020

Healthy People objectives are selected by a multi-disciplinary team of experts with the intention of identifying national health priorities. Every 10 years, goals are selected with the objective of meeting the targets by the end of the decade. All Healthy People objectives have standardized indicators with known numerators and denominators.

Data Limitations

Many key indicators are presented at the regional level, and therefore have smaller counts. Rates based on counts less than 20 are considered unstable and should be interpreted with caution, as these numbers, percentages or rates may change in the future with the addition or loss of a small number of cases. Unstable rates are noted with an asterisk.

Additionally, counts of fewer than 5 are not reported to preserve confidentiality. Any cause of death category with counts fewer than 5 were collapsed into an "other" category.

Trends based on unstable rates are not represented in this report. For example, Hispanic counts were not examined independently as white[ł] and black[ł] counts were, due to smaller counts.

Data Footnotes

*Rates based on counts less than 20 are unstable and may vary widely from future reports.

ł black indicates non-Hispanic black, and white indicates non-Hispanic white.

Regional Map of Louisiana

Region	Area	Parishes within Region
1	New Orleans	Jefferson, Orleans, Plaquemines, St. Bernard
2	Baton Rouge	Ascension, East Baton Rouge, East Feliciana, Iberville, Pointe Coupee, West Baton Rouge, West Feliciana
3	Houma	Assumption, Lafourche, St. Charles, St. James, St. John the Baptist, St. Mary, Terrebonne
4	Lafayette	Acadia, Evangeline, Iberia, Lafayette, St. Landry, St. Martin, Vermilion
5	Lake Charles	Allen, Beauregard, Calcasieu, Cameron, Jefferson Davis
6	Alexandria	Avoyelles, Catahoula, Concordia, Grant, La Salle, Rapides, Vernon, Winn
7	Shreveport	Bienville, Bossier, Caddo, Claiborne, DeSoto, Natchitoches, Red River, Sabine, Webster
8	Monroe	Caldwell, East Carroll, Franklin, Jackson, Lincoln, Madison, Morehouse, Ouachita, Richland, Tensas, Union, West Carroll
9	Hammond/ Slidell	Livingston, St. Helena, St. Tammany, Tangipahoa, Washington

Infant Mortality in Louisiana

2015-2017 Data

Infant Mortality: All Causes

Birth to 1 year

Every year in Louisiana, an average of 487 infants die before they reach their first birthday.[1]

The Louisiana infant mortality rate from 2015-2017 was **7.7 deaths per 1,000 live births**. The U.S. infant mortality rate during the same period was 5.8 deaths per 1,000 live births. **116 fewer** babies would die each year if Louisiana had the same infant mortality rate as the U.S.

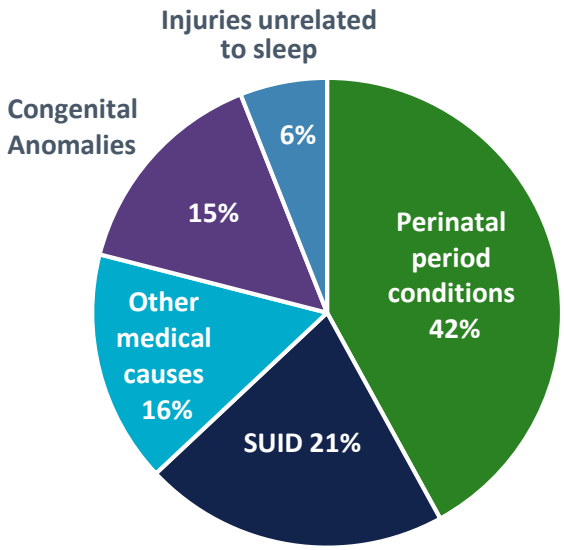
Louisiana Rate[1]	U.S. Rate[2]	HP2020 Goal[3]	LA Ranking[2]
7.7	5.8	6.0	5th highest in the U.S.

Infant Deaths by Region (2015-2017)[1]	1	2	3	4	5	6	7	8	9
Average annual infant deaths counts	74	88	36	61	30	29	73	41	55
Infant mortality rate per 1,000 live births	6.3	9.6	6.7	7.0	6.9	6.8	10.2	8.8	7.2

Causes of Infant Death

Each year, an average of…[1]

- **206** infants die from conditions originating in the perinatal period
- **100** infant deaths are classified as Sudden Unexpected Infant Deaths (SUID), which primarily occur in the sleep environment
- **80** infants die from other medical causes
- **73** infants die from congenital anomalies
- **28** infants die from injuries not related to sleep environments



Key Points

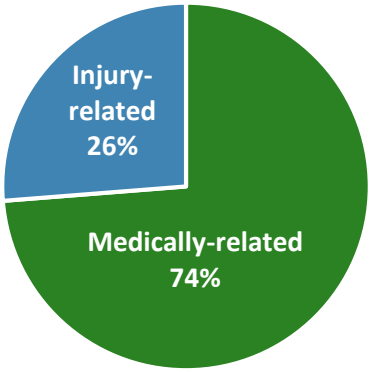
- Louisiana has the fifth highest infant mortality rate in the country.
- Conditions originating in the perinatal period are closely related to maternal health before conception. Nearly half of infant deaths are due to these conditions which include low birth weight and prematurity.
- Maternal health is closely linked to the leading cause of infant death: conditions originating in the perinatal period. Top among those conditions are low birthweight and premature birth, both of which are risk factors for the second leading cause of infant death: SUID. SUID refers to any sudden and unexpected death occurring during infancy, whether explained or unexplained. This category includes Accidental Suffocation or Strangulation in Bed (ASSB), Sudden Infant Death Syndrome (SIDS) and ill-defined deaths.

Infant Mortality: Fatal Injury

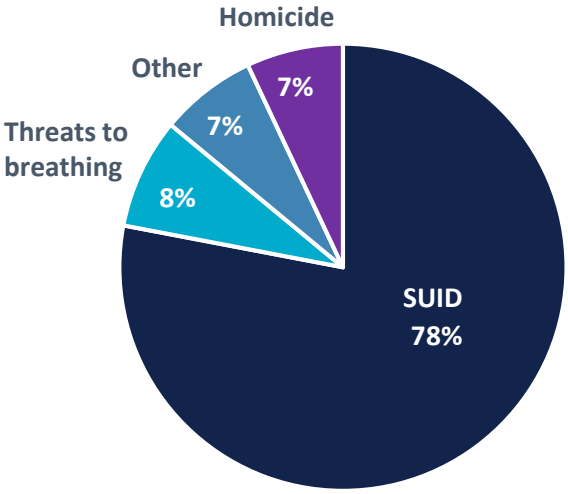
Birth to 1 year

Every year in Louisiana, an average of 128 infants die from an injury before they reach their first birthday.[1]

Approximately 1 in 4 infant deaths are injury-related.[1]



Causes of Fatal Injury



Each year, an average of…[1]

- **100** infant deaths are classified as Sudden Unexpected Infant Deaths (SUID)
- **10** infants die from threats to breathing
- **9** infants die from another type of unintentional injury, including drowning, motor vehicle crashes, and other unintentional causes
- **9** infants die from homicide

Key Points

- A significant majority of injury-related infant deaths were classified as SUIDs and were related to the sleep environment.
- In Louisiana, most SUID deaths occur when the infant is 2 to 3 months old. The most common SUID risk factors present in these deaths are: infants sleeping with loose bedding or toys (86%); infants sleeping in something other than a crib or bassinette (81%); and infants sleeping with other people (63%). Other evidence-based risk factors for SUID include: stomach- or side-sleeping position; preterm birth or low birth weight, cigarette smoke in the home; and drinking, drug use, or tobacco use during pregnancy (see pg. 12 for more details).[4]

Neonatal Mortality

Infant deaths between 0 and 28 days

Every year in Louisiana, an average of 269 infants die during the neonatal period.[1]

A CLOSER LOOK

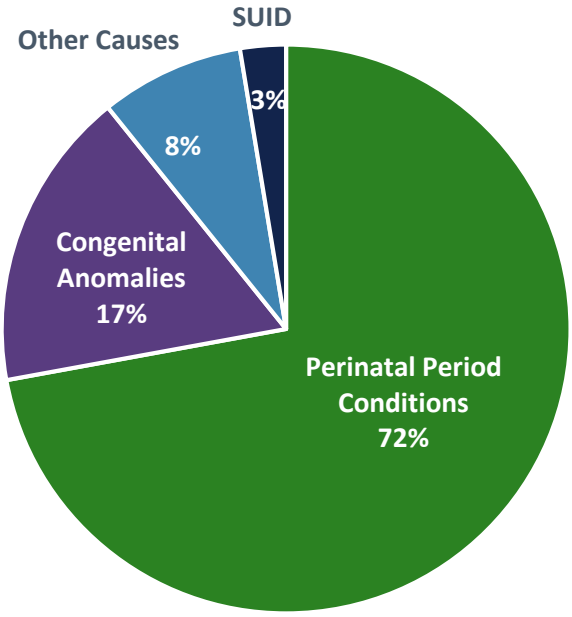
In Louisiana, the neonatal period (between 0 and 28 days after birth) is the **period with the most infant deaths** (deaths that occur between birth and 1 year of age). The Louisiana neonatal mortality rate from 2015 to 2017 was **4.3 deaths per 1,000 live births.**

Louisiana Rate[1]	U.S. Rate[2]	HP2020 Goal[3]	LA Ranking[2]
4.3	3.9	4.1	21st highest in the U.S.

Causes of Death During the Neonatal Period

Each year, an average of…[1]

- **194** infants die from conditions originating in the perinatal period
- **46** infants die from congenital anomalies
- **22** infants die from another cause, including injury and other medical causes
- **7** neonatal deaths are classified as Sudden Unexpected Infant Deaths (SUID)



Key Points

- Conditions originating in the perinatal period often stem from poor maternal health prior to conception. Low birth weight and preterm birth account for many of the deaths in this category, but other conditions include, but are not limited to: infections; conditions limiting the baby's ability to receive adequate oxygen; complications related to pregnancy, labor and delivery; and hemorrhage and hematological disorders of the newborn.
- High stress, inadequate healthcare throughout the life span and during pregnancy, and unmanaged chronic disease negatively affect maternal health, leading to higher rates of adverse birth outcomes.[5]

Post-neonatal Mortality

Infant deaths between 28 and 365 days

Every year in Louisiana, an average of 218 infants die during the post-neonatal period.[1]

A CLOSER LOOK

From 2015 to 2017 in Louisiana, fewer deaths occurred during the post-neonatal period than the neonatal period. However, the **causes of death common to this period are more preventable**. For example, 42% of deaths during the post-neonatal period are classified as Sudden Unexpected Infant Deaths (SUIDs), many of which could be prevented through safe sleep practices.

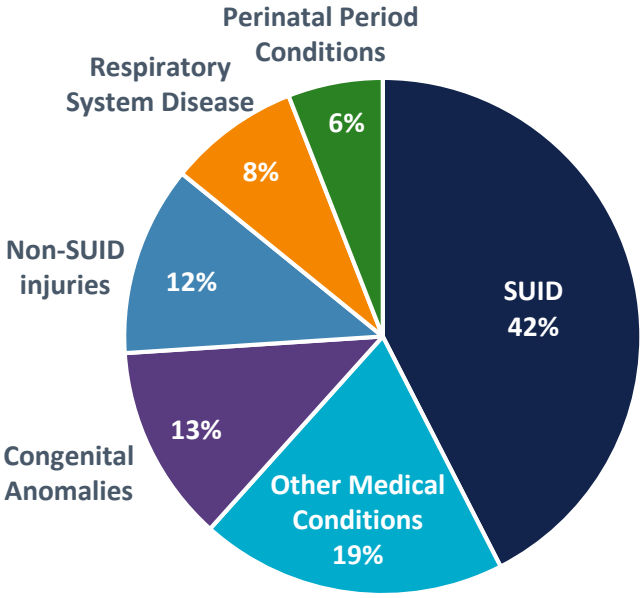
Louisiana Rate[1]	U.S. Rate	HP2020 Goal[3]	LA Ranking
3.5	2.0	2.0	2nd highest in the U.S.

Causes of Death During the Post-neonatal Period

54% of deaths during the post-neonatal period are injury-related (this includes SUIDs).

Each year, an average of…[1]

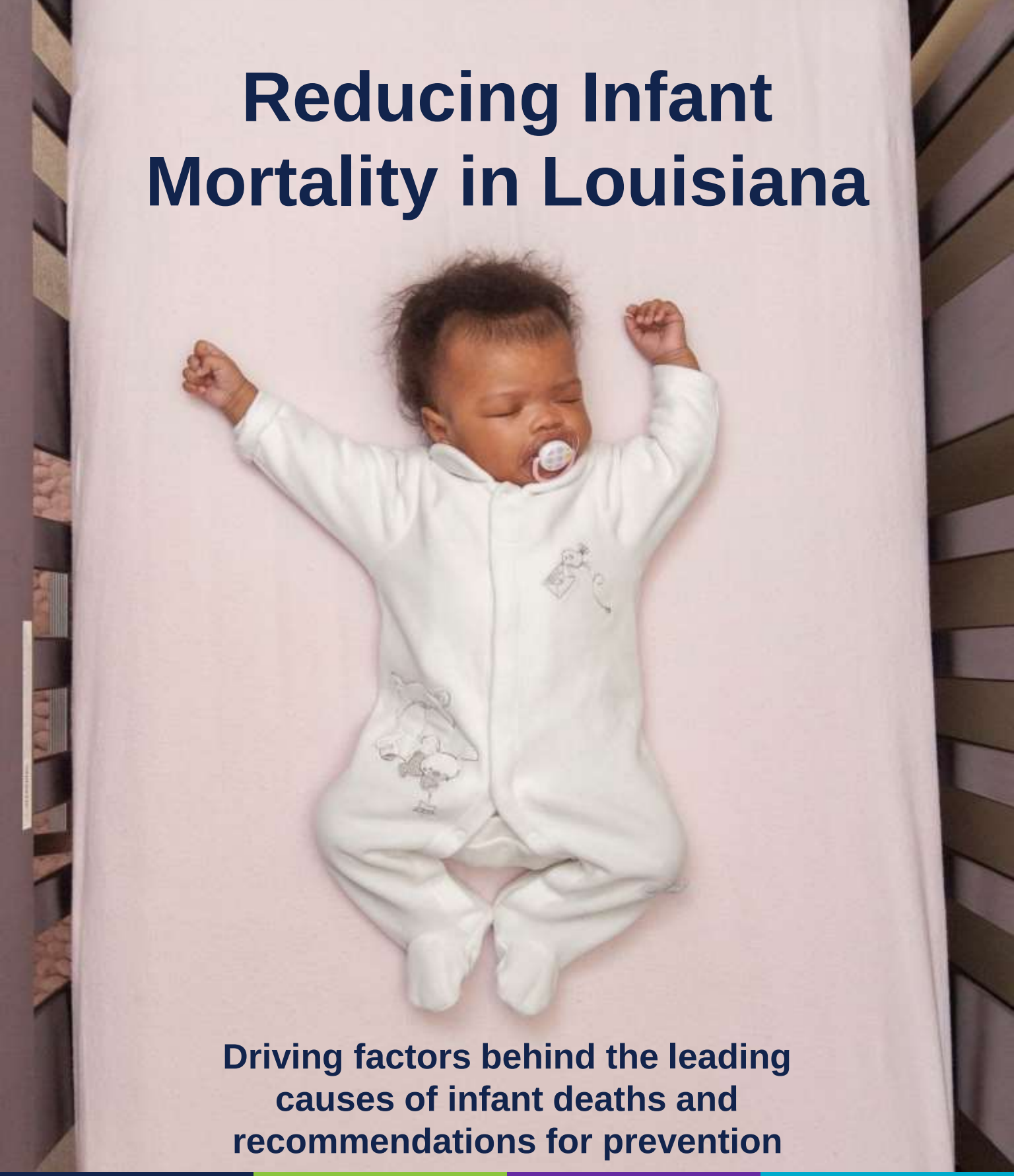
- **92** infant deaths are classified as SUIDs
- **42** infants die from other medical conditions
- **27** infants die from a congenital anomaly
- **26** infants die from injury unrelated to SUID
- **18** infants die from respiratory diseases
- **13** infants die from conditions related to the perinatal period



Key Points

- During the post-neonatal period, about 2 out of 5 (42%) infant deaths were classified as SUIDs.
- SUID is considered largely preventable by reducing risk factors and increasing protective factors. Some of these risk factors, including low birth weight or preterm infants and maternal smoking, trace back to maternal health. Other risk factors are behavioral – such as caregivers placing infants to sleep on unsafe surfaces or with soft bedding and toys – or environmental, such as cigarette smoke in the home.[6] Protective factors include consistently following safe sleep practices (see pg. 12 for details), breastfeeding, regular prenatal care and well-baby check-ups, and keeping infants up to date on immunizations.[6]

Reducing Infant Mortality in Louisiana



Driving factors behind the leading causes of infant deaths and recommendations for prevention

Infant Mortality (Birth to 1 Year)

Driving Factors and Recommendations for Prevention

The top causes of infant mortality include conditions originating in the perinatal period and causes associated with Sudden Unexpected Infant Death (SUID). Many of these deaths can be prevented. The next three pages highlight key risk factors that contribute to infant mortality and provide prevention recommendations.

Conditions originating in the perinatal period are often related to maternal health status. Low birth weight and preterm birth account for a large proportion of the deaths in this category. Chronic stress and inadequate healthcare, coupled with conditions such as hypertension, diabetes, depression, or infections, can lead to adverse birth outcomes. Inadequate preconception healthcare includes insufficient access to quality preventive and primary care, as well as a insufficient access to family planning and reproductive health services.

Causes of death associated with SUID include Accidental Strangulation and Suffocation in Bed (ASSB) and Sudden Infant Death Syndrome (SIDS), though sometimes the cause is unknown. Some conditions originating in the perinatal period, such as low birth weight and preterm birth are risk factors for SUID, as are unsafe sleep practices.

Risk Factors for SUID include:[6]

- Preterm birth
- Low birth weight
- Infant sleeping on stomach or side
- Infant sharing a sleeping surface or bed-sharing with other children, pets, or adult(s), especially if the adult is drug- or alcohol-impaired
- Infant sleeping on unsafe sleep surface such as a couch or armchair
- Soft objects, loose bedding, cords, wires, etc. in or near the sleeping area
- Smoking, drinking or using drugs during pregnancy

Protective Factors for SUID include:[6]

- Infant laid down to sleep on back
- Firm sleeping surface, with no objects (toys, pillow, blankets, bumpers)
- Breastfeeding
- Room-sharing with a caregiver, but not in the same bed
- Smoke-free home
- Room at a comfortable temperature and infant is not overdressed
- Pacifier at nap time and bedtime
- Regular prenatal care and well-baby check ups
- Infant is up to date on immunizations

Additional Data Sources

In order to gain a more complete understanding of the context in which infant deaths occur, this section includes information from the 2017 Louisiana Pregnancy Risk Assessment Monitoring System (PRAMS) Survey and case review data from Louisiana CDR, maintained on the National Fatality Review Case Reporting System.

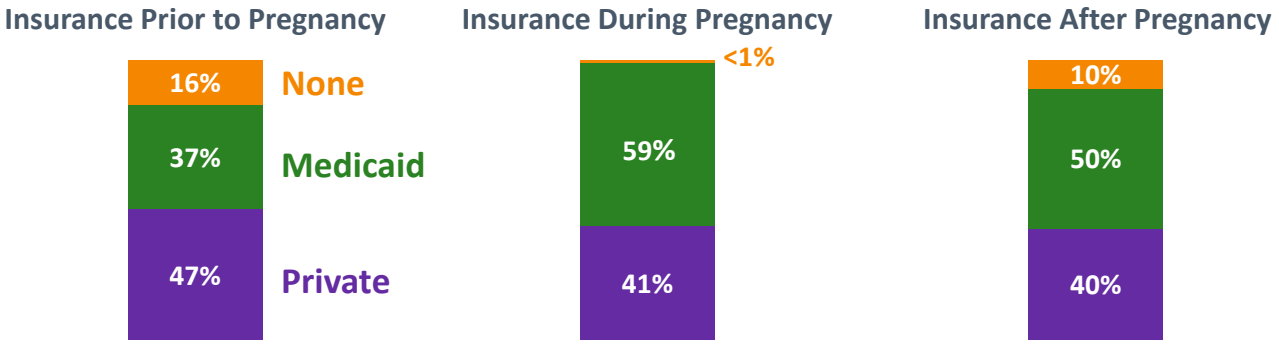
Louisiana PRAMS is an ongoing, population-based risk factor surveillance system designed to explore maternal behaviors and experiences that occur before, during, and immediately following pregnancy. The survey collects substantial quantitative and qualitative data on known risk factors for infant mortality. Louisiana PRAMS data are highlighted on the following pages. More information can be found at PartnersforFamilyHealth.org/PRAMS. Additional Louisiana PRAMS data and reports can be found at PartnersforFamilyHealth.org/data-center. Louisiana CDR data are used in the following pages to determine the prevalence of known risk factors in Louisiana deaths. Both data sources are used to inform programmatic and policy decisions related to reducing infant mortality.

