

# LOUISIANA CHILD DEATH REVIEW REPORT

## 2012-2014

Key Findings and Recommendations From:  
2012-2014 Louisiana Vital Statistics and  
State and Local Death Reviews

Annual  
Legislative  
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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# Regional Map of Louisiana

## Breakdown of Parishes by Region

Figure 1. Louisiana Department of Health Administrative Regions

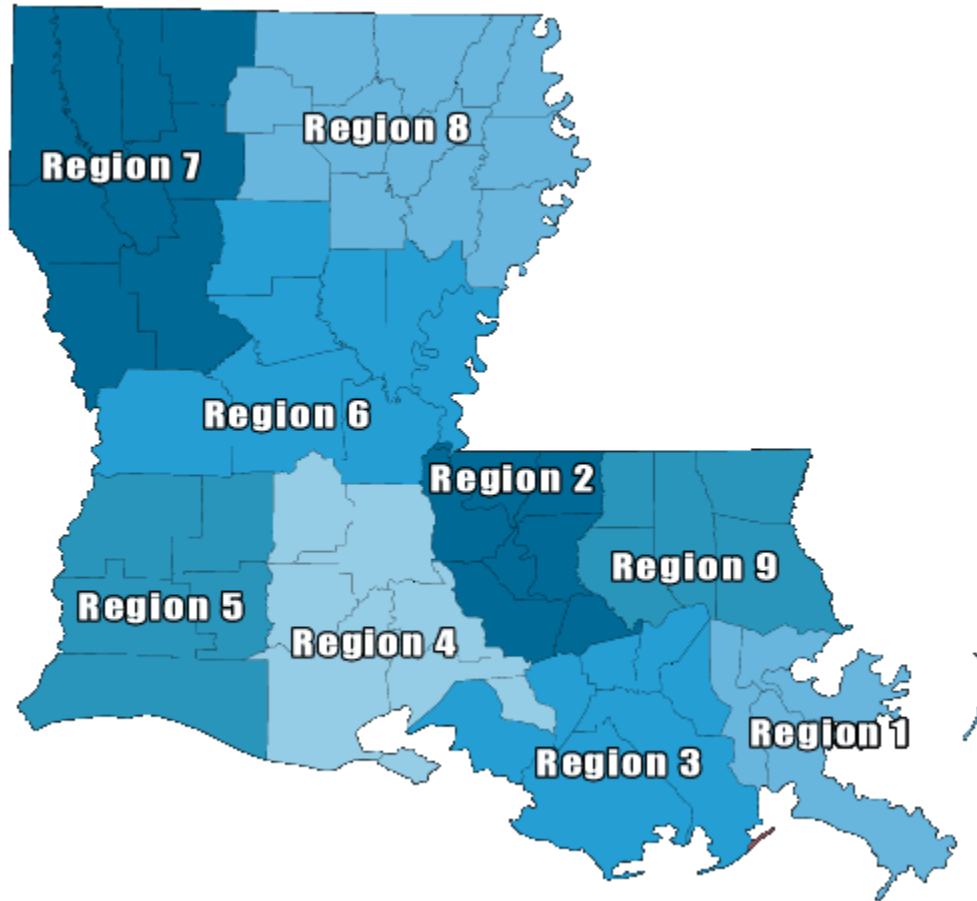


Table 1. Louisiana Department of Health Administrative Regions

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, Vermillion
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

# Cause of Death Explanations

Cause of Death	Explanation <sup>1*</sup>
<b>Congenital malformations, deformations and chromosomal abnormalities (CMDCA)</b>	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, Down's syndrome, Edward syndrome, Patau syndrome, other congenital malformations and deformations and other chromosomal abnormalities not elsewhere classified.
<b>Conditions originating in the perinatal period</b>	This category includes disorders related to the length of gestational age and fetal growth, effects from maternal factors and complications, infections specific to the perinatal period, hemorrhage and hematological disorders and other perinatal conditions.
<b>Diseases of the nervous system</b>	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.
<b>Diseases of the circulatory system</b>	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.
<b>Diseases of the respiratory system</b>	This category includes respiratory infections, influenza, pneumonia, lung diseases due to external agents and diseases of the pleura.
<b>External causes of mortality (injuries)</b>	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.
<b>Infectious and parasitic diseases</b>	This category includes transmissible diseases, including intestinal infectious diseases, tuberculosis, zoonotic bacterial diseases, spirochetal diseases, rickettsioses and viral diseases.
<b>Neoplasm</b>	This category includes tumors and abnormal growths of body tissue. Neoplasms can be malignant (cancerous) or benign (noncancerous).
<b>Sudden infant death syndrome (SIDS)</b>	This category includes deaths among infants less than one year of age that occur suddenly, unexpectedly and for which the causes of death are not immediately obvious prior to investigation. <sup>2</sup>
<b>Sudden unexpected infant death (SUID)</b>	This category includes ill-defined and unknown causes of mortality, SIDS, and accidental suffocation and strangulation in bed.

\*Explanations do not provide comprehensive lists

# Acronyms and Definitions

Acronym	Definition
ASSB	Accidental Suffocation and Strangulation in Bed
ATV	All-Terrain Vehicle
BFH	Bureau of Family Health
CDR	Child Death Review
CDRP	Child Death Review Panel
CMDCA	Congenital Malformation, Deformation and Chromosomal Abnormality
LDH	Louisiana Department of Health
FIMR	Fetal and Infant Mortality Review
GA/LBW	Gestational Age and Low Birth Weight
ICD	International Classification of Diseases
MCH	Maternal and Child Health
MVA	Motor Vehicle Accident
OPH	Office of Public Health
PAMR	Pregnancy-Associated Mortality Review
SIDS	Sudden Infant Death Syndrome
SUID	Sudden Unexpected Infant Death

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

# Child Death Review Overview

## A quick guide to the Child Death Review process

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### **What is the purpose?**

The Louisiana Department of Health's (LDH) Office of Public Health's (OPH) Bureau of Family Health (BFH) coordinates the Child Death Review (CDR) Program. Per R.S. 40:2019, CDRs are mandated for deaths among 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. The review panels are made up of multidisciplinary groups of professionals. These groups are called case review teams.

### **What is the difference between the state and local CDR programs?**

The state panel reviews cases when there are issues that cannot be resolved at the local level, issues that require the weight of CDR legislation, issues that are better addressed by the individuals on the state panel or when there are clusters of cases in multiple regions throughout the state.

### **What types of deaths are reviewed?**

Deaths of children under 15 years of age who die in Louisiana unexpectedly are eligible for case review, regardless of resident status. Commonly reviewed cases include deaths attributable to unintended injuries, homicide, suicide, neglect or abuse, unknown causes and sudden unexpected infant death (SUID).

### **Does anyone review other types of deaths?**

Mothers who die during or within one year of pregnancy are eligible for case review through a separate review process called pregnancy-associated mortality review (PAMR). There is also a review process for infants who are not eligible for CDR. Stillborn babies delivered at or after 28 weeks gestation and infants under the age of one who die expectedly (due to medical causes) and were delivered at 24-36 weeks gestation are eligible for review through fetal and infant mortality review (FIMR). Please see Figure 2 on page nine for more details. Deaths due to abuse and neglect are also reviewed by the Department of Children and Family Services. Infants who do not fall under one of these categories are not reviewed.

### **How are deaths identified?**

Louisiana Vital Records provides data on newly identified deaths each month. Regional Maternal and Child Health (MCH) coordinators and abstractors throughout Louisiana use this information to identify deaths.

### **What happens after a death is identified?**

The regional MCH coordinators and abstractors 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 at CDR meetings.

### **Who decides what deaths will be presented at the CDR meetings?**

The regional MCH coordinators use information gathered from the case abstraction process to determine which cases will be presented. Regional MCH coordinators are registered nurses charged with coordinating CDR meetings in each public health region. All sudden unexpected infant deaths (SUIDs) and unexpected deaths to children under 15 years of age are reviewed at the local level.