Preconception Health and Family Planning

Infant health is strongly influenced by maternal health. Helping women achieve optimal health throughout their lives is key to reducing infant mortality. To remain as healthy as possible, women need adequate health insurance coverage and consistent access to healthcare.

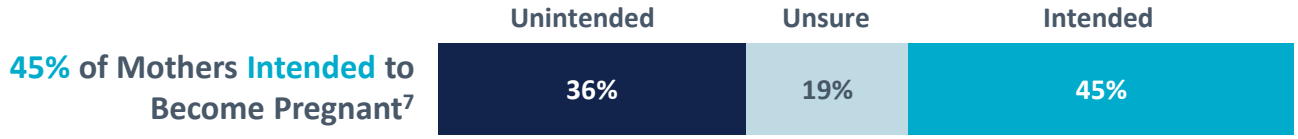
Maternal Health Insurance Coverage (2017)[7]

On June 1, 2016, Louisiana residents with incomes up to 138% of the federal poverty level became eligible to enroll in the state's expanded Medicaid program.



Pregnancy Intention (2017)

Unplanned pregnancies limit women's opportunities to improve their health prior to becoming pregnant. Improving access to family planning services can lead to an increased rate of intended pregnancies, which may be associated with fewer adverse birth outcomes.



Maternal Health Indicators Prior to Pregnancy (2017)

Prior to their most recent pregnancy…[7]

- **55%** of mothers were overweight or obese*
- **14%** of mothers reported they had depression
- **6%** of mothers reported they had high blood pressure
- **2%** of mothers reported they had diabetes

**Weight criteria based on national Body Mass Index (BMI) categories and calculated from self-reported height and weight on PRAMS Survey*

Recommendation

- Improve maternal health by increasing access to family planning services and quality primary care before and between pregnancies. Services focused on care coordination and personalized support, such as home visiting programs, help women navigate insurance coverage options to ensure adequate and consistent coverage.

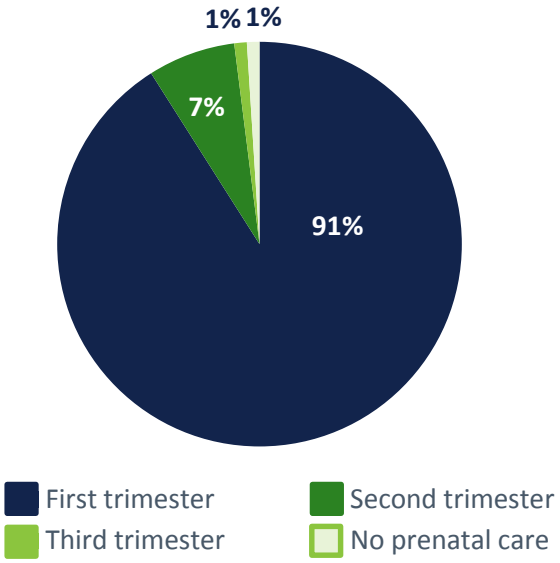
Prenatal Care

In 2017, about 10% of mothers in Louisiana did not receive prenatal care during the first trimester. Early care is a key part of adequate care and can help reduce infant mortality.[7]

Adequacy of Prenatal Care in Louisiana (2017)

Adequate prenatal care is defined as having received 80% or more of the recommended prenatal visits for gestational age based on standards set by the American Congress of Obstetricians and Gynecologists.[7]

About 1 in 10 (9%) Louisiana Mothers Do Not Receive Prenatal Care in First Trimester[7]



About 1 in 4 (24%) Louisiana Women Received Less than Adequate* Prenatal Care[7]	
Inadequate **<50% of recommended visits**	**13%**
Intermediate **50-79% of recommended visits**	**11%**
Adequate 80 – 109% of recommended visits	39%
Adequate Plus 110% or more of recommended visits	37%

*Less than adequate prenatal care includes "inadequate" and "intermediate" responses.

Reasons for Not Receiving Early Prenatal Care (2017)

The most common reasons women reported for not receiving first trimester prenatal care included: [7]

- Couldn't get an appointment when I wanted
- Didn't know I was pregnant
- Didn't have Medicaid or LaMoms card**
- I didn't have enough money or insurance to pay for my visits**

**Based on 2017 data. Louisiana Medicaid expansion occurred July 1, 2016

Recommendation

- Home visiting programs support early and adequate prenatal care by helping pregnant women get health insurance that meets their needs, find prenatal care providers, and keep up with appointments.
- Continued legislative support for Medicaid expansion in Louisiana is critical to reduce financial barriers to accessing prenatal care.

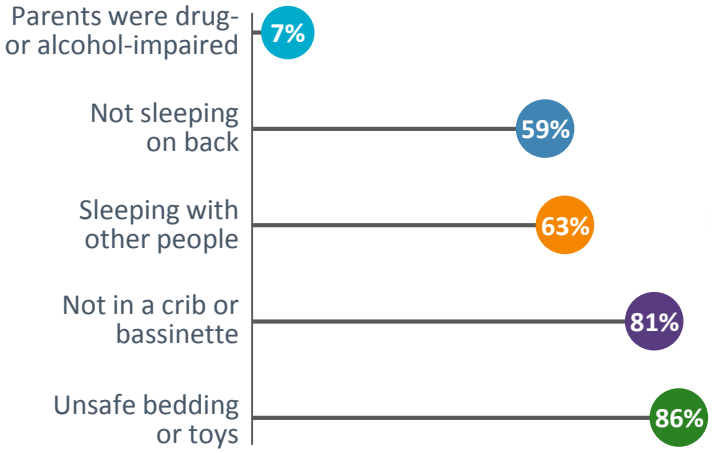
Sudden Unexpected Infant Death (SUID)

72% of sleep-related deaths in Louisiana occurred by 3 mo. of age (2015-2017).[4]

SUID Risk Factors in Louisiana

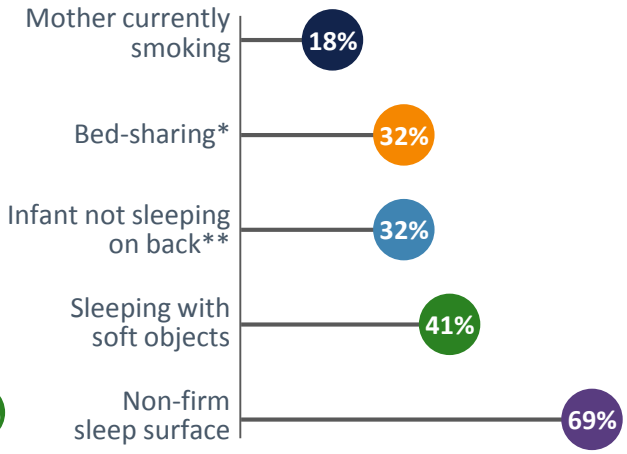
In 2017**, more than 1 in 4 babies** (26%) in Louisiana were exposed to **3 or more risk factors for sleep-related death.**[7] **32%** of Louisiana mothers said they **sometimes, often or always bed-share** with their baby.[7]
The American Academy of Pediatrics cites bed-sharing as the greatest risk factor for sleep-related infant deaths.

Risk Factors* Present in Louisiana SUIDs (2015-2017 CDR Data)[4]



**Multiple risk factors may be present*

Infant Sleep Environment Risk Factors (2017 Louisiana PRAMS Data)[7]



**Calculated by mothers' reports of infants sometimes, often or always bed-sharing.*
***Mothers reported how infants were most often laid to sleep in the past two weeks.*

Recommendations

- Obstetricians, pediatricians and other direct service providers are encouraged to discuss safe sleep with their patients/clients and their families. These conversations should help parents and caregivers develop realistic strategies to reduce their babies' risk of sleep-related death.
- Providers can model safe sleep environments in clinical, childcare and community settings. This includes setting up safe sleep displays in clinic waiting rooms, workplaces, churches, daycare facilities, and more.
- The Bureau of Family Health (BFH) manages Give Your Baby Space, a statewide campaign that teaches caregivers the safest ways for babies to sleep. Healthcare, public health, and community partners are encouraged to use the website, GiveYourBabySpace.org, and free printed materials with their patients/clients.
- Agencies responsible for the training and licensure of child care providers, both center-based and in-home, are encouraged to provide training on safe sleep practices and monitor their compliance.
- Maternal and child health agencies and their partners are encouraged to identify and contribute to local or national efforts to persuade businesses and media to show *only* safe sleeping environments in advertisements, entertainment media and news stories featuring sleeping babies.

Child Mortality in Louisiana

2015-2017 Data

Overall Child Mortality

1 to 14 years

Every year in Louisiana, an average of 228 children between ages 1 and 14 years die.[1]

The 2015-2017 Louisiana mortality rate for children ages 1 to 14 years **was 26.4 deaths per 100,000 children**. The U.S. rate was 16.6 per 100,000 children for the same time period. If Louisiana had the same mortality rate as the U.S., **85 fewer** children would die per year.

Louisiana Rate[1]	U.S. Rate[2]	LA Ranking[2]
26.4	16.6	4th highest in the U.S.

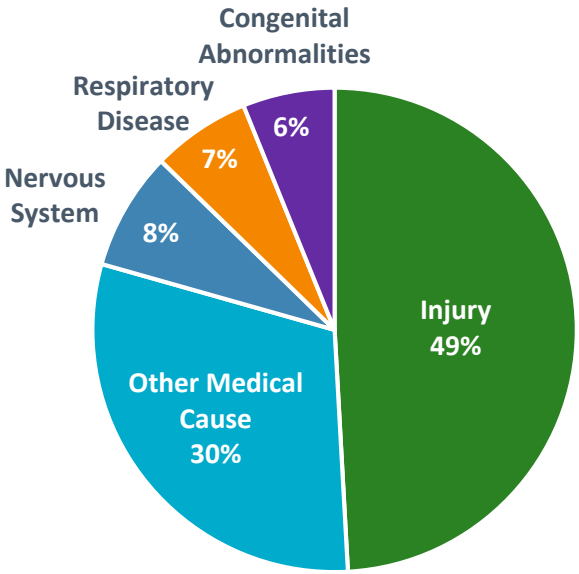
Child Deaths by Region (2015-2017)[1]	1	2	3	4	5	6	7	8	9
Average Annual Child Deaths	37	30	17	29	18	21	30	22	25
Child Mortality Rate	24.6	24.3	22.2*	24.5	30.6*	35.9	29.5	33.0	22.3

**Rates based on counts less than 20 are unstable and may vary widely in future reporting years.*

Causes of Child Mortality

Each year, an average of…[1]

- **112** children die from injury
- **69** children die from another medical cause
- **18** children die from diseases of the nervous system
- **15** children die from diseases of the respiratory system
- **14** children die from congenital anomalies



Key Points

- About half (49%) of childhood deaths during ages 1 to 14 are due to injuries. Most of these deaths are considered preventable.
- The other half (51%) of childhood deaths are due to a medical cause. The most common medical causes are diseases of the nervous system, diseases of the respiratory system, and deaths related to congenital abnormalities.

Child Mortality: Fatal Injuries

1 to 14 years

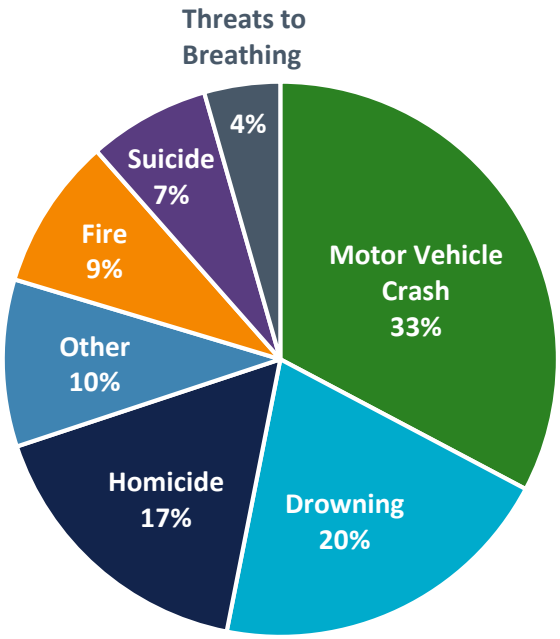
Every year in Louisiana, an average of 112 children die from injuries. The majority of injury deaths are due to motor vehicle crashes, drowning, and homicide.[1]

About half of child deaths are a result of injury. Injury makes up a larger percentage of deaths in childhood (49%) than in infancy (26%).

Causes of Fatal Injury

Each year, an average of…[1]

- **36** children die from motor vehicle crashes
- **23** children die from drowning
- **19** children die from homicide
- **11** children die from another unintentional cause, including falls and other injuries
- **10** children die from exposure to fire
- **8** children die from suicide
- **5** children die from threats to breathing



Key Points

- Motor vehicle crashes, drowning, and homicide are the top causes of injury-related child deaths.
- For the majority of child deaths due to motor vehicle crashes, child safety seats were either not used or used incorrectly.
- Inadequate supervision of children and lack of barriers around water are the top contributing factors in drowning deaths. Nearly half (42%) of all drowning deaths occurred in swimming pools, hot tubs or spas.

Child Mortality: Ages 1-4

2015-2017 Data

Child Injury Mortality

Ages 1 – 4 years

Every year in Louisiana, an average of 107 children between ages 1 and 4 years die. 52 die from injury.[1]

From 2015 to 2017, the Louisiana mortality rate for children ages 1 to 4 was **43.0 deaths per 100,000 children**. The U.S. rate was 24.8 per 100,000 children for the same time period. If Louisiana had the same mortality rate as the U.S. **45 fewer** children in this age group would die per year.

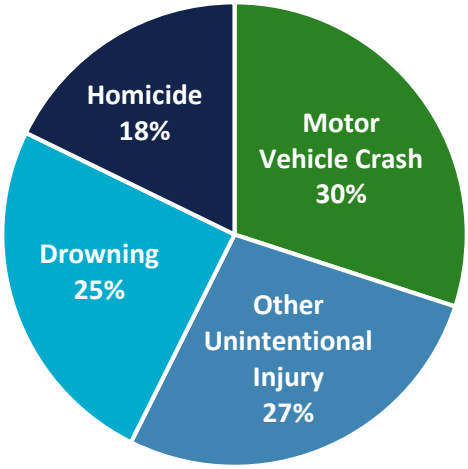
Louisiana Rate[1]	U.S. Rate[2]	HP2020 Goal[3]	LA Ranking[2]
43.0	24.8	26.5	2nd highest in the U.S.

Causes of Fatal Injury

Every year, about half of all deaths among 1-4 year olds are injury-related

Each year, an average of…[1]

- **16** children die in a motor vehicle crash
- **14** children die from other unintentional injuries, including but not limited to: falls, blunt force trauma, and fire
- **13** children drown
- **9** die from homicide



Key Points

- The greatest disparity between Louisiana and U.S. child mortality rates is found within this age group.
- Within Louisiana, this age group had the highest rate of injury-related mortality among all children.
- The majority of these fatalities are due to unintentional injuries: motor vehicle crashes, drowning, falls and blunt force trauma, and fire-related deaths.
- Homicide is the 3rd leading cause of death in this age group ("other unintentional injury" is a grouping of multiple, less frequent causes). Specific methods of homicide in this age group include deaths due to trauma, neglect, asphyxia, and firearms.
- Creating safe environments for children where they live, learn and play is important to reducing fatalities due to injuries. Safe environments require a variety of physical and behavioral supports, including but not limited to: size-appropriate child passenger safety restraints in vehicles, barriers around bodies of water and fall hazards, smoke alarms inside homes, safe firearm storage, and attentive supervision by caregivers.

Child Mortality: Ages 5-9

2015-2017 Data

Child Injury Mortality

Ages 5 – 9 years

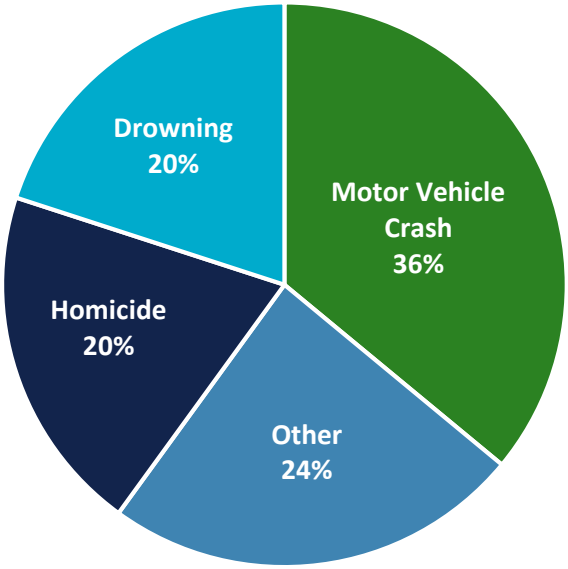
Every year in Louisiana, an average of 57 children between ages 5 and 9 years die. 25 die from an injury.[1]

The Louisiana mortality rate from 2015 to 2017 for children ages 5 to 9 years was **18.5 deaths per 100,000 children**. The U.S. rate was 11.8 deaths per 100,000 children for the same time period. If Louisiana had the same mortality rate as the U.S., **21 fewer** children in this age group would die per year.

Louisiana Rate[1]	U.S. Rate[2]	HP2020 Goal[3]	LA Ranking[2]
18.5	11.8	12.4	3rd highest in the U.S.

Causes of Fatal Injury

Every year, 44% of deaths among 5-9 year olds are injury-related



Each year, an average of…[1]

- **9** children die in a motor vehicle crash
- **6** children die from other injury-related causes, including but not limited to: threats to breathing, falls, blunt force trauma, and fire
- **5** children die due to homicide
- **5** children drown

Key Points

- Motor vehicle crashes are the most common cause of injury-related death in this age group.
- Among motor vehicle crash deaths in this age group, children were more likely to die as car passengers (72%) than outside the vehicle (i.e. fewer children died as pedestrians or while playing near vehicles). A major risk factor for child passenger deaths was the absence of proper safety gear (shoulder belts, lap belts, etc.) or improper use of safety gear.[4]
- Among 5 to 9 year olds, 80% of weapons-related injury deaths (including intentional and unintentional injuries) were due to firearms.[4]

Child Mortality: Ages 10-14

2015-2017 Data

Child Injury Mortality

Ages 10 – 14 years

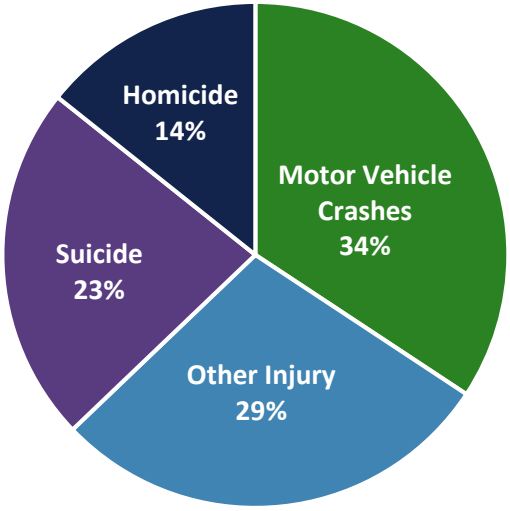
Every year in Louisiana, an average of 64 children between ages 10 and 14 years die. 35 die from injuries.[1]

The Louisiana mortality rate from 2015 to 2017 for children between the ages of 10 and 14 years was **20.9 deaths per 100,000 children**. The U.S. rate was 14.9 deaths per 100,000 children for the same time period. If Louisiana had the same mortality rate as the U.S., **18 fewer** children in this age group would die per year.