### **How are the recommendations from the CDR meetings used?**

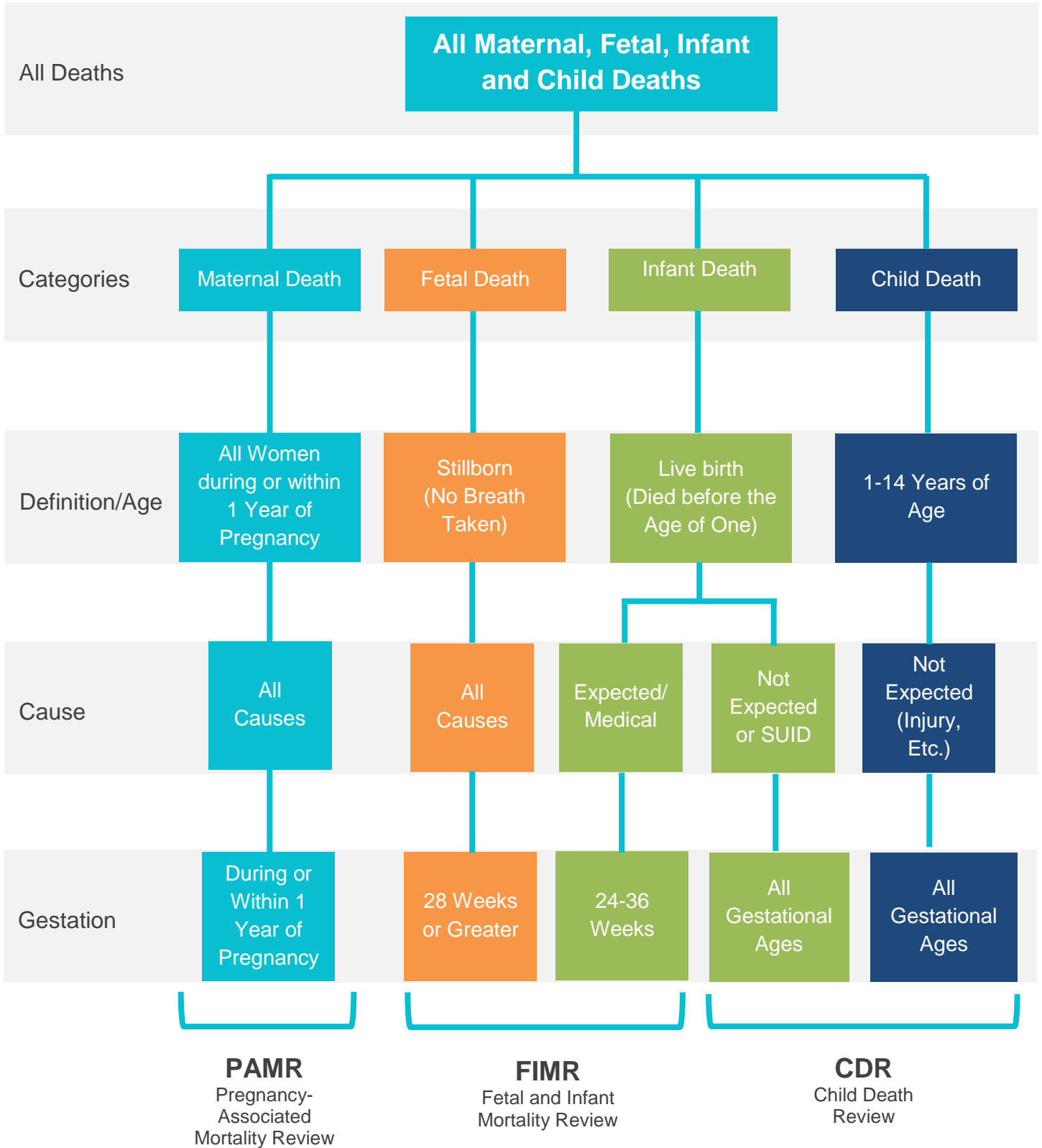
Recommendations from the CDR meetings are referred to regional community action teams. Community action teams are composed of multidisciplinary stakeholders and develop action plans based on the recommendations generated from the CDR meetings.



# Death Review Algorithm

## Case review determination

Figure 2. Louisiana Death Review Algorithm



# Key Findings

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## Infant Deaths (Aged Less than One Year)

In Louisiana from 2012-2014, black<sup>†</sup> infants were 2.2 times as likely as white<sup>†</sup> infants and 2.6 times as likely as Hispanic infants to die during their first year of life ( $p < 0.05$ ). The infant mortality rate decreased for all races from 2002 to 2014. Black infants account for only 37% of births, but 57% of infant deaths. White infants account for 52% of births and only 37% of infant deaths. The top three causes of infant death are conditions originating in the perinatal period, CMDCA (congenital malformations, deformations & chromosomal anomalies), and Sudden Unexpected Infant Death (SUID).

## Neonatal Deaths (Infants Aged Less than 28 Days)

Conditions originating in the perinatal period (see page 6 for criteria) were the leading causes of death in this age group, accounting for nearly 71% of the deaths. In Louisiana, black<sup>†</sup> infants were 2.2 times as likely as white<sup>†</sup> infants and Hispanic infants to die before reaching 28 days old ( $p < 0.05$ ). There was a significant reduction in neonatal deaths among black infants from 2002-2014 ( $p < 0.05$ ). The reduction in white<sup>†</sup> infants was not statistically significant.

## Postneonatal Deaths (Infants Aged 28 to 364 Days)

SUID was the leading cause of postneonatal death. From 2012-2014 in Louisiana, black<sup>†</sup> infants between 28 and 364 days old were 2.2 times as likely as white<sup>†</sup> infants and 3.6 times as likely as Hispanic infants to die during the postneonatal period ( $p < 0.05$ ). There was not a significant reduction in the postneonatal mortality rate from 2002-2014.

## Child Deaths (Aged 1-4 Years)

Injuries were the leading cause of death among children aged 1-4 years in Louisiana during 2012-2014. Of injury deaths, drowning was the leading cause (36 deaths), just above motor vehicle accidents (34 deaths). Mortality rates for black<sup>†</sup> children were higher in every region compared to white<sup>†</sup> and Hispanic children. Overall, black<sup>†</sup> children aged 1-4 years were 2.4 times as likely to die as white<sup>†</sup> children in the same age group ( $p < 0.05$ ). Mortality rates for males were 1.3 times higher than females aged 1-4 years.

## Child Deaths (Aged 5-9 Years)

Injuries, of which motor vehicle accidents were the primary contributor (21 deaths), were the leading cause of death among children aged 5-9 years in Louisiana from 2012 to 2014. Overall, black<sup>†</sup> children aged 5-9 years were 2.8 times as likely to die compared to white<sup>†</sup> children in the same age group ( $p < 0.05$ ). Mortality rates for black<sup>†</sup> children were higher in every region compared to white<sup>†</sup> and Hispanic children ( $p < 0.05$ ).

## Adolescent Deaths (Aged 10-14 Years)

Louisiana adolescent death rate has consistently been about 10% higher than the US rate. Black<sup>†</sup> adolescents had higher mortality rates than white<sup>†</sup> and Hispanic adolescents. Males aged 10-14 years in Louisiana accounted for 61% of deaths. Injuries were the leading cause of death among adolescents aged 10-14 years in Louisiana during 2012-2014, accounting for over 50% of the deaths in this age group. Among fatal injuries, motor vehicle accidents accounted for the largest proportion of deaths at 30%. Black<sup>†</sup> adolescents were 46.8% of deaths. Twenty-two adolescents were killed by a firearm in Louisiana from 2012-2014.

<sup>†</sup> Black indicates non-Hispanic black, and white indicates non-Hispanic white.

# Louisiana Report Card

## Comparison of Healthy People 2020, United States and Louisiana indicators

Table 2. National and State Comparison of Healthy People 2020 Objectives

Indicator	2020 Targets	U.S.	LA
<b>Infant Deaths (Rate per 1,000 Live Births)</b>			
Neonatal mortality rate	4.1 <sup>1</sup>	4.1 <sup>3†</sup>	<b>4.8<sup>3†</sup></b>
Postneonatal mortality rate	2.0 <sup>1</sup>	2.0 <sup>3†</sup>	<b>3.3<sup>3†</sup></b>
Infant mortality rate	6.0 <sup>1</sup>	6.1 <sup>3†</sup>	<b>8.0<sup>3†</sup></b>
SUID rate	0.84 <sup>1</sup>	0.7 <sup>†</sup>	<b>1.4<sup>3†</sup></b>
<b>Child Deaths (Rate per 100,000 Population)</b>			
Child mortality rate, ages 1-4	26.5 <sup>1</sup>	26.4 <sup>†</sup>	<b>42.1<sup>4†</sup></b>
Child mortality rate, ages 5-9	12.4 <sup>1</sup>	11.6 <sup>4†</sup>	<b>15.9<sup>4†</sup></b>
<b>Adolescent Deaths (Rate per 100,000 Population)</b>			
Adolescent mortality rate, ages 10-14	14.8 <sup>1</sup>	14.1 <sup>4†</sup>	<b>18.6<sup>4†</sup></b>
<b>Injury and Violence Prevention</b>			
Percent of deaths due to external causes among children less than 17 years old reviewed by a child fatality review team	90.0% <sup>1</sup>	Unavailable	<b>24.5%<sup>5, 6†</sup></b>
Unintentional suffocation mortality rate among infants, 0-12 months	20.8 per 100,000 population <sup>1</sup>	23.1 per 100,000 population <sup>3†</sup>	<b>77.6 per 100,000 population<sup>3†</sup></b>

Above, Louisiana and US data are compared with U.S. Department of Health and Human Services' Healthy People 2020 targets. These evidence-based objectives were selected by a team of experts at Healthy People with the intention of identifying national health priorities. Every 10 years, objectives are selected with a goal of meeting the targets by the end of the decade.