Louisiana Rate[1]	U.S. Rate[2]	HP2020 Goal[3]	LA Ranking[2]
20.9	14.9	14.8	7th highest in the U.S.

Causes of Fatal Injury

55% of deaths in 10-14 year olds are injury-related

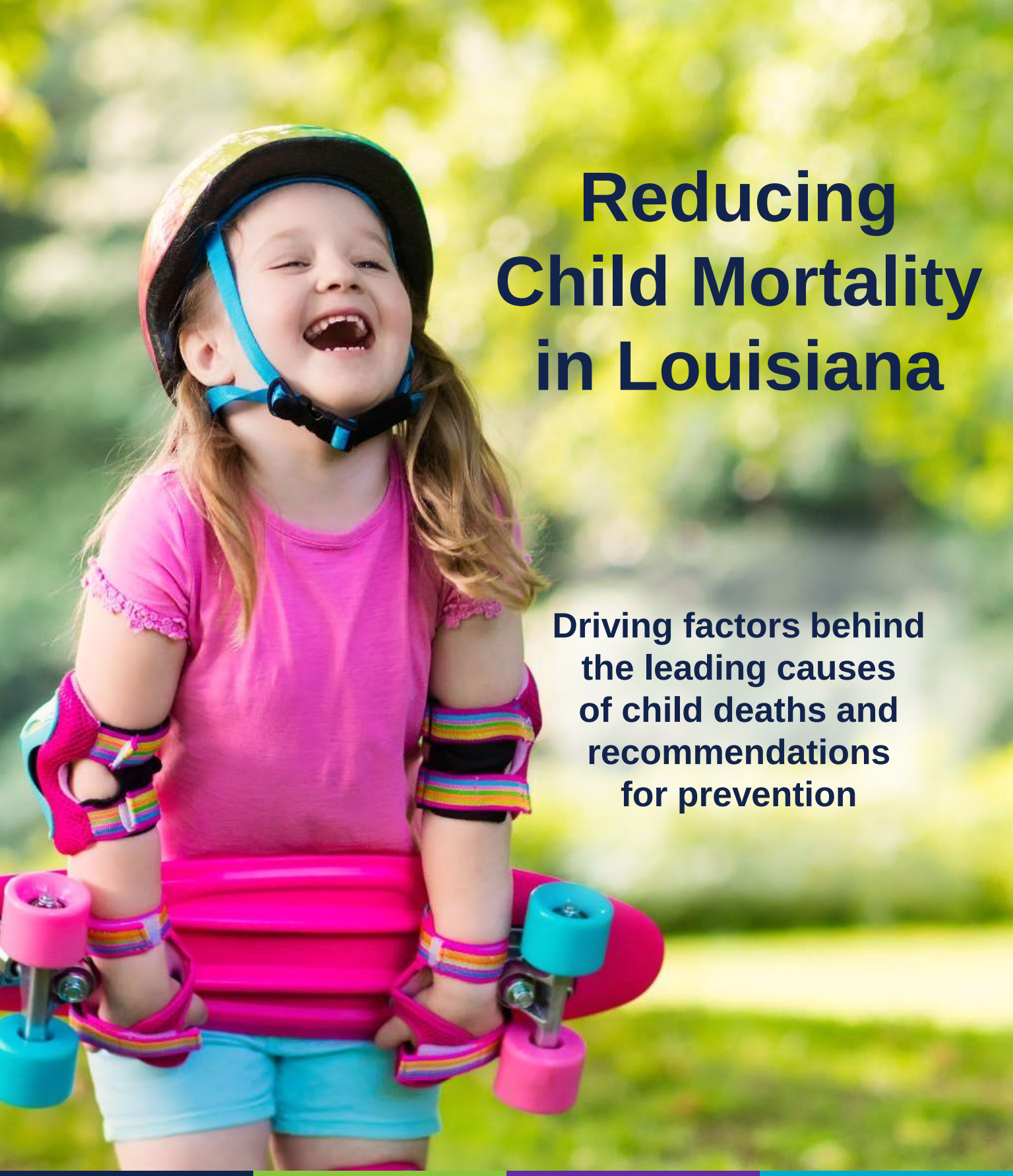


Each year, an average of…[1]

- **12** children die in motor vehicle crashes
- **10** children die from other injuries, including but not limited to: threats to breathing, drowning, falls, blunt force trauma, and fire
- **8** children die from suicide
- **5** children die from homicide

Key Points

- Motor vehicle crashes are the most common cause of injury-related deaths in this age group.
- Among motor vehicle crash deaths in this age group, children were more likely to die as car passengers (64%) than outside the vehicle as pedestrians or while playing near vehicles. A major risk factor for child passenger deaths was the absence or improper use of safety gear (shoulder belts, lap belts, etc.).[4]
- In this age group, 74% of weapons-related injury deaths (including intentional or unintentional injuries) were due to firearms.[4]
- Suicides exceed homicides in this age group. Louisiana CDR case reviews indicate that the top risk factors for suicide in this age group include: a history of adverse childhood experiences (term used to describe all types of abuse, neglect, and other potentially traumatic experiences that occur to people under the age of 18) and access to lethal means of self-harm, such as firearms.



Reducing Child Mortality in Louisiana

Driving factors behind the leading causes of child deaths and recommendations for prevention

Child Mortality (Ages 1 to 14 years)

Driving Factors and Recommendations for Prevention

The next three pages highlight risk factors for the leading causes of child mortality, and provide recommendations for reducing those risk factors, increasing protective factors and preventing future deaths.

Motor vehicle crashes (MVC) are the top cause of child death in Louisiana. These are predominantly crashes involving motor vehicles, but include all transport-related deaths, such as incidents involving All Terrain Vehicles (ATV), boats, and aircrafts. Drowning and homicide are the second and third top causes of child death in Louisiana, respectively. The category of "Other" unintentional injury deaths includes multiple causes, such as falls, blunt force, trauma, fire-related, poisoning and asphyxia.

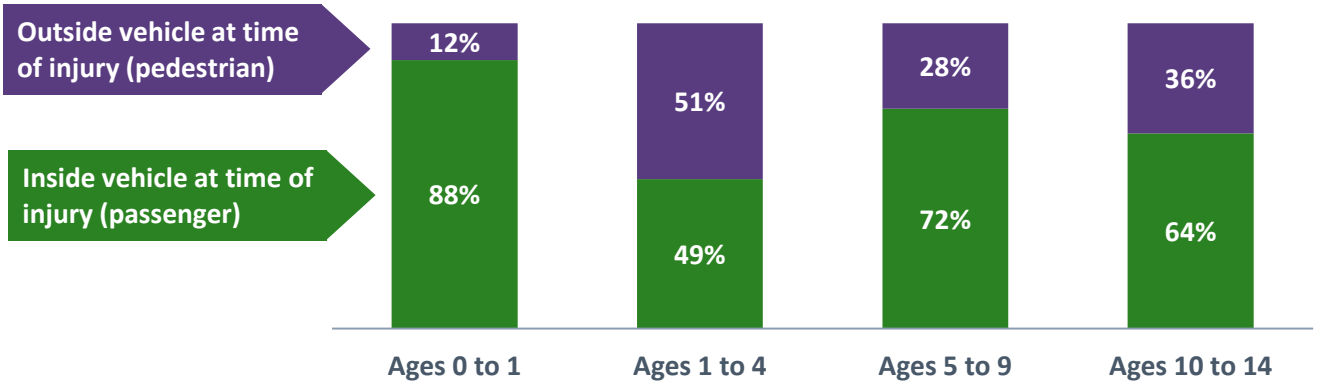
Regional and State Child Death Reviews include the abstraction of data into the National Fatality Review Case Reporting System database. Data from this database were used in the following pages to determine the prevalence of risk factors in Louisiana deaths due to motor vehicle crashes, drowning, homicide, and suicide.

Child Motor Vehicle Crash (MVC) Deaths

Risk Factors & Recommendations, 2015-2017 data

110 children in Louisiana died in motor vehicle crashes from 2015-2017.[4] Infants and children ages 5 -14 years were more likely to die as passengers in MVCs. Children ages 1-4 years were more likely to die outside of the vehicle as pedestrians or at play.[4]

Location of Victim at time of MVC, by Age Group[4]



Safety Features Used Incorrectly or Not Present in Child MVC Deaths[4]

For the majority of child deaths due to motor vehicle crashes, **child safety seats** and **seat belts** were either **not used or used incorrectly.**

Recommendations

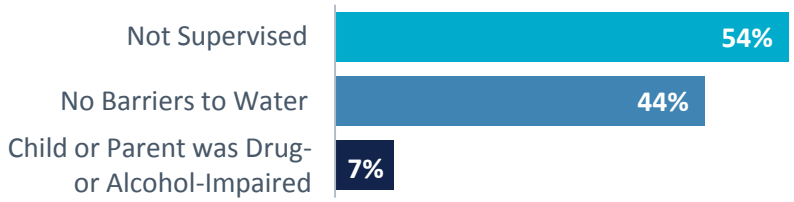
- Pediatricians and providers are encouraged to discuss the use of appropriate child safety seats with parents on an ongoing basis, in keeping with changes in requirements and national recommendations as children grow.
- Car seat distribution programs are recommended to increase the availability of free or low-cost seats for families in need. Programs or events that provide no-cost installation assistance to all caregivers are also recommended.
- As of 2019, Louisiana's child passenger safety legislation reflects best practices. Prevention professionals should work to ensure all families have access to appropriate seats and instruction/assistance for correct installation.
- Safety professionals should monitor enforcement of legislation related to child safety seats.
- Policies around improper restraint and drinking and driving should be strictly enforced.[8]
- Injury prevention professionals are encouraged to conduct environmental assessments of areas where children gather (parks, schools, libraries, etc.) for unsafe road conditions such as poor visibility, lack of cross-walks or stop signs, high speed, or poorly coordinated traffic.[9]
- National experts recommend requiring three stage Graduated Drivers' Licensing Programs for young drivers.[8]

Child Drowning Deaths

Risk Factors & Recommendations, 2015-2017 data

68 children in Louisiana died from drowning from 2015-2017.[4] Louisiana had the highest rate of drowning in the U.S. for children ages 1-14 years. Drowning was the 2nd leading cause of injury-related death for children in Louisiana.[1]

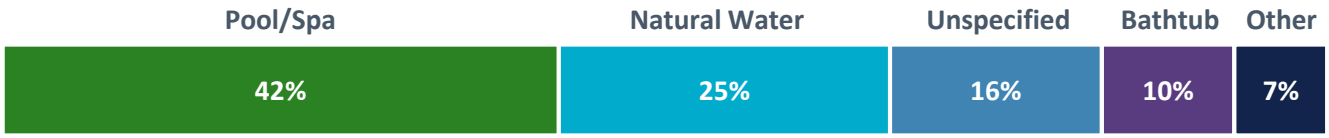
Top Risk Factors for Drowning in Louisiana[4]



- Most children who drowned did not have **adequate supervision** or **barriers preventing access to water**.[4]
- Most drowning deaths occurred among children who are white[i], male, and between the ages of 1 and 4 years.

Drowning Location

Of children who died from drowning in Louisiana**, nearly half (42%)** drowned in a **pool, hot tub, or spa**. [4]



Recommendations

Based on shared recommendations from the CDC,[10] Safe Kids Worldwide,[11] and Children's Safety Network.[12]

Pool owners or operators and water safety instructors should:

- Emphasize or require supervision of all children at all times when they are in or around water. Supervision consists of at least 2 designated adult "water watchers' within "touch distance."
- Only use floatation devices that have been approved by the US Coast Guard for the specific weight of the child using the device. Product will have the USCG imprint on it.
- Teach children to swim close to lifeguards and only swim in designated swimming areas.
- Maintain automatic external defibrillators (AEDs) and rescue equipment near pools.
- Require CPR and First Aid certification for pool supervisors, and ensure quick access to call 911.
- Follow pool safety standards, secure pool/spa ladders, and install updated safety-compliant drains & pipes.
- Maintain clear visibility of pool surface & floor.

Community and municipal leaders should:

- Organize free or affordable swim lessons for children and adults.
- Increase regulations and code enforcement for barriers around pools, spas & ponds.

Building officials, insurers and pool professionals should:

- Require and enforce the use of standard safety features around pools, spas and ponds, such as barriers, gates, door and pool alarms, and covers.

Pediatricians and other health and social service professionals serving families should:

- Instruct parents & caregivers to maintain constant supervision of infants while they are in bathtubs, and limit toddlers' access to all water sources, including bathtubs, fountains, buckets & storm drains.
- Share drowning prevention health education resources with caregivers, from sources such as **poolsafely.gov**.

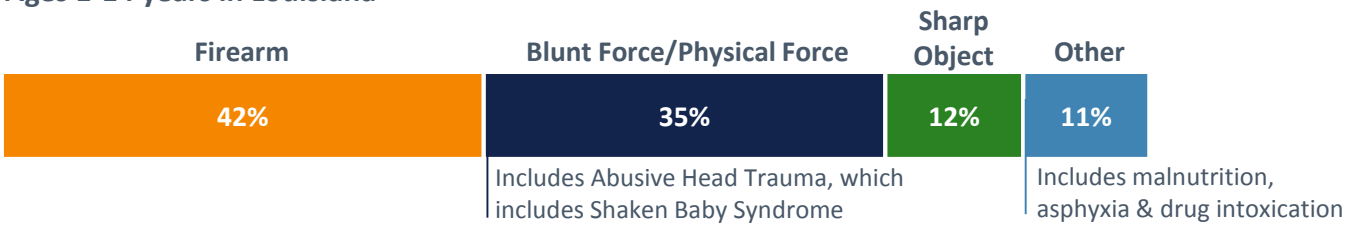
Homicide Deaths in Children

Risk Factors & Recommendations, 2015-2017 data

57 children in Louisiana were victims of homicide from 2015-2017.[1]
Nearly half (42%) of child homicides in Louisiana involve firearms.

Homicide Methods

Ages 1-14 years in Louisiana[1]



Firearm Storage

Child Death Review teams reviewed firearm-related homicide cases (both intentional and unintentional) to determine how the firearm used was stored.

NOTE: Of the 57 homicide deaths among children from 2015-2017, 22 were reviewed by local Child Death Review teams. The remaining 35 cases could not be reviewed due to ongoing legal proceedings. Firearm storage findings reflect only reviewed cases.

Recommendations

Based on recommendations from Children's Safety Network,[13] the American Academy of Pediatrics (AAP)[14] and the Safe States Alliance.[15]

- **Pediatricians are encouraged to:**
  - Regularly talk to parents about how to safely store all firearms in children's primary home and relatives' homes. Safe storage includes locking up firearms and storing firearms and ammunition separately.
  - Share strategies and resources for managing stressful parenting situations (e.g. excessive crying in infants, toddler meltdowns) with parents and discuss safe, age-appropriate methods of discipline.
- **Policymakers and public health agencies are encouraged to:**
  - Promote and enact evidence-based interventions that promote safe, stable, nurturing relationships and environments, positive parent-child interactions and cultural norms supporting safe child discipline.
  - Support and enact evidence-based violence prevention interventions that are guided by a risk and protective factor approach, which means that they impact multiple adverse health outcomes, including chronic disease, injury and violence. More information can be found in the **CDC's Connecting the Dots** guide and the Prevention Institute's **Recommendations for Preventing Gun Violence**.
  - Support the National Violent Death Reporting System (NVDRS) in Louisiana that collects and analyzes comprehensive homicide data in order to inform prevention and policy efforts.
- **Sporting agencies, governmental bodies and hunting enthusiasts** should advocate and facilitate training for novice hunters. Training should cover safe firearm handling and preventing unintentional discharge.

Suicide Deaths in Children

Risk Factors & Recommendations, 2015-2017 data

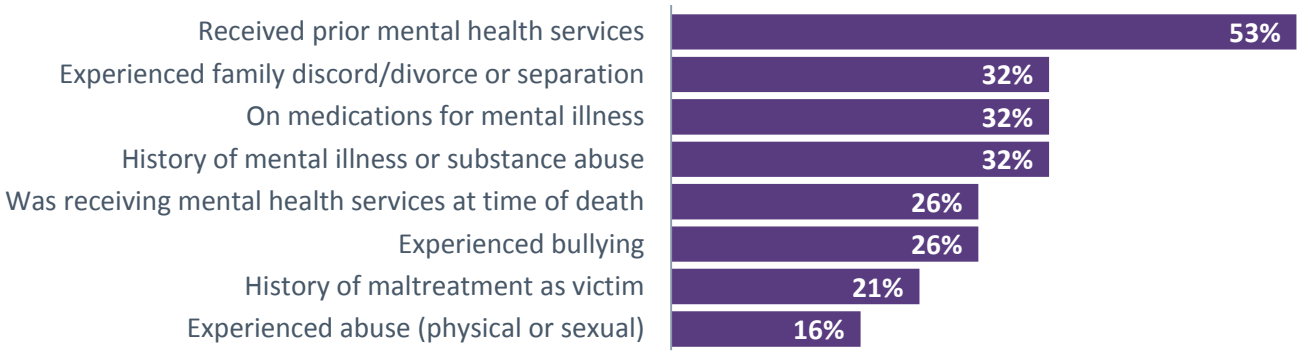
24 children in Louisiana died from suicide from 2015-2017.[1]
Half of all child suicides in Louisiana are completed using firearms.

Suicide Methods

Children under the age of 15 years old in Louisiana[1]

Experiences of Children who Died by Suicide

Local Child Death Review teams reviewed 19 out of 24 child deaths due to suicide from 2015-2017. The graph below reflects only reviewed cases, and data are not mutually exclusive.



Recommendations

Based on recommendations from Children's Safety Network,[13] AAP[14] and the Safe States Alliance.[15]

- Pediatricians should regularly talk to parents about how to safely store firearms in children's primary home and relatives' homes. Safe storage includes locking up firearms and storing ammunition separately.
- Healthcare providers and counselors should use valid and reliable screening tools (e.g. ASQ Suicide Risk Screening Tool or Beck's Scale for Suicide Ideation) to assess children for suicide risk.
- Educators and those working with youth should learn to recognize warning signs for suicide and how to connect at-risk youth to resources such as Living Works' ASIST or safeTALK programs. The Louisiana Department of Education is responsible for monitoring compliance with training for educators.
- Policymakers are encouraged to work with public health agencies to understand how social determinants of health and health inequities (including historical and community trauma, inequitable distribution of protective services and resources, gender norms, and others) contribute to race, place, and gender differences in suicide and self-harm, including firearm injuries.
- The Louisiana Department of Health and partners should promote evidence-based interventions that work to increase community connectedness; build resilience, empathy and emotional regulation skills; and teach children positive behaviors and relationship-building. These interventions are designed to prevent children from using violence against themselves or others.
- Policymakers are encouraged to support NVDRS, which helps Louisiana collect and analyze comprehensive suicide data to better inform prevention and policy efforts.

Racial Disparities

Infant and Child Mortality
2015-2017 Data

Image: Robert Wood Johnson Foundation © 2017

Racial Disparities in Mortality

Infants ages 0 to 1 year, and children ages 1 to 14 years

Racial disparities in mortality are complex and due to many factors. Infant and child mortality is influenced by a wide range of intergenerational social, economic, clinical and environmental determinants. Racial disparities across important non-clinical factors, such as socioeconomic status, access to preventive healthcare[16] and family planning services,[17] and community infrastructure increases corresponding disparities in infant and child mortality.[18, 19]

Racial disparities in mortality exist throughout Louisiana and the United States. In Louisiana, black[ł] infants are **more than twice as likely** to die as white[ł] infants. Black[ł] children **are almost twice as likely** to die as white[ł] children.