<sup>†</sup>2012-2014 data

# Infant Deaths

## Less than 1 Year Old

Figure 3. Trend in Infant Mortality by Race, Louisiana, 2002-2014<sup>5</sup>

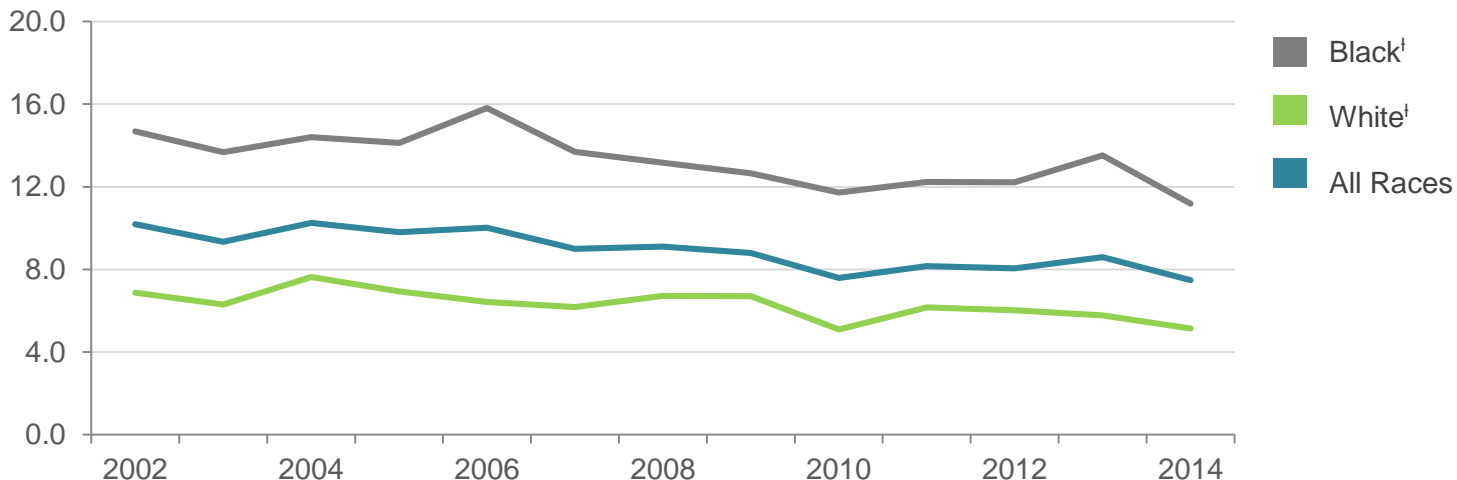
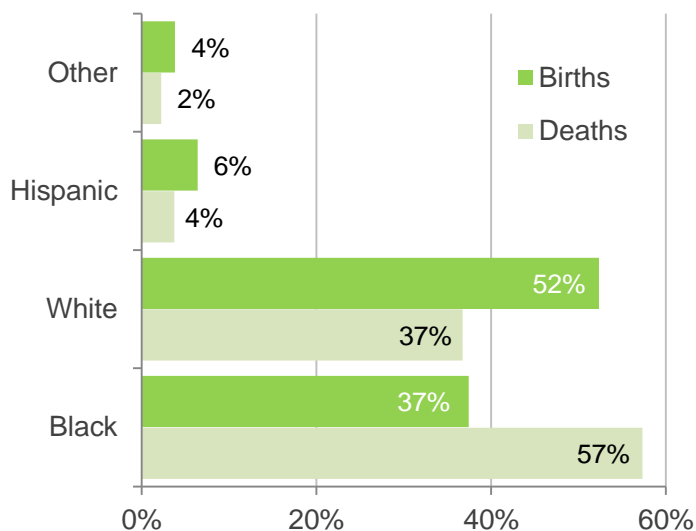


Table 3. Infant Mortality Rate per 1,000 Live Births by Region and Race/Ethnicity, 2012-2014<sup>5</sup>

Location	White	Black	Hispanic	Other	All Races
Louisiana	5.6	12.3	4.7	4.7	8.0
Region 1	4.8	11.2	3.8*	4.0*	7.4
Region 2	6.0	15.9	6.7*	8.3*	11.0
Region 3	6.7	9.8	4.8*	8.2*	7.5
Region 4	5.5	10.6	-	-	7.0
Region 5	5.3	14.5	-	0.0	7.3
Region 6	6.4	9.5	-	-	7.4
Region 7	4.7	13.3	-	-	8.5
Region 8	6.0	10.9	-	-	8.4
Region 9	5.9	11.8	7.9	0.0	7.1

Figure 4. Proportion of Live Births and Deaths by Race/Ethnicity, Louisiana, 2012-2014<sup>5</sup>



## Key Findings

The infant mortality rate decreased for all races from 2002 to 2014. From 2012-2014 in Louisiana, black<sup>†</sup> infants were 2.2 times as likely as white<sup>†</sup> infants and 2.6 times as likely as Hispanic infants to die during their first year of life ( $p < 0.05$ ). Black infants account for only 37% of births, but 57% of infant deaths. White infants account for 52% of births and only 37% of deaths.

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

--Rates based on counts <5 are suppressed to maintain confidentiality.

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

# Causes of Infant Death

## Infants Less than 1 Year Old

Figure 5. Proportion of Infant Deaths by Cause, Louisiana, 2012-2014<sup>5</sup>

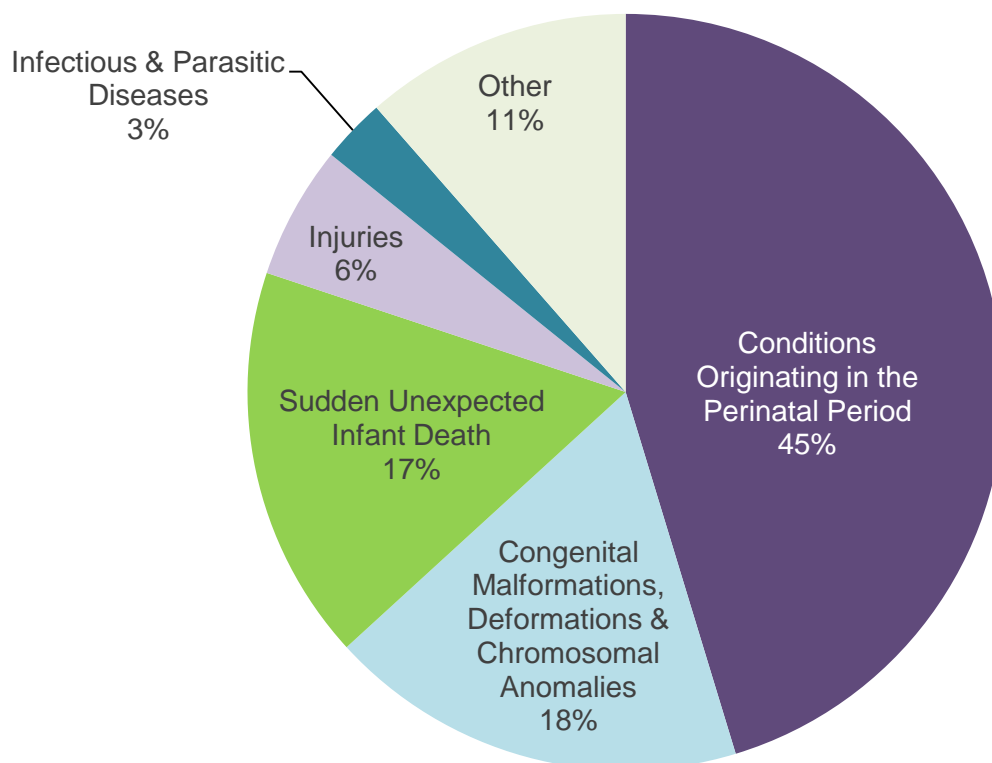


Table 4. Leading Causes of Infant Death, Louisiana, 2012-2014<sup>5</sup>

Rank	Cause of Death	Number of Deaths	Rate (per 1,000 Live Births)
1	Conditions Originating in the Perinatal Period	708	3.7
2	Congenital Malformations, Deformations & Chromosomal Anomalies (CMDCA)	280	1.5
3	Sudden Unexpected Infant Death (SUID)	264	1.4
4	Injuries	89	0.5
5	Infectious & Parasitic Diseases	43	0.2

### Key Findings

The top three causes of infant death are conditions originating in the perinatal period, CMDCA (congenital malformations, and deformations and chromosomal anomalies), and sudden unexpected infant death (SUID), see page 6 for criteria. Conditions originating in the perinatal period were the leading causes of death among infants aged less than 1 year, accounting for 45.3% of infant deaths in Louisiana from 2012-2014. Within that category, disorders arising from preterm birth or malnutrition were the largest contributing factors, followed by factors associated with complications of labor, pregnancy or delivery.