Black[ł] infants are at higher risk for Sudden Unexpected Infant Death, the leading cause of injury-related infant death. Some families may find it especially difficult to consistently follow safe sleep recommendations for a number of social and economic reasons, including shift-work or other non-traditional work schedules, exhaustion, inability to afford safe sleep products such as cribs and Pack 'n Plays, misconceptions about safe sleep practices, or home safety concerns leading caregivers to believe that bed-sharing is the safest option.[20, 21]

Low socioeconomic status is correlated with injury-related child fatalities.[22] Families living in economically disadvantaged communities which are characterized by a lack of resources and infrastructure may be at higher risk for unsafe conditions. Examples include:

- Families with lower incomes and limited resources may need to prioritize basic needs such as housing, food, and transportation over safety equipment. Items such as child passenger safety seats and bicycle helmets can be expensive. Many communities do not have consistent access to organizations that may provide these safety items for free or at reduced cost.
- Older vehicles are equipped with fewer safety features than newer ones.
- Economically disadvantaged neighborhoods may not have municipal swimming pools or access to free or low cost water safety and swim lessons.
- Dilapidated buildings, open drainage canals, limited hazard mitigation, high rates of violent crime, poorly lit or poorly designed roadways, and limited enforcement of road safety rules put children at risk.
- Limited access to quality trauma care can result in worse injury outcomes.

Addressing structural and socioeconomic inequalities, such as the ones listed above, at a community and institutional level will help reduce health inequity, as well as overall infant and child fatalities.

ł Black indicates non-Hispanic black, and white indicates non-Hispanic white.

Racial Disparities in Mortality

Infants ages 0 to 1 year, and children ages 1 to 14 years

Black[ł] infants and children are at an increased risk of dying, as compared to their white[ł] peers.[1]

A CLOSER LOOK

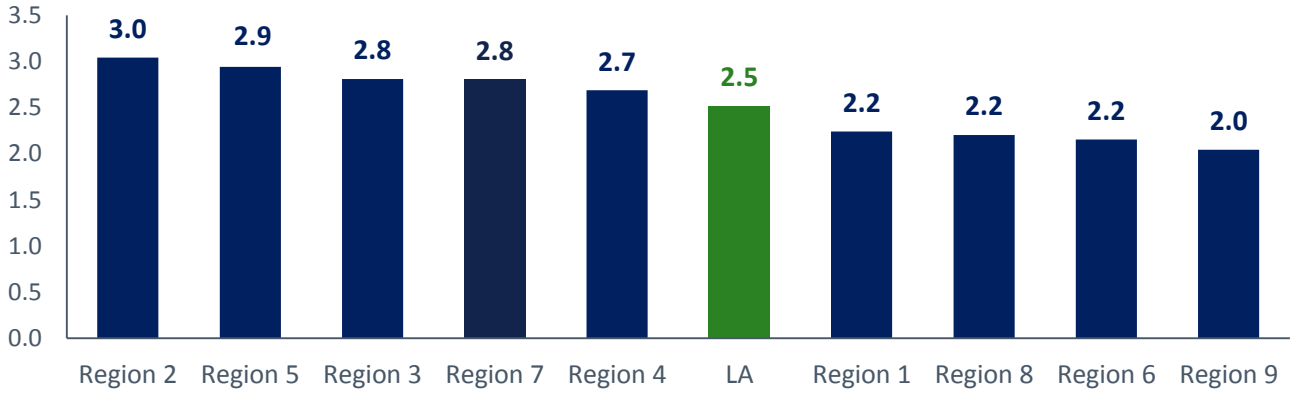
In Louisiana from 2015 to 2017, black[ł] infants were **2.5 times as likely to die** as white[ł] infants. During the same time period, black[ł] children were **1.8 times as likely** to die as white[ł] children.

Mortality Rate		
Age Group	**Black[ł]**	**White[ł]**
Infants, birth to 1 year	12.1 deaths per 1,000 live births	4.8 deaths per 1,000 live births
Children, 1 to 14 years	35.8 deaths per 100,000 children	19.7 deaths per 100,000 children

ł black indicates non-Hispanic black, and white indicates non-Hispanic white.

Relative Risk of Infant Death for black[ł] vs. white[ł] Infants

Relative risk is the probability of an event occurring in one group and not another



Key Points

- Infant and child mortality affects some racial groups more than others.
- Region 2 (Greater Baton Rouge Area) has the greatest racial disparity in birth outcomes. In this region, black[ł] infants are 3 times as likely to die as white[ł] infants.
- Mortality data for Hispanic infants and children were not included in racial disparity calculations because of insufficient counts – i.e. the number of Hispanic infants or children who died in Louisiana during this time period was too small for a reliable comparison against mortality rates for white[ł] and black[ł] infants and children.

Injury Prevention Recommendations & Considerations for Children and Youth with Special Health Care Needs

Recommendations and Considerations

Children and Youth with Special Health Care Needs

Since 2016, in an effort to address the needs of all children in Louisiana in a more equitable way, the Bureau of Family Health (BFH) has included a Family Advisor in various workgroups and initiatives to ensure that children and youth with special health care needs are considered. In 2018, the lead Family Advisor joined the Louisiana State CDR panel to provide a family perspective to case reviews, especially regarding injury prevention for children and youth with special health care needs. While deaths among this population may be few in number, they are no less tragic. In many instances, simple accommodations and systems-level checks and balances can prevent serious injuries and deaths.

The following recommendations and considerations focus on protecting children and youth with special health care needs from the leading causes of fatal injury. They are informed by Louisiana child death case reviews and national recommendations.

Motor Vehicle Passenger Safety

- Providers of early intervention services, case management, respite and attendant care services, pediatricians, and allied health providers should:
    - Ensure the child has an appropriately sized and supportive car seat. Providers may need to make referrals for seating evaluations, write prescriptions, or provide letters of medical necessity for payer authorizations.
    - Educate caregivers and families on wheelchair transportation safety with secure locking systems and appropriate head and neck supports.
- Louisiana Medicaid Managed Care Organizations are required to pay for transportation accommodations, including specialized car seats, for families that can demonstrate medical necessity. Providers should work with families to provide letters of medical necessity when appropriate.
- Identifiers that convey personal health information or medical diagnoses can be placed on or inside cars to facilitate speedy delivery of services from emergency responders in the event of a crash. Providers and agencies serving children and youth with special health care needs should consider partnering with community organizations to provide families personal health identifiers for use in cars.
    - The Louisiana Bureau of Emergency Medical Services and BFH's Emergency Medical Services for Children program facilitate the Louisiana Yellow Dot Program, which provides families with a bright yellow envelope containing an emergency information form. The envelope is kept in the vehicle glove box, and a notification sticker is placed on the rear glass.
    - Examples of identifiers include seat belt clips or notification stickers indicating a special condition such as deafness, autism, paralysis, rare protocol needs, inability to speak, etc.
- Vehicle heat safety awareness is important for all caregivers and families, but children with special health care needs are particularly vulnerable. Children with chronic medical conditions may be at higher risk in extreme heat situations, as they may more sensitive to heat, less likely to sense or respond to changes in temperature, or may take medications that compound the effects of extreme heat.[23]
- More information about motor vehicle safety and transportation considerations for children and youth with special needs can be found at preventinjury.pediatrics.iu.edu/special-needs/. The website has resources for providers – including a comprehensive guide to child safety seats and passenger restraints, special considerations by medical condition, and up-to-date information on new or updated safety recommendations and equipment – as well as a parent-friendly Frequently Asked Questions page.

Recommendations and Considerations

Children and Youth with Special Health Care Needs

Water Safety

- Providers of early intervention services, case management, respite or attendant care services, pediatricians, and allied health providers should ensure the child has appropriately supportive bath equipment. Providers may need to make referrals for seating evaluations, write prescriptions, or provide letters of medical necessity for payer authorizations.
- Some community organizations offer swimming lessons specifically for children and youth with special health care needs, such as JoJo's Hope.[24] Providers should familiarize themselves with organizations in their area that provide this service, and refer families.

Fire Safety

- For families who receive in-home early intervention services, case management, attendant or respite care services, allied health services, or home health services, providers should:
    - Regularly document fire safety education and fire drill demonstrations
    - Perform and document environmental scans noting any risks or hazards
    - Verify the presence of working smoke detectors, fire extinguishers, and window stickers identifying the location of the child's bedroom for firefighters. If any of these items are missing in the home, refer families to community organizations that provide smoke detectors, replacement batteries, fire extinguishers, and identifying window stickers.[25]
- Families with children who are deaf or hard of hearing should use smoke detectors with flashing lights, especially in the room where the child sleeps.

Preventing Suicide and Homicide

Homicide includes deaths due to Child Abuse and Neglect

- Early access to behavioral health supports for parents of children and youth with special health care needs, the children themselves, and their siblings is protective against depression, anxiety, toxic stress.[26] Referrals to behavioral and mental health services for the whole family should be part of care coordination efforts and policies.
- Students with disabilities are more likely to be bullied by their peers, and are more likely to experience social isolation.[27] The Department of Education and local school boards are encouraged to collaborate with community and national partners to implement anti-bullying and inclusion campaigns in schools.[28]
- Home visiting, parent education and family support programs should be expanded and enhanced to meet the needs of families of children and youth with special health care needs. Like all parents, these caregivers benefit from coaching on parenting, life skills and family health. However, caring for children with special health care needs requires caregivers to learn additional systems navigation skills and stress management/coping techniques.[26]

Specialized Equipment

- When families need special medical or safety devices:
  - Pediatricians should provide prescriptions, referrals, and letters of medical necessity to Durable Medical Equipment (DME) companies.
  - Allied health professionals should provide operating and safety education to families who need to use the equipment.
  - Respective vendors should provide regular maintenance and safety inspections, and maintain documentation of these activities.
  - Case Managers should routinely inquire about equipment issues or needs, and facilitate appropriate referrals.
- Insurance companies should expedite authorizations for specialized medical equipment such as the following:
  - Oxygen concentrators
  - Ventilators
  - Bilevel Positive Airway Pressure (BiPAP) machines
  - Suction machines
  - Hospital Beds
  - Wheelchairs
  - Standers/Standing Aids
  - Enteral Feeding Pumps
  - Generators for a backup power source (may be provided through insurance or community organizations)

Moving Data to Action

What the Office of Public Health, Bureau of Family Health and its partners are doing to prevent fatalities and promote the health of Louisiana families

Moving Data to Action

The Bureau of Family Health (BFH) facilitates quarterly meetings of the State CDR Panel to review data on the leading causes of child fatalities, select priorities for the upcoming year, discuss recommendations generated by local level review panels, and identify opportunities for preventive action. The Louisiana Department of Health (LDH), Office of Public Health (OPH), BFH and various partner organizations use State and local CDR findings and recommendations to inform activities, programs, interventions and policies to prevent fatalities and promote the health of Louisiana families.

The following efforts were coordinated or facilitated by BFH and its partner organizations. They were directly or indirectly informed by CDR findings, in addition to national research and best practices, other statewide surveillance systems and programs, and recommendations from local community advisory teams.

Improving Birth Outcomes

Supporting Families

- Worked directly with pregnant women and families through the BFH's Maternal, Infant, and Early Childhood Home Visiting (MIECHV) program. In this program, registered nurses or parent educators work side-by-side with clients to help them have healthier pregnancies, care for their newborns, navigate services, and reach their personal goals, including financial and educational achievements. The evidence-based models that the program uses have been shown to reduce pregnancy and birth problems, as well as emergency room visits among participating families.[29]
    - Because mental and emotional wellbeing is also a critical part of maternal heath and healthy child development, the MIECHV program includes a mental health component. Infant and Early Childhood Mental Health Clinical Specialists work with home visitors to increase their capacity to support families who experience mental health and parenting challenges. The specialists engage in educational activities and individualized case discussion with home visitors, observe and assess families, coordinate with community providers, and provide evidence-based treatment for some clients, when possible and appropriate.
- Connected pregnant women and families to health and pregnancy resources, services, and information via the Partners for Healthy Babies (PHB) campaign. The campaign is a state project consisting of two websites, PartnersForHealthyBabies.org and a Spanish-language version (AliadosParaBebesSanos.org), and toll-free helpline, 1-800-251-BABY (2229). The websites and helpline link expecting and new parents to health, financial and social services. The Spanish-language website emphasizes resources that are particularly relevant to Spanish-speakers. The helpline is available 24/7 and is completely confidential. For all campaign elements, local and state level resources are prioritized, but national resources are used when necessary or appropriate.
- Provided affordable comprehensive reproductive health services to men and women statewide through the Bureau of Family Health's Reproductive Health Program. The following services contribute to improved birth outcomes:
    - Screening and treatment for Sexually Transmitted Infections (STIs)
    - Screening and referrals for chronic health conditions
    - Family planning counseling and a full range of contraceptive options to empower women and families to plan pregnancies and achieve healthy birth spacing

Moving Data to Action

Improving Birth Outcomes

Improving Systems

- Collaborated with federally qualified health centers to integrate reproductive health services into primary care settings to increase women's access to complete healthcare before pregnancy.
- Worked to produce improvements in maternal health during the perinatal period through the facilitation of the Louisiana Perinatal Quality Collaborative (LaPQC). LaPQC is a statewide network of hospitals and perinatal care providers, public health professionals, and patient and community advocates who use evidence-based practices and quality improvement methods in the clinical setting to improve outcomes for women, families, and newborns and advance equity.
    - LaPQC's current focus is the *Reducing Maternal Morbidity Initiative.* The goal of the initiative is twofold: achieve a 20% reduction in severe maternal morbidity among women who experience hemorrhage and severe hypertension/preeclampsia in participating facilities; and reduce the black[t]-white[t] disparity across this outcome by May 2020.
    - Improvement teams from two delivery hospitals are working closely with LaPQC on a pilot project to: (1) improve the identification and treatment of pregnant women with opioid use disorders and (2) improve care for infants who were exposed to opioids during pregnancy.
- In 2018, legislation created the Healthy Moms, Healthy Babies Advisory Council. BFH was assigned to coordinate this council. The council will address racial and ethnic disparities in maternal health outcomes and help current state agencies and partners working on maternal mortality and morbidity incorporate a community-engaged, equity-focused approach into their work. Improving maternal health will have a positive impact on birth outcomes.
- BFH, in partnership with the Tulane Educational Fund and the Tulane Department of Psychiatry and Behavioral Science, received a grant to address perinatal depression, anxiety, and related disorders, primarily through use of mental health consultation. Psychiatrists and other licensed mental health professionals will work with obstetricians, nurse practitioners, midwives, and other health professionals to help them better screen, identify, and refer pregnant and postpartum women suffering from depression, substance use disorders, and interpersonal violence. Activities are primarily based in administrative regions 4 (south central Louisiana) and 8 (northeast Louisiana), though some will have statewide reach.

Sudden Unexpected Infant Death (SUID) Prevention

Supporting Families

- Maintained Give Your Baby Space, a statewide campaign that teaches caregivers the safest ways for babies to sleep. Safe sleep information and resources for families, providers, and community partners can be found at GiveYourBabySpace.org.
    - BFH modified the campaign website and related materials to better incorporate a family-centered, risk-reduction approach, as recommended by national experts.
    - Starting in 2017, BFH enhanced and expanded the campaign through a series of radio spots and online ads promoting both the website and safe sleep practices. BFH also produced an interactive safe sleep quiz game and videos of actual Louisiana parents and providers talking about safe sleep, all of which are housed on the website.

Moving Data to Action

Sudden Unexpected Infant Death (SUID) Prevention

Supporting Families

- Worked with hospitals, Parish Health Units, community-based organizations and home visiting offices to model safe sleep environments through physical displays in clinics/offices
- Developed teaching tools (flip books) to assist community health and social service professionals tasked with giving safe sleep presentations to caregivers and families. The flip books are designed to provide a script for presenters and visuals to the audience, especially in venues without audio, video, computer or internet access.
- Partnered with the YMCA to offer a Spanish-language seminar on safe sleep to Latino families.
- Mobilized the distribution of Pack 'N Plays to families in need who were temporarily displaced as a result of severe flooding in 2016.
- Trained direct service providers on evidence-based methods to reduce sleep-related deaths. Providers included Maternal, Infant and Early Childhood Home Visitors, Louisiana Department of Children and Family Services (DCFS) case workers and childcare providers. Also trained healthcare and child welfare professionals how to educate caregivers on safe sleep and promote safe sleep practices.

Improving Systems

- Established regional taskforces and State CDR workgroup on Safe Sleep Promotion.
- Convened multiple family-serving programs and stakeholders to develop an agency position statement on safe sleep and breastfeeding for the Louisiana Department of Health. The position statement expresses a commitment to move beyond the campaign of the "ABC's of Safe Sleep" (Alone, on the Back, in a Crib) toward provider-family conversations that prioritize shared decision-making and focus on realistic strategies to minimize risk, especially in scenarios which necessitate alternate sleep environments.
- *The Gift* program promotes breastfeeding, a protective factor against SUID, by providing technical assistance to Louisiana birthing facilities to improve the quality of their maternity services, including their policies and practices around breastfeeding. 37 facilities have received *Gift Designation,* and *The Gift* has helped 16 of those facilities advance to receive the internationally-recognized Baby-Friendly designation.
- Provided child injury data and research on the connection between parent-child attachment, child safety and paid family leave to Paid Leave + US (PL+US), a state and national initiative that seeks to establish legislation requiring employers to provide paid family leave. This information was shared with Louisiana's congressional delegation.
- Collaborated with the University of Louisiana Lafayette to explore the use of simulation to improve nursing students' knowledge and retention of infant safe sleep practices. Tested a modified training for use in hospital settings.
- Evaluated the feasibility, desirability and effectiveness of "baby boxes" as a means to promote safe sleep in response to House Concurrent Resolution 58 of the 2017 Legislative Session, and reported findings to the House and Senate Committees on Health and Welfare. BFH concluded that research does not support the "baby box" as an effective method to reduce sleep-related deaths, but may have utility during emergencies/disasters.

Moving Data to Action

General Injury Prevention

Improving Systems

- Expanded BFH Injury Prevention efforts by securing funding for additional statewide programming to prevent the leading causes of childhood injury. Funding was provided through the CDC's Core State Violence and Injury Prevention Program, the National Violent Death Reporting System (NVDRS), and the Consumer Product Safety Commission's Pool Safely initiative.
- Established topic-specific regional taskforces and workgroups across the state through Community Action and Advisory Teams. Topics include: Infant Safe Sleep, Child Passenger Safety, Father Involvement, Advocacy and Public Safety, and Child Death Prevention.
- Implemented the Injury Free Louisiana (IFLA) Training academy to teach community providers to implement a shared risk and protective factor approach. This approach is designed to produce interventions that impact multiple adverse health outcomes, including chronic disease, injury and violence.
- Established surveillance and data communication processes to provide prevention stakeholders with information to inform program and policy efforts.

Child Passenger Safety and Motor Vehicle Crash Prevention

Supporting Families

- Collaborated with Regional Transportation Safety Coalitions and their partners to train car seat safety technicians, establish car seat safety check stations, promote free car seat distribution initiatives and assist caregivers with correct installation.
- Coordinated with emergency department providers and emergency medical personnel on two large Louisiana Department of Wildlife and Fisheries events (the Louisiana State Archery Tournament and the National Hunting and Fishing Day festival) to promote ATV safety.
- Coordinated with Vantage/Affinity Health Groups to create a Public Service Announcement (PSA) promoting car seat and seatbelt usage.

Improving Systems

- Provided data on child injury and best practice recommendations around child passenger safety (seating location, booster seat use) and Graduated Driver's Licensing to the Louisiana Highway Safety Commission, the Strategic Highway Safety Plan and other professional partners. The Highway Safety Commission and Louisiana State Police used this information to bring Louisiana child passenger safety legislation in line with national best practices.
- Partnered with Louisiana State University Highway Safety Research Group to participate in data integration, linkage, and specialized analyses.
- Completed data analysis linking Louisiana motor vehicle crash data with hospitalization injury data, which illuminated the need to emphasize booster seats in child passenger safety legislation.
- Identified motor vehicle crash prevention as a priority for the 2019-2020 State Child Death Review. A subgroup will determine the most effective ways to change cultural norms around child passenger safety and optimize the availability of car seats.