# Neonatal Deaths

## Infants Less than 28 Days Old

Figure 6. Trend in Neonatal Mortality Rate by Race/Ethnicity, Louisiana, 2002-2014<sup>5</sup>

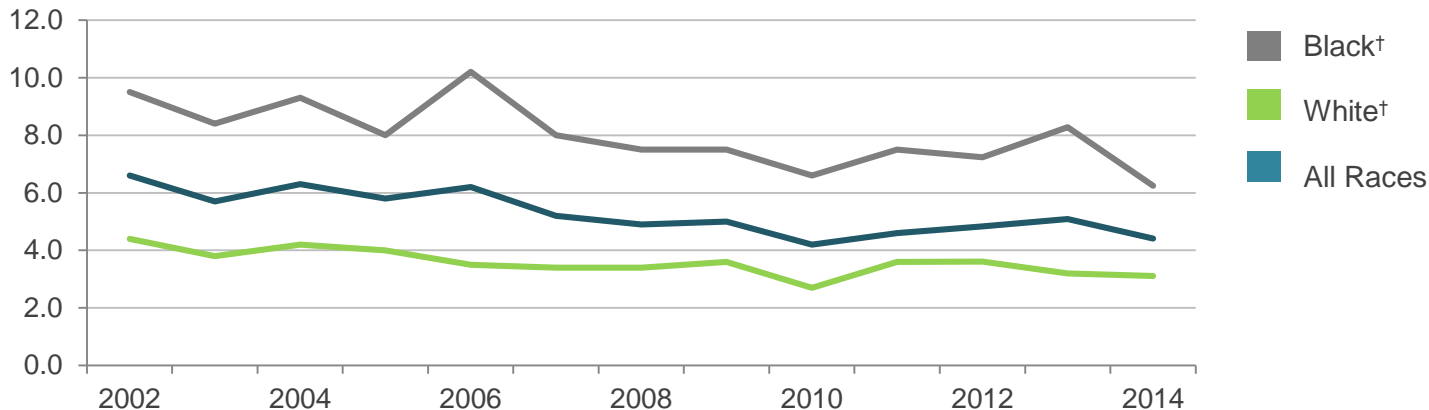
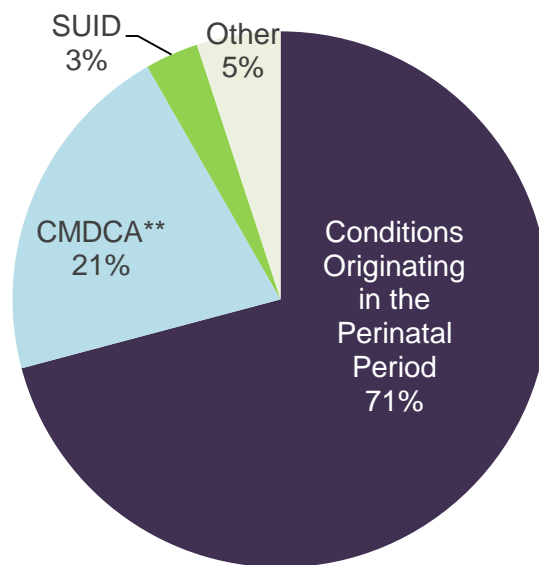


Table 5. Neonatal Mortality Rate per 1,000 Live Births by Region and Race/Ethnicity, 2012-2014<sup>5</sup>

Location	White†	Black†	Hispanic	All Races
Louisiana	3.3	7.3	3.3	4.8
Region 1	3.1	5.7	2.7*	4.2
Region 2	4.1	10.0	5.4	7.1
Region 3	4.4	5.5	--	4.7
Region 4	3.0	5.8	--	3.8
Region 5	2.8	7.4	0.0	3.8
Region 6	2.9	5.7	--	3.9
Region 7	2.0	8.9	0.0	5.1
Region 8	3.1	7.1	--	5.0
Region 9	3.9	6.6	6.3*	4.5

Figure 7. Proportion and Frequency of Neonatal Deaths by Cause, Louisiana, 2012-2014<sup>5</sup>



**From 2012-2014 in Louisiana, 54.6% of neonatal deaths were boys.<sup>5</sup>**

### Key Findings

Conditions originating in the perinatal period (see page 6 for criteria) were the leading causes of death in this age group, accounting for 71% of the deaths. In Louisiana, black<sup>†</sup> infants were 2.2 times as likely as white<sup>†</sup> infants and Hispanic infants to die before reaching 28 days old ( $p < 0.05$ ). There was a significant reduction in neonatal deaths among black<sup>†</sup> infants and among all infants from 2002-2014 ( $p < 0.05$ ). The reduction in deaths among white<sup>†</sup> infants was not statistically significant.

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

\*\*Congenital malformations, deformations and chromosomal abnormalities (CMDCA)

--Rates based on counts <5 are suppressed to maintain confidentiality.

<sup>†</sup> Black indicates non-Hispanic black, and white indicates non-Hispanic white. Non-Hispanic other races not reported due to small counts.