Moving Data to Action

Violence Prevention

Supporting Families

- Worked directly with parents through BFH's MIECHV program to support positive parent child interactions, emotional health, and nurturing familial relationships. MIECHV also screens for Intimate Partner Violence (IPV) and offers referrals to domestic violence and IPV resources for families.
- Worked with the Tulane Violence Prevention Institute, Children's Hospital and Louisiana DCFS to design an Essentials for Childhood Initiative. This is foundational in shifting cultural norms around corporal punishment and engaging businesses to implement more family-friendly policies. Promoting safe, stable, nurturing relationships and environments for employees, their children and their communities is known to be a protective factor against family violence.
- Identified safe firearm storage as a priority for the 2019-2020 State CDR. The State CDR is tasked with examining best practices.

Improving Systems

- In 2017, BFH began to gather critical data on homicide, suicide and unintentional firearm fatalities using NVDRS. NVDRS helps state and local officials understand the circumstances contributing to violent deaths by linking data from medical examiner, coroner, law enforcement, toxicology, and vital statistics records.
- Created recommendations using CDR data and panel expertise for how law enforcement can:
    - Improve and track the status of child death investigations.
    - Increase recognition and reporting of child abuse and neglect.
- Organized mandated reporting seminars designed to prevent fatalities related to child abuse and neglect for the Louisiana Emergency Response Network, Louisiana Emergency Room Nurses Association, DCFS, Emergency Medical Services, law enforcement, teachers, social workers, and childcare providers.
- Provided cross-cutting trainings on shared risk and protective factors for violence via programs such as the Injury Free Louisiana (IFLA) and the Adverse Childhood Experiences (ACEs) Educator program.
- Joined a national Children's Safety Network Child Safety Learning Collaborative on suicide and self-harm prevention. Learning about effective, tested methods to reduce suicide and self harm from national experts and peer states.
- Worked with local and regional suicide prevention taskforces to promote preventative training opportunities, and to create a Suicide Prevention Plan and Crisis Intervention Quick Resource Guide.
- Provided data and recommendations related to preventing abusive head trauma for a legislative proposal focused on educating high school students on Shaken Baby Syndrome.
- Continued collaborating with the Louisiana Foundation Against Sexual Assault to educate middle, junior and high school students on preventing physical and emotional aggression.
- Collaborated with Columbia University, Tulane University's Violence Prevention Institute and Solutions Journalism Network to host a workshop for media professionals on how to effectively cover sensitive injury and violence topics titled, "Covering Violence and Trauma: A Solutions Approach."

Moving Data to Action

Drowning Prevention

Supporting Families

- Coordinated with partners to distribute *PoolSafely* materials (water safety and drowning prevention education) to parents and caregivers.
- Expanded access to free water safety and swim instruction in areas with few resources.
- Partnered with the YMCA to provide a Spanish-language water safety class for Latino families.
- Collaborated with Safe Kids Coalition to host a water safety event.

Improving Systems

- Established State CDR workgroup on drowning prevention that used data to identify opportunities for prevention and submit a proposal for funding.
- Updated drowning and water safety infographics to share drowning data and prevention recommendations with State CDR partners across the state. These materials were used in an annual campaign for the promotion of *Pool Safely* materials during drowning prevention month.
- Coordinated with the State YMCA Alliance and the Governor's Office on the YMCA's Safety Around Water Initiative.
- Received a Consumer Product Safety Commission *Pool Safely* grant that allows BFH and partners to coordinate trainings on pool construction safety standards, pool safety requirements, provide public education around water safety and drowning prevention, and better support local prevention initiatives in underserved communities.

Appendix

Child Death Review Overview

A quick guide to the Child Death Review process

What is the purpose of the Child Death Review (CDR)?
The Louisiana Department of Health (LDH), Office of Public Health (OPH), Bureau of Family Health (BFH), coordinates the Child Death Review (CDR) Program. Per R.S. 40:2019, CDRs are mandated for all unexpected deaths of children under 15 years of age. State and local panels meet to review child deaths, identify risk factors, and provide recommendations to help reduce the occurrence of child mortality in the future. Review panels are made up of multidisciplinary groups of professionals. These groups are also called case review teams.

What is the difference between the state and local CDR programs?
The state case review team reviews cases when there are issues that cannot be resolved at the local level or that require policy initiatives, that are better addressed by the state panel. The state team is also consulted whenever there are clusters of similar cases in multiple regions throughout the state.

What types of deaths are reviewed?
Deaths of children between 0 and 14 years of age who die unexpectedly in Louisiana are eligible for case review, regardless of resident status. Commonly reviewed cases include deaths attributable to unintended injuries, homicide (including those due to child abuse and neglect), suicide, SUID, and unknown causes.

Does anyone review other types of deaths?
There are two other mortality review systems currently used by the Bureau of Family Health. These are the Pregnancy Associated Mortality Review (PAMR) and the Fetal Infant Mortality Review (FIMR). Cases in which mothers die during or within one year of pregnancy are reviewed through PAMR. Cases involving infant deaths that do not meet CDR criteria may be reviewed through the FIMR system. These cases include infants who died of medical causes between birth and their first birthday. Finally, deaths due to child abuse and neglect are also reviewed by the Department of Children and Family Services (DCFS).

How are the deaths identified?
The Office of State Registrar and Vital Records provides data on newly registered deaths to the Bureau of Family Health's mortality surveillance team each month. Regional Maternal and Child Health (MCH) Coordinators use these data to identify deaths in their respective regions.

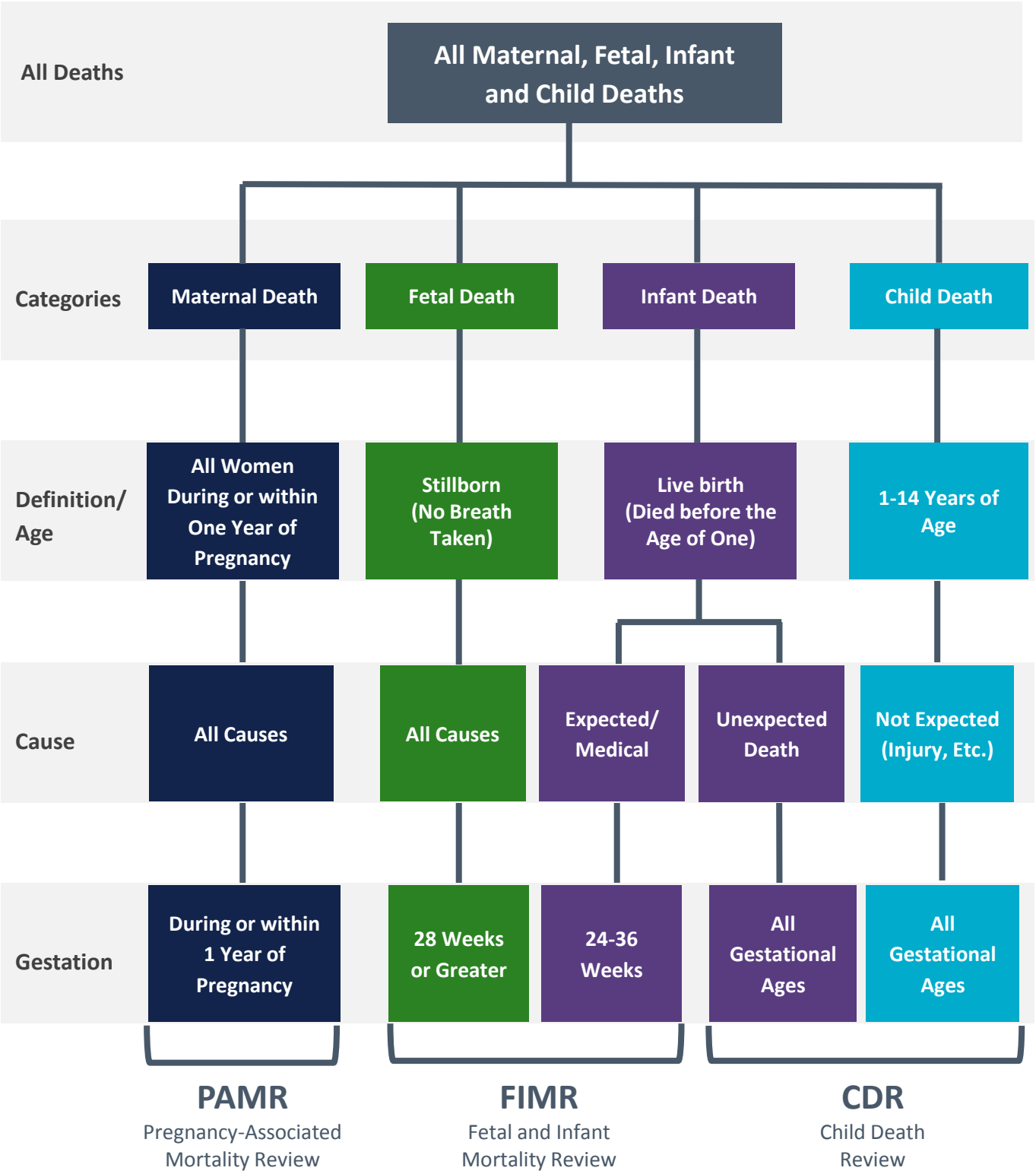
What happens after a death is identified?
The Regional MCH Coordinators obtain case information from medical records, autopsies, death scene investigations, and first responder reports. This information is entered into a secure database and used for surveillance at the state level and to create case summaries which are presented for review at regional CDR meetings.The review process uses data to create recommendations to prevent similar deaths in the future.

Who decides what deaths will be presented at the CDR meetings?
Regional MCH Coordinators are registered nurses charged with, among other duties, coordinating CDR meetings in each of their public health regions. All unexpected deaths of children under 15 years of age are reviewed by CDR teams. In Louisiana, Regional MCH Coordinators use information gathered from case abstraction to determine which cases meet CDR criteria. Criteria are based on age at death, residency status, and cause of death. Please see page 47 for Death Review Algorithm.

How are the recommendations from the CDR meetings used?
Recommendations from the CDR meetings are referred to regional Community Action and Advisory Teams (CAATs). Community action teams are comprised of multidisciplinary stakeholders who develop action plans based on the recommendations generated from the CDR meetings.

Death Review Algorithm

Case review determination



2017-2018 State Child Death Review Members

Position	Current Incumbent
State Health Officer, or designee	Joseph Kanter, M.D.
Secretary of the Louisiana Department of Health, or designee	Jane Herwehe
Secretary of the Department of Children and Family Services, or designee	Lori Miller
Superintendent of the Office of the State Police, or designee	Lieutenant Dave Kolb
State Registrar of the Office of Vital Records, or designee	Devin George
Attorney General, or their designee	Alicia Wheeler
Member of the Senate, appointed by the President of the Senate	Honorable Yvonne Dorsey-Colomb
Member of the House of Representatives, appointed by the Speaker of the House of Representatives	Honorable Scott Simon
Commissioner of the Department of Insurance, or designee	Rebecca DeLaSalle
Representative of the Louisiana Partnership for Children and Families	Sandra Adams
Executive Director of the Highway Safety Commission, or the Department of Public Safety and Corrections	Lisa Freeman, J.D.
District Attorney, appointed by the Louisiana District Attorneys Association	Joseph Waitz Jr.
Sheriff appointed by the Louisiana Sheriffs Association	Lauren Meher
State Fire Marshal, or designee	Cynthia Gonthier Naquin
Assistant Secretary of Behavioral Health, or designee	Danita LeBlanc
Police Chief, appointed by the Louisiana Association of Chiefs of Police	Chief Tommy Clark / Chief Frank Edwards
Forensic Pathologist, certified by the American Board of Pathology and licensed to practice medicine in the state, and appointed by the chairman of the Louisiana State Child Death Review Panel subject to Senate confirmation	Michael Cramer, M.D.
Pathologist experienced in pediatrics, appointed by the Louisiana Pathology Society	Deborah Cavalier, M.D.
Coroner, appointed by the president of the Louisiana Coroner's Association	James Groody
Health professional with expertise in Sudden Infant Death Syndrome	Laurel Kitto
Pediatrician with experience in diagnosing and treating child abuse & neglect	Laura Clayton Kleinpeter, M.D.
State Superintendent of Education, or designee	Janice Zube
Director of the Bureau of Emergency Medical Services, or designee	Amanda Perry
Pediatrician with expertise in the prevention of SUID	Brian Zganjar, M.D.
Four citizens from the state at large who represent different geographic areas of the state	Pam Cart Dawn Vick, M.D. Ashlyn Melton Shana Toole

2017 and Current Regional Maternal and Child Health Coordinators

Region	Coordinator
Region 1	Rosa Bustamante-Forest, A.P.R.N., M.P.H.
Region 2	Kelly Bankston, B.S.N., R.N.
Region 3	Nicole Soudelier, B.S.N., R.N.
Region 4	Christine Cornell, B.S.N., R.N. (2015-2017) / Debra Perna, R.N.
Region 5	Bridget Redlich-Cole, R.N, CIC (2017) / Jade Marler, R.N.
Region 6	Lisa Norman, R.N.
Region 7	Shelley Ryan-Gray, B.N., R.N.
Region 8	Sara Dickerson, R.N.
Region 9	Martha Hennegan, R.N.
Statewide	Robin Gruenfeld, M.P.H. (2015-2017)/Rosaria Trichilo, M.P.H.

Note: With the exception of the Regional Maternal and Child Health Coordinators, local CDR membership is voluntary and not every local CDR meeting will include the same members.

Acronyms and Definitions

Acronym	Definition
ASSB	Accidental Suffocation and Strangulation in Bed (ICD 10 code W75)
BFH	Bureau of Family Health
CDR	Child Death Review
CMDCA	Congenital malformation, deformation and chromosomal abnormality
LDH	Louisiana Department of Health
FIMR	Fetal and Infant Mortality Review
ICD	International Classification of Diseases
MCH	Maternal and Child health
MVC	Motor Vehicle Crash
OPH	Office of Public Health
PAMR	Pregnancy-Associated Mortality Review
PRAMS	Pregnancy Risk Assessment Monitoring System
SIDS	Sudden Infant Death Syndrome (ICD 10 code R95)
SUID	Sudden Unexpected Infant Death (ICD 10 codes W75, R95, and R99*)

*R99 refers to unknown causes of death

Term	Definition
Low birth weight	Less than 2,500 grams at delivery (5.5 lbs.)
Fetal death	Stillborn with gestation greater than 20 weeks or birth weight greater than 350 grams
Perinatal death	Fetal deaths plus deaths of infants under 7 days of age
Neonatal death	Deaths of infants under 28 days of age
Post-neonatal death	Deaths of infants that occur between 28 days and 365 days after birth
Infant death	Deaths of infants under 1 year of age

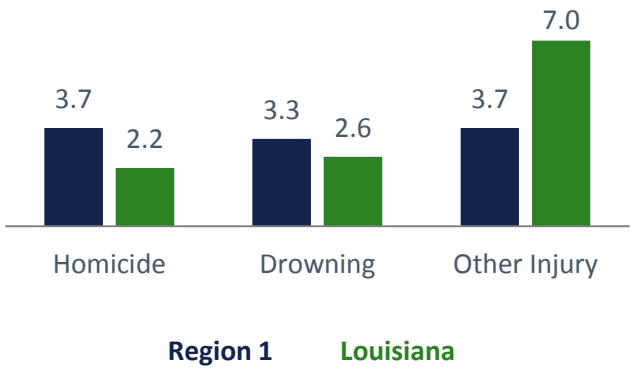
Cause of Death Explanations

Cause of Death	Explanation
Congenital malformations, deformations and chromosomal abnormalities (CMDCA)	Referred to as "Congenital Anomalies" throughout Report for ease of reading. This category includes anencephaly and similar malformations, congenital hydrocephalus, spina bifida, other congenital malformations of the nervous system, congenital malformations of the heart, other congenital malformations of the circulatory system, congenital malformations of genitourinary system, congenital malformations and deformations of musculoskeletal system, limbs and integument, Downs syndrome, Edward syndrome, Patau syndrome, other congenital malformations and deformations and other chromosomal abnormalities not elsewhere classified.
Conditions originating in the perinatal period	Also referred to as "Perinatal Period Conditions" throughout report for ease of reading. This category includes disorders related to the length of gestational age and fetal growth (prematurity and low birth weight), effects from maternal factors and complications, infections specific to the perinatal period, hemorrhage and hematological disorders and other perinatal conditions.
Diseases of the nervous system	This category includes inflammatory diseases of the central nervous system, systemic atrophies primarily affecting the central nervous system, degenerative diseases of the nervous system and cerebral palsy and other paralytic syndromes.
Diseases of the circulatory system	This category includes rheumatic fever; hypertensive diseases; ischemic heart disease; pulmonary heart disease and diseases of pulmonary circulation; cerebrovascular diseases; diseases of arteries, arterioles and capillaries; and diseases of veins, lymphatic vessels and lymph nodes.
Diseases of the respiratory system	This category includes respiratory infections, influenza, pneumonia, lung diseases due to external agents and diseases of the pleura.
External causes of mortality (injuries)	This category includes deaths from injuries (unintentional and intentional) and causes not related to a medical condition, including motor vehicle accidents, other and unspecified transport accidents, cuts, falls, accidental discharge of firearms, homicide, suicide, drowning and submersion, accidental suffocation and strangulation in bed and other suffocation and strangulation.
Infectious and parasitic diseases	This category includes transmissible diseases, including intestinal infectious diseases, tuberculosis, zoonotic bacterial diseases, spirochetal diseases, rickettsioses and viral diseases.
Sudden infant death syndrome (SIDS)	This category includes deaths among infants less than one year of age that occur suddenly and for which the causes of death are not able to be determined even after a full investigation and autopsy.
Sudden unexpected infant death (SUID)	SUID is a term used to describe any sudden and unexpected death, whether explained or unexplained (including Sudden Infant Death Syndrome [SIDS], Accidental Suffocation or Strangulation in Bed [ASSB], and ill-defined deaths), occurring during infancy.

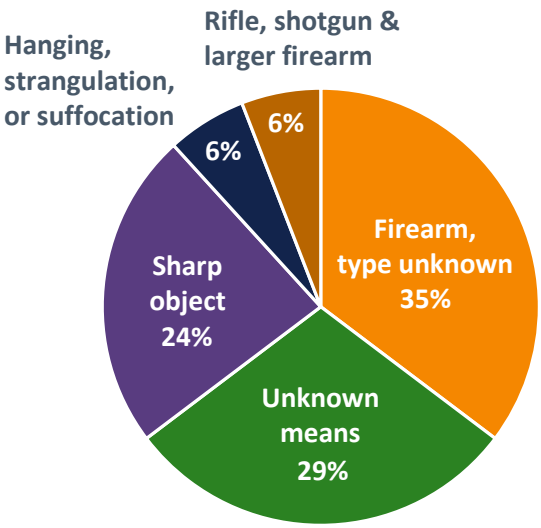
Top Causes of Child Death in Children Ages 1-14 years between 2015-2017[1]

About Child Death Due to Injury:

- Deaths are per 100,000 children ages 1-14 years.
- **Region 1's total unexpected child death rate of children ages 1-14 years** between 2015-2017 is **10.8 per 100,000 children. Louisiana's** is **12.3**.
- **Region 1 surpasses Louisiana** in the **number of deaths** by **Homicide** and **Drowning**.
- ***Other Injury* includes** Motor Vehicle Crashes, inhalation of object, fall, fire, suicide, and maltreatment.



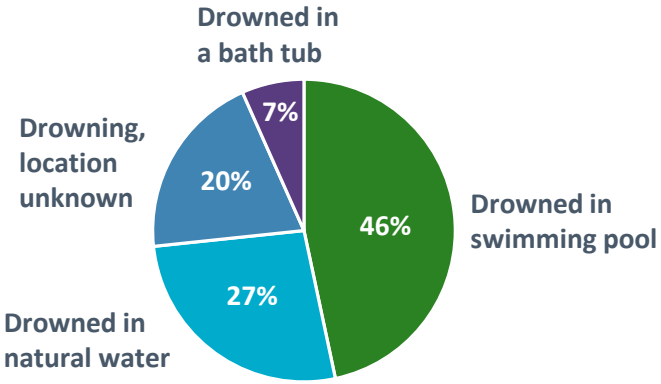
Means Used in Homicide Deaths of Children Ages 1-14 years in Region 1[1]



About Homicide Deaths:

- **Scenario details** are **unavailable** for most homicide deaths, but **41% of deaths occur due to firearms.**

Types of Drowning Deaths in Children Ages 1-14 years in Region 1[1]



About Drowning Deaths:

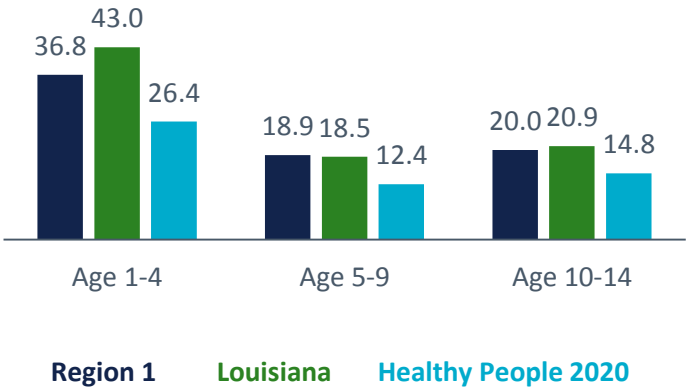
- The **majority of childhood drowning deaths** where information is available occur in a **swimming pool**.
- The **most common contributors to drowning deaths** are **lack of barriers to water** and **lack of supervision.**[2]

Sources: 1. Louisiana Vital Records, 2015-2017. 2017 data are preliminary as of 2/28/19 2. Louisiana Child Death Review

Child Mortality Rate by Age Group between 2015-2017[1]

About the Child Mortality Rate:

- Deaths are per 100,000 children.
- **Both Region 1 and Louisiana do not meet Healthy People 2020 goals** for ages 1-4, 5-9, and 10-14 years for 2015-2017.
- **Region 1 has lower rates of childhood mortality than Louisiana** in the age range 1-4 years and has **approximately the same childhood mortality rate as Louisiana** for ages 5-9 and 10-14 years.



Top Causes of Unexpected Death by Age Group in Region 1[1]

Rank	Age 0-1	Age 1-4	Age 5-9	Age 10-14
1	SUID*	Homicide	Drowning	Homicide
2	Homicide	Drowning	Homicide	Suicide
3	**	MVC	Fire	Drowning

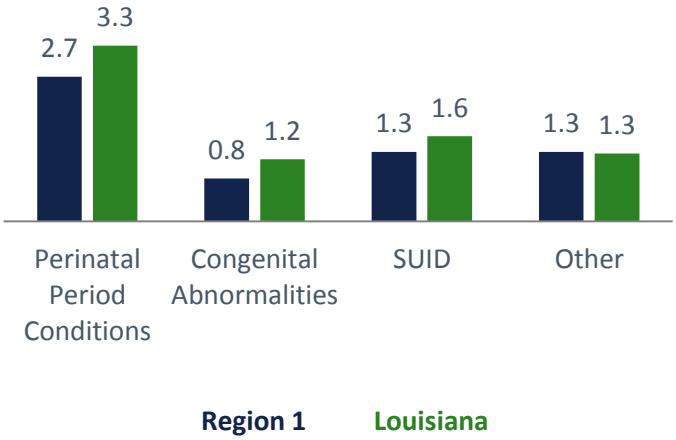
**Sudden Unexpected Infant Death*
***Blank boxes indicate causes with counts that are too low to report due to risk of violating confidentiality*

Homicide is the **leading cause of death** in ages 1-4 and 10-14 years and **Drowning is the leading cause of death** in ages 5-9 years.

Top Causes of Infant Death (Medical and Injury) between 2015-2017[1]

Infant Death By Region:

- Death rate is per 1,000 live births.
- **Region 1's infant mortality rate is 6.3** deaths per 1,000 live births**, lower than Louisiana's rate** of **7.7.**
- **The Healthy People 2020 Goal** for **infant mortality** is **6.0** per 1,000 live births.
- **SUID** is Sudden Unexpected Infant Death.
- ***Other category* includes** infections, respiratory conditions, threats to breathing, inhalation of food or objects, etc.

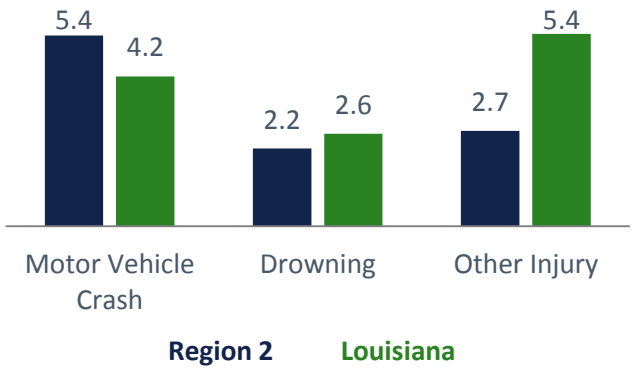


Sources: 1. Louisiana Vital Records, 2015-2017

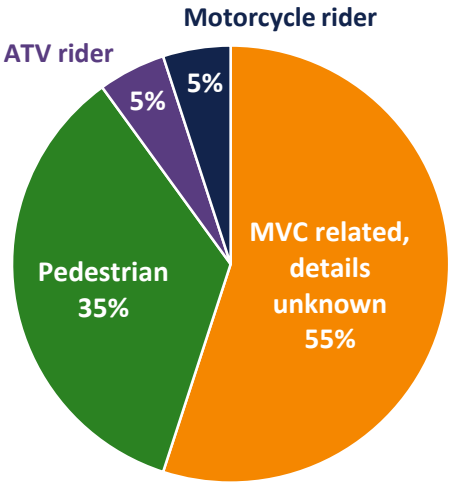
Top Causes of Child Death in Children Ages 1-14 years between 2015-2017[1]

About Child Death Due to Injury:

- Deaths are per 100,000 children ages 1-14 years.
- **Region 2's total unexpected child death rate of children 1-14 years** between 2015-2017 is **10.3 per 100,000 children. Louisiana's** is **12.3**.
- **Region 2 surpasses Louisiana** in the **number of deaths** by **Motor Vehicle Crash**.
- ***Other Injury* includes** homicide, unintentional firearm discharge, inhalation of object, fall, fire, suicide and maltreatment.



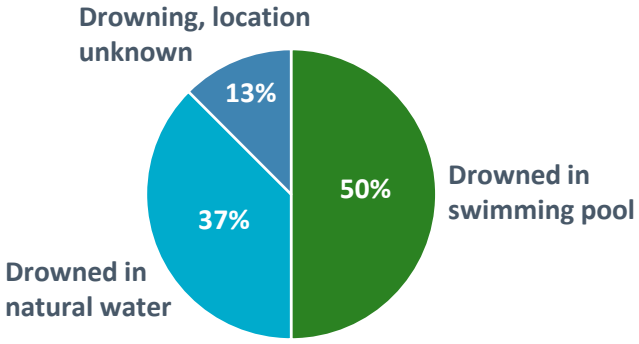
Types of Motor Vehicle Crash (MVC) Deaths in Children Ages 1-14 years in Region 2, 2015-2017[1]



About Motor Vehicle Crash Deaths:

- **Scenario details** are **unavailable** for most motor vehicle crashes, but **greater than a third of deaths occur in pedestrians**.

Types of Drowning Deaths in Children Ages 1-14 years in Region 2, 2015-2017[1]



About Drowning Deaths:

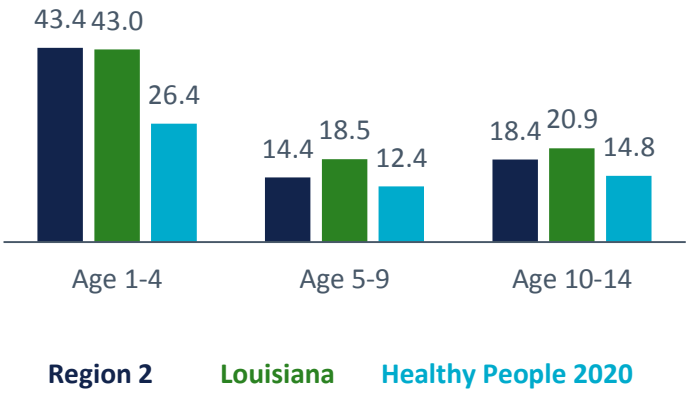
- **Scenario information** is **not available** for approximately **13% of drowning related deaths**.
- The **majority of childhood drowning deaths** where information is available occur in a **swimming pool**.
- The **most common contributors to drowning deaths** are **lack of barriers to water** and **lack of supervision.**[2]

Sources: 1. Louisiana Vital Records, 2015-2017 (2017 data are preliminary as of 2/28/19) 2. Louisiana Child Death Review

Child Mortality Rate by Age Group between 2015-2017[1]

About the Child Mortality Rate:

- Deaths are per 100,000 children.
- **Region 2's child mortality rate** for **ages 5-9 and 10-14 years almost meets Healthy People 2020's goal** for 2015-2017.
- Both **Region 2 and Louisiana do not meet Healthy People 2020 goals** for **ages 1-4 years** for 2015-2017.



Top Causes of Unexpected Death by Age Group in Region 2[1]

Rank	Age 0-1	Age 1-4	Age 5-9	Age 10-14
1	SUID*	MVC	MVC	MVC
2	Homicide	Drowning	**	Homicide
3	MVC	**	**	Drowning

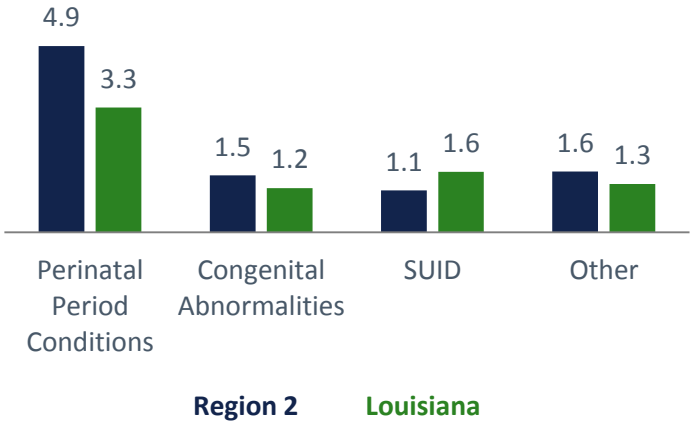
Sudden Unexpected Infant Death
***Blank boxes indicate causes with counts that are too low to report due to risk of violating confidentiality*

Motor vehicle crashes (MVC) remain the **top cause of death** across all **age** groups **greater than 1 year.**

Top Causes of Infant Death (Medical and Injury) between 2015-2017[1]

Infant Death By Region:

- Death rate is per 1,000 live births.
- **Region 2's infant mortality rate is 9.6** deaths per 1,000 live births**, greater than Louisiana's rate** of **7.7.**
- **The Healthy People 2020 Goal** for **infant mortality** is **6.0** per 1,000 live births.
- **SUID** is Sudden Unexpected Infant Death.
- ***Other category* includes** infections, respiratory conditions, threats to breathing, inhalation of food or objects, etc.

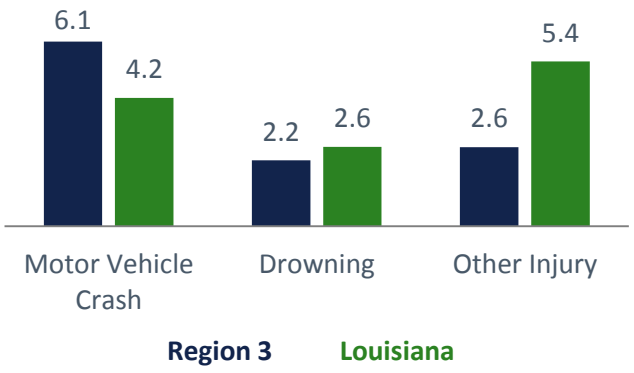


Sources: 1. Louisiana Vital Records, 2015-2017

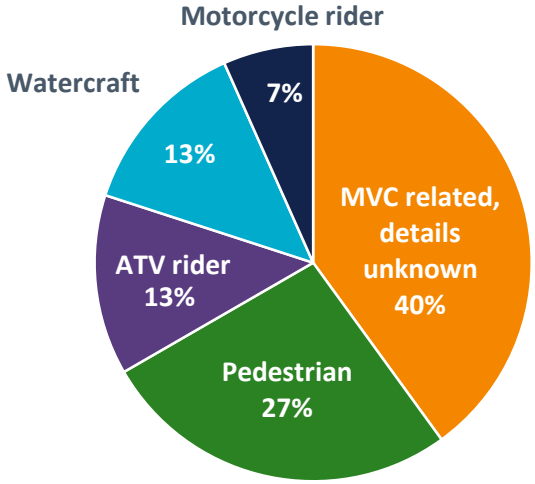
Top Causes of Child Death in Children Ages 1-14 years between 2015-2017[1]

About Child Death Due to Injury:

- Deaths are per 100,000 children ages 1-14 years.
- **Region 3's total unexpected child death rate of children 1-14 years** between 2015-2017 is **10.9 per 100,000 children. Louisiana's** is **12.3**.
- **Region 3 surpasses Louisiana** in the **number of deaths** by **Motor Vehicle Crash**.
- ***Other Injury* includes** homicide, unintentional firearm discharge, inhalation of object, fall, fire, and maltreatment.



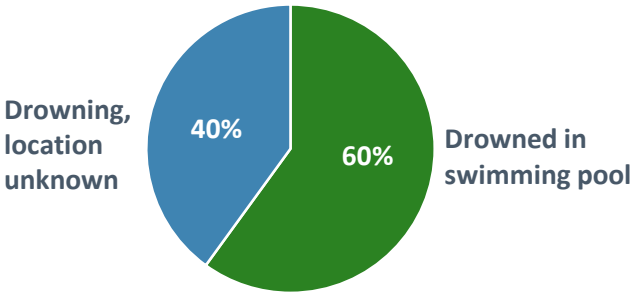
Types of Motor Vehicle Crash (MVC) Deaths in Children Ages 1-14 years in Region 3, 2015-2017[1]



About Motor Vehicle Crash Deaths:

- **Scenario details** are **unavailable** for most motor vehicle crashes, but **greater than 25% of deaths occur in pedestrians**.

Types of Drowning Deaths in Children Ages 1-14 years in Region 3, 2015-2017[1]



About Drowning Deaths:

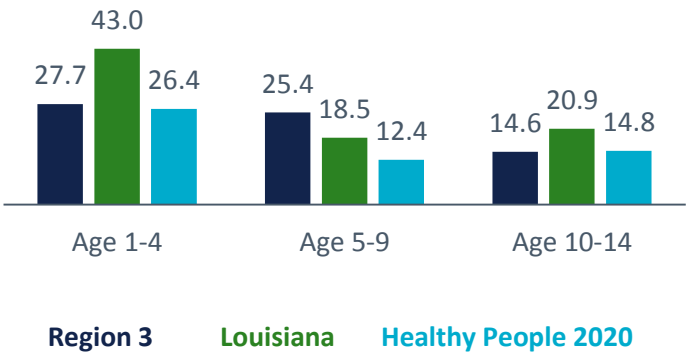
- **Scenario information** is **not available** for more than **one third of drowning-related deaths**.
- The **majority of childhood drowning deaths** where information is available occur in a **swimming pool**.
- The **most common contributors to drowning deaths** are **lack of barriers to water** and **lack of supervision.**[2]

Sources: 1. Louisiana Vital Records, 2015-2017 (2017 data are preliminary as of 2/28/19) 2. Louisiana Child Death Review

Child Mortality Rate by Age Group between 2015-2017[1]

About the Child Mortality Rate:

- Deaths are per 100,000 children.
- **Region 3's child mortality rate** for **ages 1-4 years almost meets Healthy People 2020's goal** for 2015-2017.
- **Region 3's child mortality rate** for **ages 10-14 years falls within Healthy People 2020's** goal for 2015-2017**.**
- Both **Region 3 and Louisiana do not meet Healthy People 2020 goals** for **ages 5-9 years** for 2015-2017.



Top Causes of Unexpected Death by Age Group in Region 3[1]

Rank	Age 0-1	Age 1-4	Age 5-9	Age 10-14
1	SUID*	MVC	MVC	MVC
2	**	Drowning	Drowning	Drowning
3	**	**	**	**

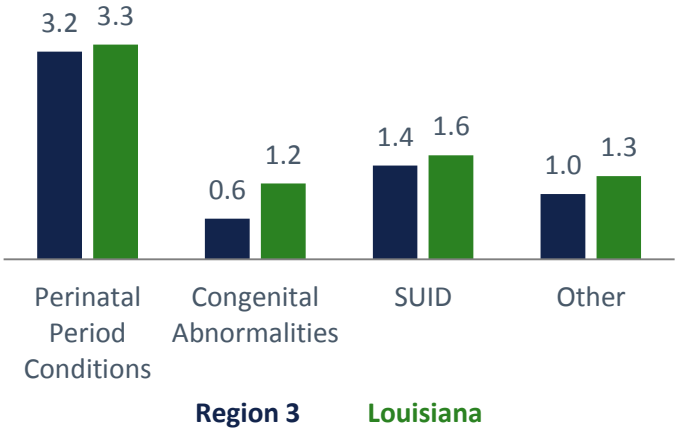
**Sudden Unexpected Infant Death*
***Blank boxes indicate causes with counts that are too low to report due to risk of violating confidentiality*

Motor vehicle crashes (MVC) and drowning remain the **top two causes of death** across all **age** groups **greater than 1 year.**

Top Causes of Infant Death (Medical and Injury) between 2015-2017[1]

Infant Death By Region:

- Death rate is per 1,000 live births.
- **Region 3's infant mortality rate is 6.7** deaths per 1,000 live births**, lower than Louisiana's rate** of **7.7.**
- **The Healthy People 2020 Goal** for **infant mortality** is **6.0** per 1,000 live births.
- **SUID** is Sudden Unexpected Infant Death.
- ***Other category* includes** infections, respiratory conditions, threats to breathing, inhalation of food or objects, etc.

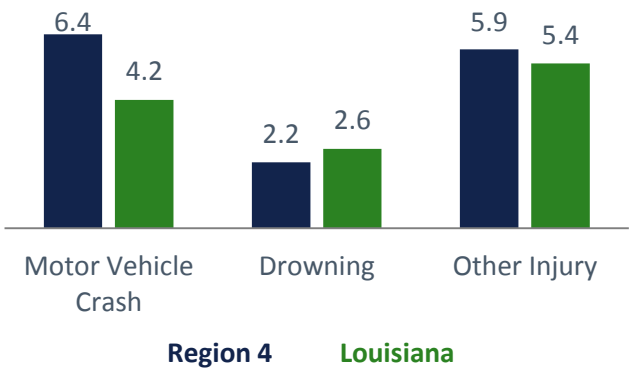


Sources: 1. Louisiana Vital Records, 2015-2017

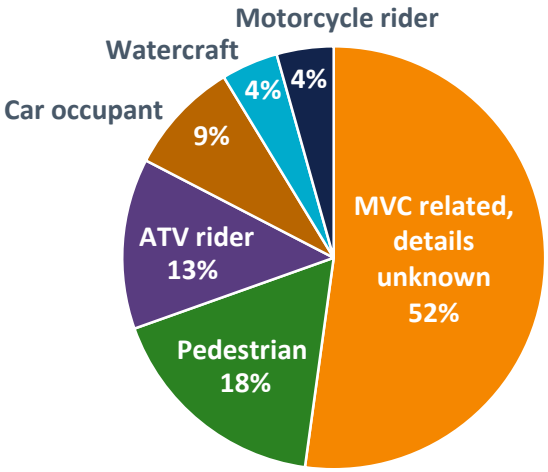
Top Causes of Child Death in Children Ages 1-14 years between 2015-2017[1]

About Child Death Due to Injury:

- Deaths are per 100,000 children ages 1-14 years.
- **Region 4's total unexpected child death rate of children 1-14 years** between 2015-2017 is **14.5 per 100,000 children. Louisiana's** is **12.3**.
- **Region 4 surpasses Louisiana** in the **number of deaths** by **Motor Vehicle Crash**.
- ***Other Injury* includes** homicide, unintentional firearm discharge, inhalation of object, fall, fire, and maltreatment.



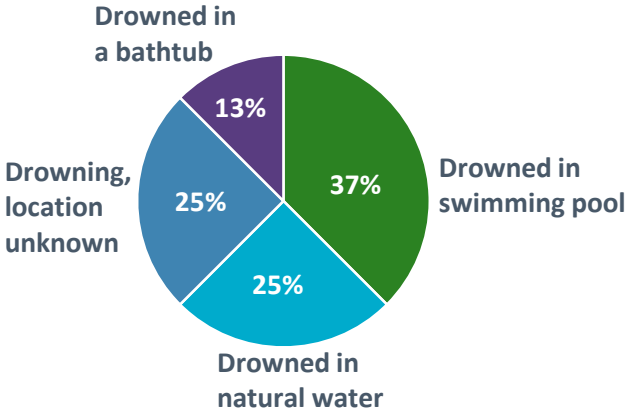
Types of Motor Vehicle Crash (MVC) Deaths in Children Ages 1-14 years in Region 4, 2015-2017[1]



About Motor Vehicle Crash Deaths:

- **Scenario details** are **unavailable** for most motor vehicle crashes, but **greater than 25% of deaths occur in pedestrians**.

Types of Drowning Deaths in Children Ages 1-14 years in Region 4, 2015-2017[1]



About Drowning Deaths:

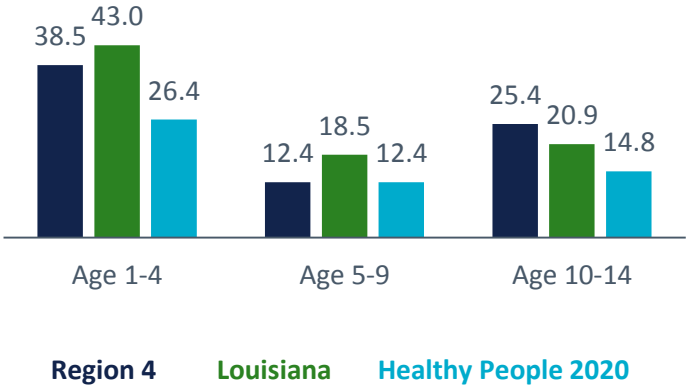
- **Scenario information** is **not available** for **a fourth of drowning-related deaths**.
- The **majority of childhood drowning deaths** where information is available occur in a **swimming pool**.
- The **most common contributors to drowning deaths** are **lack of barriers to water** and **lack of supervision.**[3]

Sources: 1. Louisiana Vital Records, 2015-2017. 2017 data are preliminary as of 2/28/19 2. Louisiana Child Death Review

Child Mortality Rate by Age Group between 2015-2017[1]

About the Child Mortality Rate:

- Deaths are per 100,000 children.
- **Both Region 4 and Louisiana do not meet Healthy People 2020 goals** for **ages 1-4 and 5-9 years** for 2015-2017.
- **Region 4's child mortality rate** for **ages 10-14 years falls within the Healthy People 2020's goal** for the years 2015-2017.



Top Causes of Unexpected Death by Age Group in Region 4[1]

Rank	Age 0-1	Age 1-4	Age 5-9	Age 10-14
1	SUID*	MVC	MVC	MVC
2	**	Drowning	Drowning	Suicide
3	**	Fire	**	**

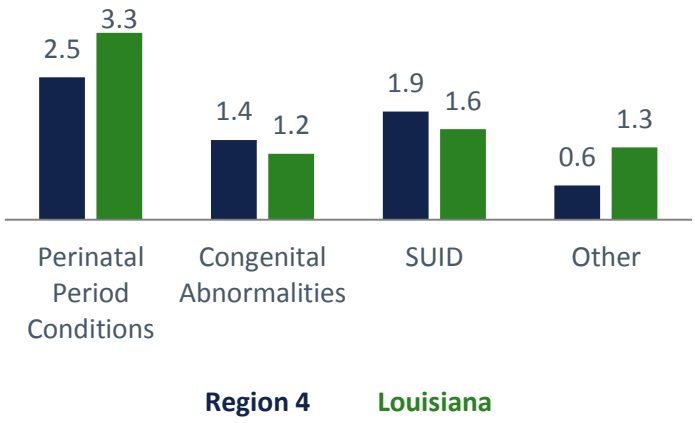
**Sudden Unexpected Infant Death*
***Blank boxes indicate causes with counts that are too low to report due to risk of violating confidentiality*

Motor vehicle crashes (MVC) remain the **top cause of death** across all **age** groups **greater than 1 year.**

Top Causes of Infant Death (Medical and Injury) between 2015-2017[1]

Infant Death By Region:

- Death rate is per 1,000 live births.
- **Region 4's infant mortality rate is 7.0** deaths per 1,000 live births**, lower than Louisiana's rate** of **7.7.**
- **The Healthy People 2020 Goal** for **infant mortality** is **6.0** per 1,000 live births.
- **SUID** is Sudden Unexpected Infant Death.
- ***Other category* includes** infections, respiratory conditions, threats to breathing, inhalation of food or objects, etc.

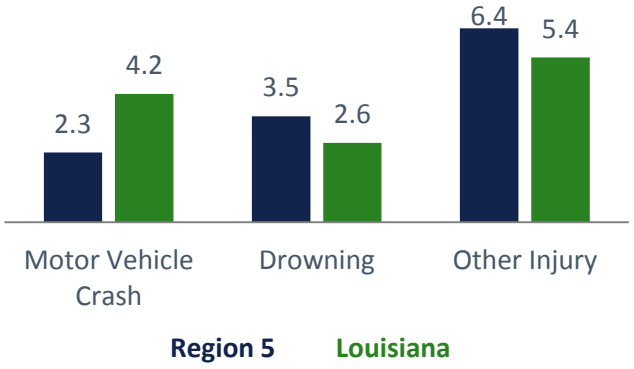


Sources: 1. Louisiana Vital Records, 2015-2017

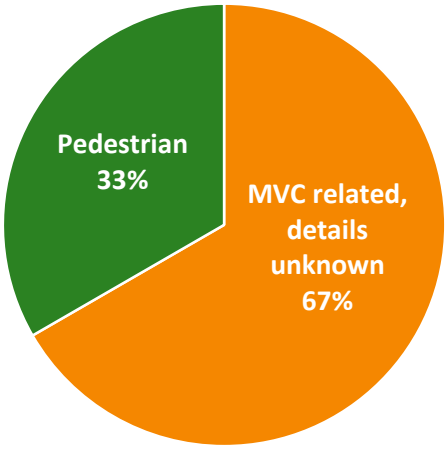
Top Causes of Child Death in Children Ages 1-14 years between 2015-2017[1]

About Child Death Due to Injury:

- Deaths are per 100,000 children ages 1-14 years.
- **Region 5's total unexpected child death rate of children 1-14 years** between 2015-2017 is **12.1 per 100,000 children. Louisiana's** is **12.3**.
- **Region 5 surpasses Louisiana** in the **number of deaths** by **Drowning and Other Injury**.
- ***Other Injury* includes** homicide, unintentional firearm discharge, inhalation of object, fall, fire, and maltreatment.



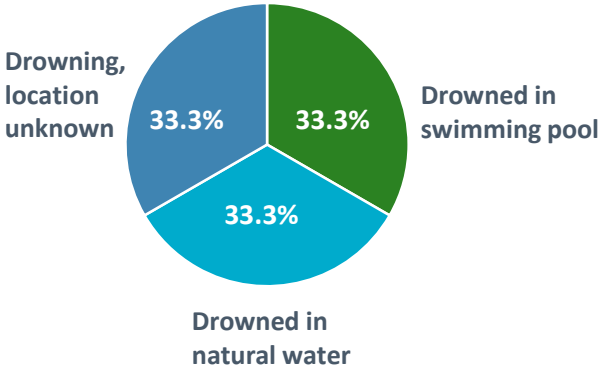
Types of Motor Vehicle Crash (MVC) Deaths in Children Ages 1-14 years in Region 5, 2015-2017[1]



About Motor Vehicle Crash Deaths:

- **Scenario details** are **unavailable** for most motor vehicle crashes, but **greater than 25% of deaths occur in pedestrians**.

Types of Drowning Deaths in Children Ages 1-14 years in Region 5, 2015-2017[1]



About Drowning Deaths:

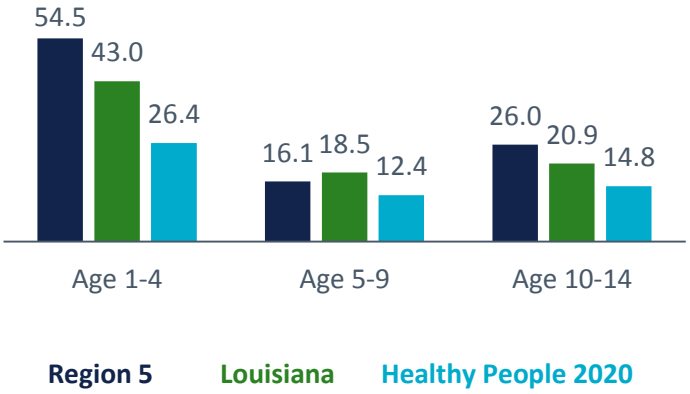
- **Scenario information** is **not available** for **one third of drowning-related deaths**.
- **A third of childhood drowning deaths** where information is available occur in a **swimming pool**.
- The **most common contributors to drowning deaths** are **lack of barriers to water** and **lack of supervision.**[2]

Sources: 1. Louisiana Vital Records, 2015-2017 (2017 data are preliminary as of 2/28/19) 2. Louisiana Child Death Review

Child Mortality Rate by Age Group between 2015-2017[1]

About the Child Mortality Rate:

- Deaths are per 100,000 children.
- **Both Region 5 and Louisiana do not meet the Healthy People 2020 goals** for ages 1-4, 5-9, and 10-14 years in 2015-2017.
- **Region 5 has higher rates of childhood mortality than Louisiana** for the age ranges 1-4 and 10-14 years.



Top Causes of Unexpected Death by Age Group in Region 5[1]

Rank	Age 0-1	Age 1-4	Age 5-9	Age 10-14
1	SUID*	MVC	Drowning	Drowning
2	**	Falls	**	Homicide
3	**	Homicide	**	**

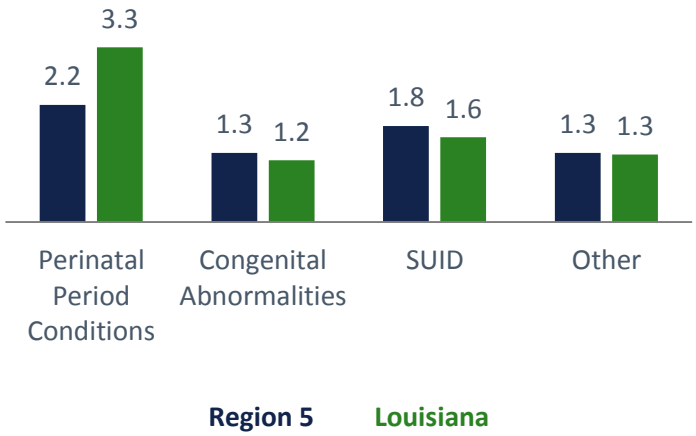
**Sudden Unexpected Infant Death*
***Blank boxes indicate causes with counts that are too low to report due to risk of violating confidentiality*

Motor vehicle crashes (MVC) are the **leading cause of death in ages 1-4 years** and **drowning** is the **leading cause of death** in ages 5-9 and 10-14 years.

Top Causes of Infant Death (Medical and Injury) between 2015-2017[1]

Infant Death By Region:

- Death rate is per 1,000 live births.
- **Region 5's infant mortality rate is 6.9** deaths per 1,000 live births**, lower than Louisiana's rate** of **7.7.**
- **The Healthy People 2020 Goal** for **infant mortality** is **6.0** per 1,000 live births.
- **SUID** is Sudden Unexpected Infant Death.
- ***Other category* includes** infections, respiratory conditions, threats to breathing, inhalation of food or objects, etc.

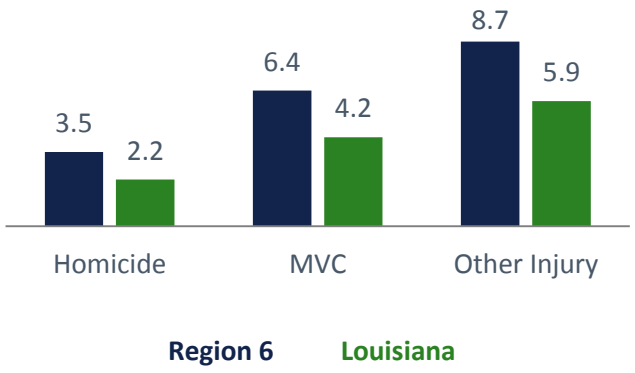


Sources: 1. Louisiana Vital Records, 2015-2017

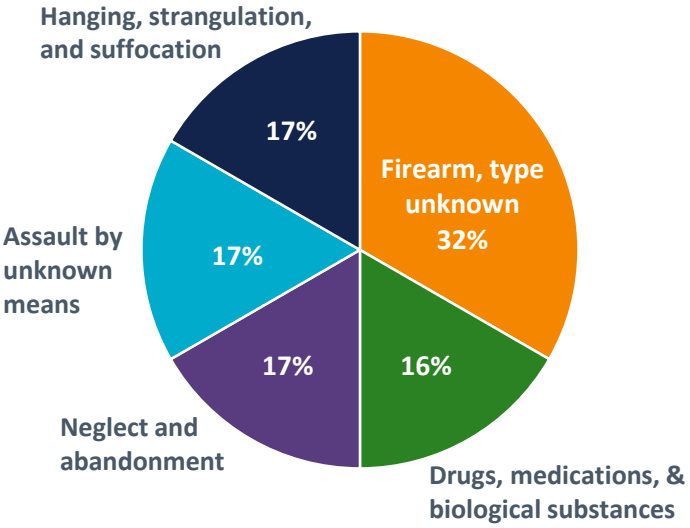
Top Causes of Child Death in Children Ages 1-14 years between 2015-2017[1]

About Child Death Due to Injury:

- Deaths are per 100,000 children ages 1-14 years.
- **Region 6's total unexpected child death rate of children 1-14 years** between 2015-2017 is **18.6 per 100,000 children. Louisiana's** is **12.3**.
- **Region 6 surpasses Louisiana** in the **number of deaths** by **Homicide, Motor Vehicle Crashes (MVCs), and other injuries**.
- ***Other Injury* includes** Drowning, inhalation of object, fall, fire, suicide, and maltreatment.



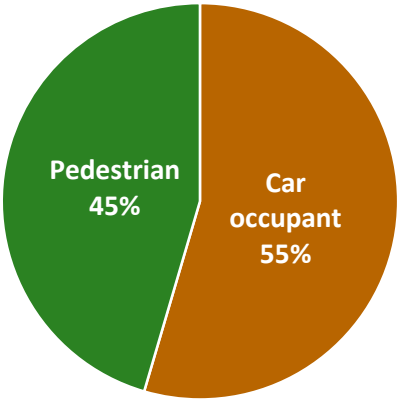
Types of Homicide Deaths in Children Ages 1-14 years in Region 6, 2015-2017[1]



About Homicide Deaths:

- **Types of homicides that occur are split relatively evenly in Region 6,** though **a third** of **homicides are due to unspecified firearms.**

Types of Motor Vehicle Crash (MVC) Deaths in Children Ages 1-14 years in Region 6, 2015-2017[1]



About Motor Vehicle Crash Deaths:

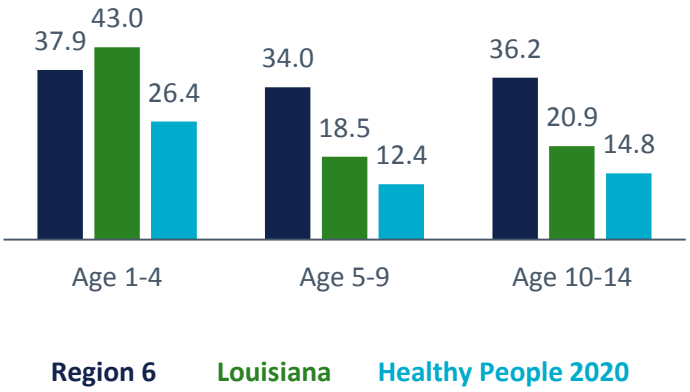
- While Vital Records data does not include scenario information for most cases, after local case review it was determined that **over half of MVC deaths occur in car occupants.** [1, 2]

Sources: 1. Louisiana Vital Records, 2015-2017. 2017 data are preliminary as of 2/28/19 2. Louisiana Child Death Review

Child Mortality Rate by Age Group between 2015-2017[1]

About the Child Mortality Rate:

- Deaths are per 100,000 children.
- **Both Region 6 and Louisiana do not meet Healthy People 2020 goals** for ages 1-4, 5-9, and 10-14 years for 2015-2017.
- **Region 6 has higher rates of childhood mortality than Louisiana** for the age ranges 5-9 and 10-14 years.



Top Causes of Unexpected Death by Age Group in Region 6[1]

Rank	Age 0-1	Age 1-4	Age 5-9	Age 10-14
1	SUID*	MVC	MVC	Suicide
2	**	Homicide	Fire	MVC
3	**	Drowning	Homicide	**

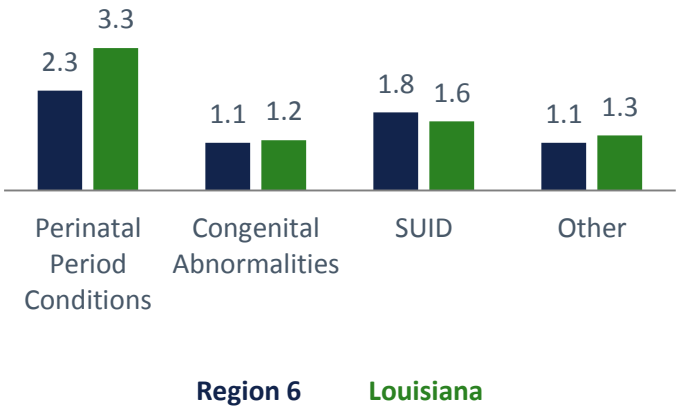
Sudden Unexpected Infant Death
***Blank boxes indicate causes with counts that are too low to report due to risk of violating confidentiality*

Motor vehicle crashes (MVC) are the **leading cause of death** in ages 1-4 and 5-9 years while **Suicide is the leading cause of death** in ages 10-14 years.

Top Causes of Infant Death (Medical and Injury) between 2015-2017[1]

Infant Death By Region:

- Death rate is per 1,000 live births.
- **Region 6's infant mortality rate is 6.8** deaths per 1,000 live births**, lower than Louisiana's rate** of **7.7.**
- **The Healthy People 2020 Goal** for **infant mortality** is **6.0** per 1,000 live births.
- **SUID** is Sudden Unexpected Infant Death.
- ***Other category* includes** infections, respiratory conditions, threats to breathing, inhalation of food or objects, etc.

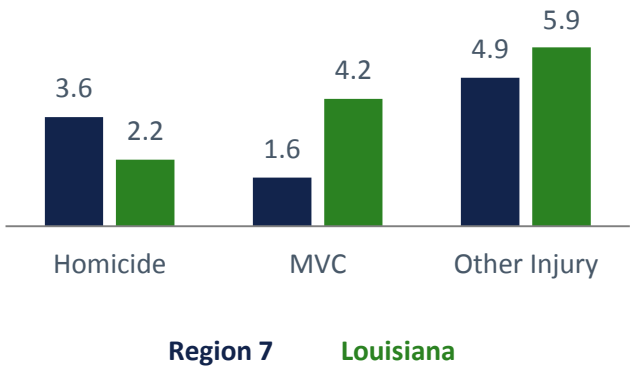


Sources: 1. Louisiana Vital Records, 2015-2017

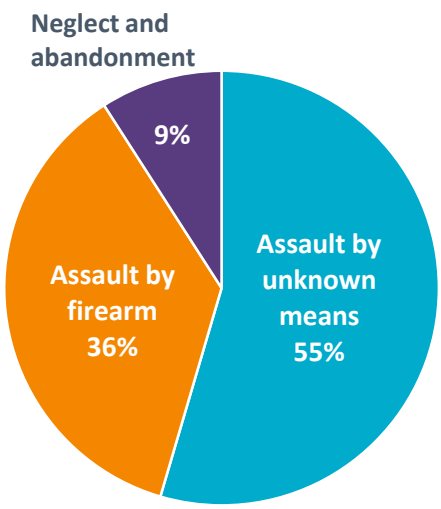
Top Causes of Child Death in Children Ages 1-14 years between 2015-2017[1]

About Child Death Due to Injury:

- Deaths are per 100,000 children ages 1-14 years.
- **Region 7's total unexpected child death rate of children 1-14 years** between 2015-2017 is **10.2 per 100,000 children. Louisiana's** is **12.3**.
- **Region 7 surpasses Louisiana** in the **number of deaths** by **Homicide**.
- ***Other Injury* includes** Drowning, inhalation of object, fall, fire, suicide, and maltreatment.



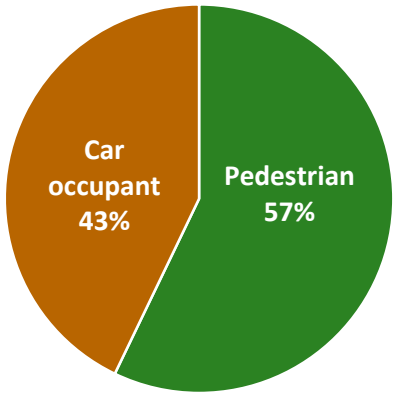
Types of Homicide Deaths in Children Ages 1-14 years in Region 7, 2015-2017[1]



About Homicide Deaths:

- **Scenario details** are **unavailable** for a majority of homicide deaths, but **approximately a third of deaths occur due to firearms.**

Types of Motor Vehicle Crash (MVC) Deaths in Children Ages 1-14 years in Region 7, 2015-2017[1]



About Motor Vehicle Crash Deaths:

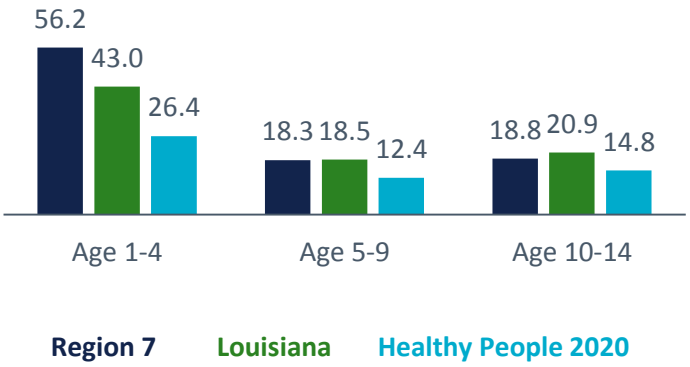
- After investigation of cases through case review, it was determined that **over half of MVC deaths occur in pedestrians.**

Sources: 1. Louisiana Vital Records, 2015-2017. 2017 data are preliminary as of 2/28/19 2. Louisiana Child Death Review

Child Mortality Rate by Age Group between 2015-2017[1]

About the Child Mortality Rate:

- Deaths are per 100,000 children.
- **Both Region 7 and Louisiana do not meet Healthy People 2020 goals** for ages 1-4, 5-9, and 10-14 years for 2015-2017.
- **Region 7 has higher rates of childhood mortality than Louisiana** for the age range 1-4 years.



Top Causes of Unexpected Death by Age Group in Region 7[1]

Rank	Age 0-1	Age 1-4	Age 5-9	Age 10-14
1	SUID*	Homicide	Drowning	Suicide
2	Homicide	MVC (tie)	MVC (tie)	MVC
3	**	Drowning (tie)	Homicide (tie)	**

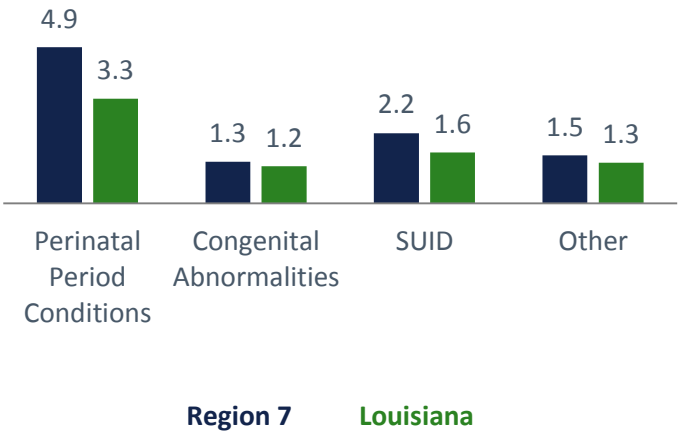
**Sudden Unexpected Infant Death*
***Blank boxes indicate causes with counts that are too low to report due to risk of violating confidentiality*

The leading cause of death is homicide in ages 1-4 years, **Drowning** in ages 5-9 years, **and Suicide** in ages 10-14 years.

Top Causes of Infant Death (Medical and Injury) between 2015-2017[1]

Infant Death By Region:

- Death rate is per 1,000 live births.
- **Region 7's infant mortality rate is 10.2** deaths per 1,000 live births**, greater than Louisiana's rate** of **7.7.**
- **The Healthy People 2020 Goal** for **infant mortality** is **6.0** per 1,000 live births.
- **SUID** is Sudden Unexpected Infant Death.
- ***Other category* includes** infections, respiratory conditions, threats to breathing, inhalation of food or objects, etc.

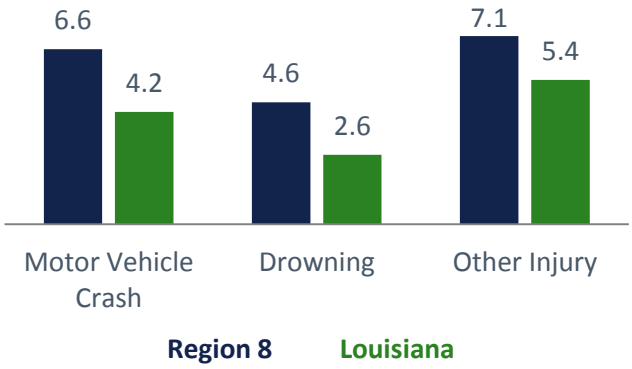


Sources: 1. Louisiana Vital Records, 2015-2017

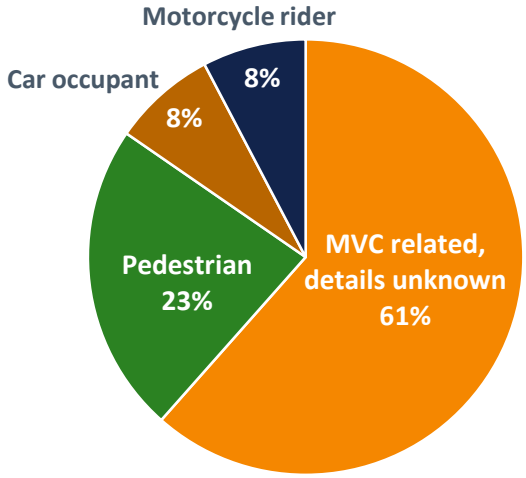
Top Causes of Child Death in Children Ages 1-14 years between 2015-2017[1]

About Child Death Due to Injury:

- Deaths are per 100,000 children ages 1-14 years.
- **Region 8's total unexpected child death rate of children 1-14 years** between 2015-2017 is **18.3 per 100,000 children. Louisiana's** is **12.3**.
- **Region 8 surpasses Louisiana** in the **number of deaths** by **Motor Vehicle Crash, Drowning, and Other Injury**.
- ***Other Injury* includes** homicide, unintentional firearm discharge, inhalation of object, fall, fire, and maltreatment.



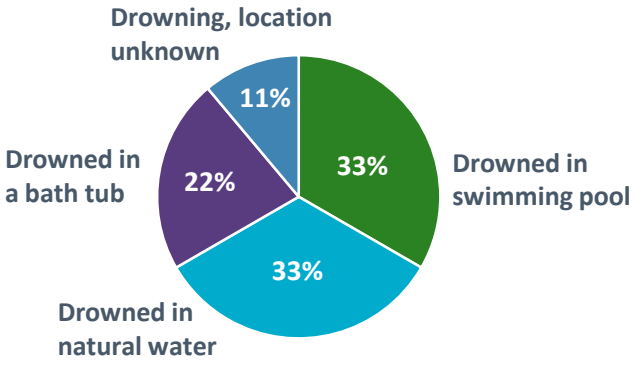
Types of Motor Vehicle Crash (MVC) Deaths in Children Ages 1-14 years in Region 8, 2015-2017[1]



About Motor Vehicle Crash Deaths:

- **Scenario details** are **unavailable** for most motor vehicle crashes, but **approximately a fourth of deaths occur in pedestrians**.

Types of Drowning Deaths in Children Ages 1-14 years in Region 8, 2015-2017[1]



About Drowning Deaths:

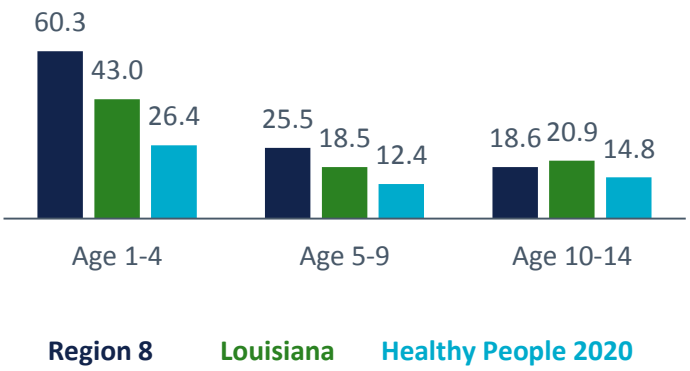
- **Scenario information** is **not available** for **11% of drowning-related deaths**.
- The **majority of childhood drowning deaths** where information is available occur in a **swimming pool or natural water**.
- The **most common contributors to drowning deaths** are **lack of barriers to water** and **lack of supervision.**[2]

Sources: 1. Louisiana Vital Records, 2015-2017 (2017 data are preliminary as of 2/28/19) 2. Louisiana Child Death Review

Child Mortality Rate by Age Group between 2015-2017[1]

About the Child Mortality Rate:

- Deaths are per 100,000 children.
- Both **Region 8 and Louisiana do not meet Healthy People 2020 goals** for **ages 1-4, 5-9, and 10-14 years** for 2015-2017.
- **Region 8 has higher rates of childhood mortality than Louisiana** for the age ranges 1-4 and 5-9 years.



Top Causes of Unexpected Death by Age Group in Region 8[1]

Rank	Age 0-1	Age 1-4	Age 5-9	Age 10-14
1	SUID*	MVC	Fire	MVC
2	**	Drowning	Homicide	Drowning
3	**	Fire	**	**

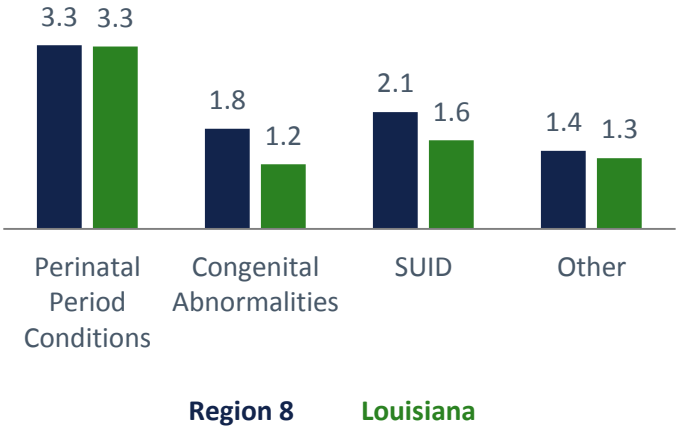
Sudden Unexpected Infant Death
***Blank boxes indicate causes with counts that are too low to report due to risk of violating confidentiality*

Motor vehicle crashes (MVC) are the **top cause of death** in age groups 1-4 and 10-14 years. **Fire is the leading cause of death** in the age group 5-9 years.

Top Causes of Infant Death (Medical and Injury) between 2015-2017[1]

Infant Death By Region:

- Death rate is per 1,000 live births.
- **Region 8's infant mortality rate is 8.8** deaths per 1,000 live births**, greater than Louisiana's rate** of **7.7.**
- **The Healthy People 2020 Goal** for **infant mortality** is **6.0** per 1,000 live births.
- **SUID** is Sudden Unexpected Infant Death.
- ***Other category* includes** infections, respiratory conditions, threats to breathing, inhalation of food or objects, etc.

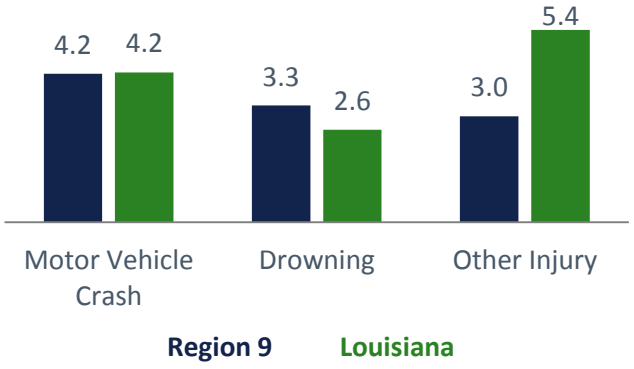


Sources: 1. Louisiana Vital Records, 2015-2017

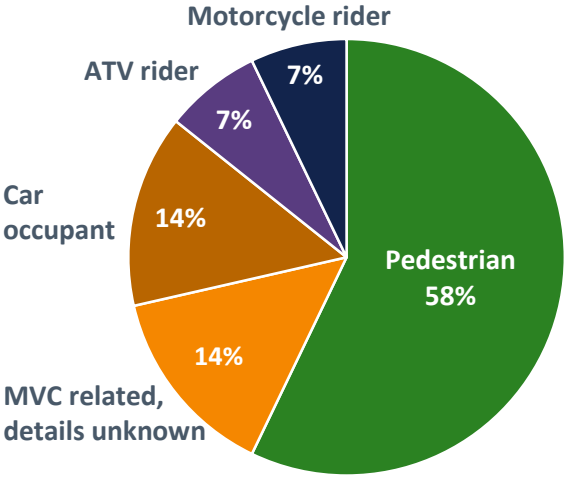
Top Causes of Child Death in Children Ages 1-14 years between 2015-2017[1]

About Child Death Due to Injury:

- Deaths are per 100,000 children ages 1-14 years.
- **Region 9's total unexpected child death rate of children 1-14 years** between 2015-2017 is **10.5 per 100,000 children. Louisiana's** is **12.3**.
- **Region 9 surpasses Louisiana** in the **number of deaths** by **Drowning**.
- ***Other Injury* includes** homicide, unintentional firearm discharge, inhalation of object, fall, fire, and maltreatment.



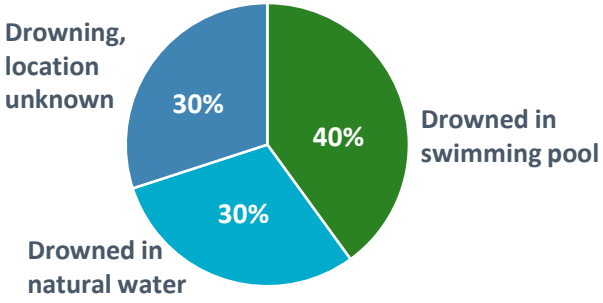
Types of Motor Vehicle Crash (MVC) Deaths in Children Ages 1-14 years in Region 9, 2015-2017[1]



About Motor Vehicle Crash Deaths:

- **Scenario details** are **unavailable** for many motor vehicle crashes, but **greater than 50% of deaths occur in pedestrians**.

Types of Drowning Deaths in Children Ages 1-14 years in Region 9, 2015-2017[1]



About Drowning Deaths:

- **Scenario information** is **not available** for approximately **one third of drowning-related deaths**.
- The **majority of childhood drowning deaths** where information is available occur in a **swimming pool**.
- The **most common contributors to drowning deaths** are **lack of barriers to water** and **lack of supervision.**[2]

Sources: 1. Louisiana Vital Records, 2015-2017 (2017 data are preliminary as of 2/28/19) 2. Louisiana Child Death Review

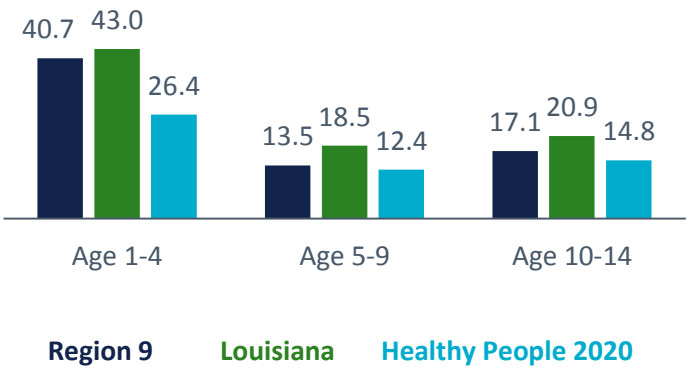
Region 9 Mortality Surveillance Report, 2015-2017

Northshore Area | March 2019

Child Mortality Rate by Age Group between 2015-2017[1]

About the Child Mortality Rate:

- Deaths are per 100,000 children.
- Both **Region 9 and Louisiana do not meet Healthy People 2020 goals** for **ages 1-4, 5-9, and 10-14 years** for 2015-2017.
- **Region 9 has lower rates** of **childhood mortality** than Louisiana for ages 1-4, 5-9, and 10-14 years.



Top Causes of Unexpected Death by Age Group in Region 9[1]

Rank	Age 0-1	Age 1-4	Age 5-9	Age 10-14
1	SUID*	Drowning	Drowning	MVC
2	MVC	MVC	**	Suicide
3	**	**	**	**

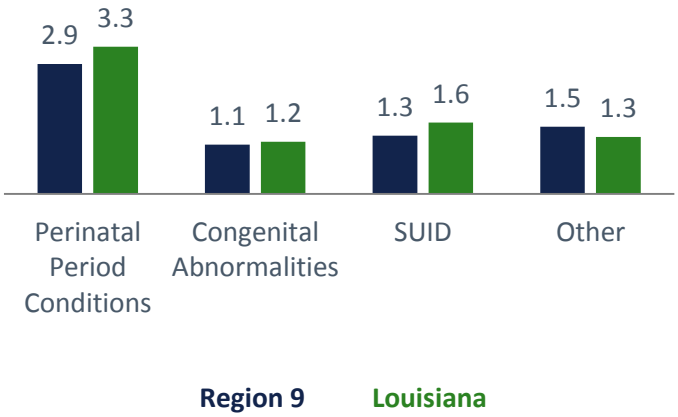
Drowning is the leading cause of death in ages 1-4 and 5-9 years and **Motor vehicle crashes (MVC)** are the **leading cause of death** in ages 1-4 years.

**Sudden Unexpected Infant Death*
***Blank boxes indicate causes with counts that are too low to report due to risk of violating confidentiality*

Top Causes of Infant Death (Medical and Injury) between 2015-2017[1]

Infant Death By Region:

- Death rate is per 1,000 live births.
- **Region 9's infant mortality rate is 7.2** deaths per 1,000 live births, **lower than Louisiana's rate** of **7.7.**
- **The Healthy People 2020 Goal** for **infant mortality** is **6.0** per 1,000 live births.
- **SUID** is Sudden Unexpected Infant Death.
- ***Other category* includes** infections, respiratory conditions, threats to breathing, inhalation of food or objects, etc.



Sources: 1. Louisiana Vital Records, 2015-2017

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Other Sources:

Bureau of Family Health website, Partners for Family Health: PartnersForFamilyHealth.org

For Additional Information:

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Cooperative Data Agreement

This project was supported in part by the Health Resources and Services Administration (HRSA) Title V MCH Block Grant award and the Sudden Unexpected Infant Death Cooperative Endeavor Agreement of the Centers for Disease Control and Prevention (CDC) of the U.S. Department of Health and Human Services (HHS). This information or content and conclusions are those of the author and should not be construed as the official position or policy of, nor should any endorsements be inferred by HRSA, the CDC, HHS or the U.S. Government.