# Postneonatal Deaths

## Infants between 28 and 364 Days Old

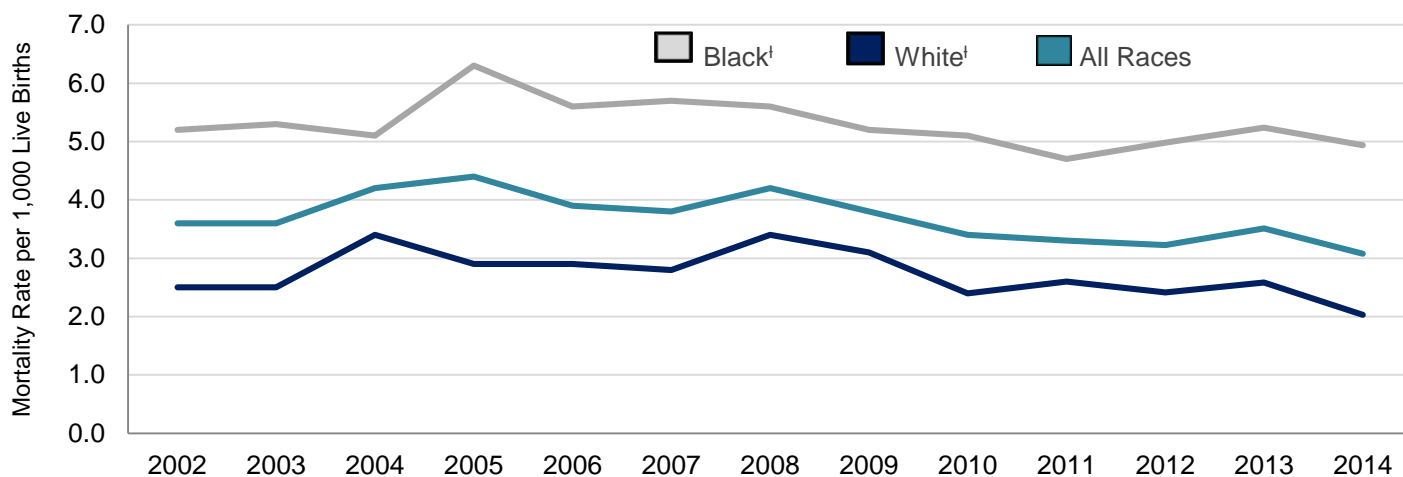
Table 6. Postneonatal Mortality Rate per 1,000 Live Births by Region and Race/Ethnicity, 2012-2014<sup>5</sup>

Location	Black <sup>†</sup>	White <sup>†</sup>	Hispanic	All Races
Louisiana	5.1	2.3	1.4*	3.3
Region 1	5.5	1.7	1.1*	3.2
Region 2	5.9	1.9	--	3.9
Region 3	4.3	2.3	--	2.8
Region 4	4.8	2.5	--	3.2
Region 5	7.1	2.5	--	3.5
Region 6	3.9	3.5	0.0	3.5
Region 7	4.5	2.7	--	3.4
Region 8	3.8	2.9	--	3.4
Region 9	5.1	2.0	--	2.6

Table 7. Leading Causes of Postneonatal Death, Louisiana, 2012-2014<sup>5</sup>

Rank	Cause of Death	Number	Rate (per 1,000 Live Births)
1	SUID	234	1.2
2	CMDCA**	86	0.5
3	Injuries	83	0.4
4	Diseases of the Respiratory System	59	0.3
5	Infectious and Parasitic Diseases	42	0.2

Figure 8. Trend in Postneonatal Mortality Rate by Race, Louisiana, 2002-2014<sup>5</sup>



**From 2012-2014 in Louisiana, 55.1% of postneonatal deaths were boys.<sup>5</sup>**

### Key Findings

Sudden unexpected infant death (SUID) was the leading cause of postneonatal death. From 2012-2014 in Louisiana, black<sup>†</sup> infants between 28 and 364 days old were 2.2 times as likely as white<sup>†</sup> infants and 3.6 times as likely as Hispanic infants to die during the postneonatal period (p <0.05). There was not a significant reduction in the postneonatal mortality rate from 2002-2014.

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

\*\*Congenital malformations, deformations and chromosomal abnormalities (CMDCA)

--Rates based on counts <5 are suppressed to maintain confidentiality.

<sup>†</sup>Black indicates non-Hispanic black, and white indicates non-Hispanic white. Non-Hispanic other races not reported due to small counts.

# Sudden Unexpected Infant Deaths (SUID)

## Infants Less than 1 Year Old

Figure 9. Trend in SUID\*\* Cases by Cause of Death, Louisiana, 2004-2014<sup>5</sup>

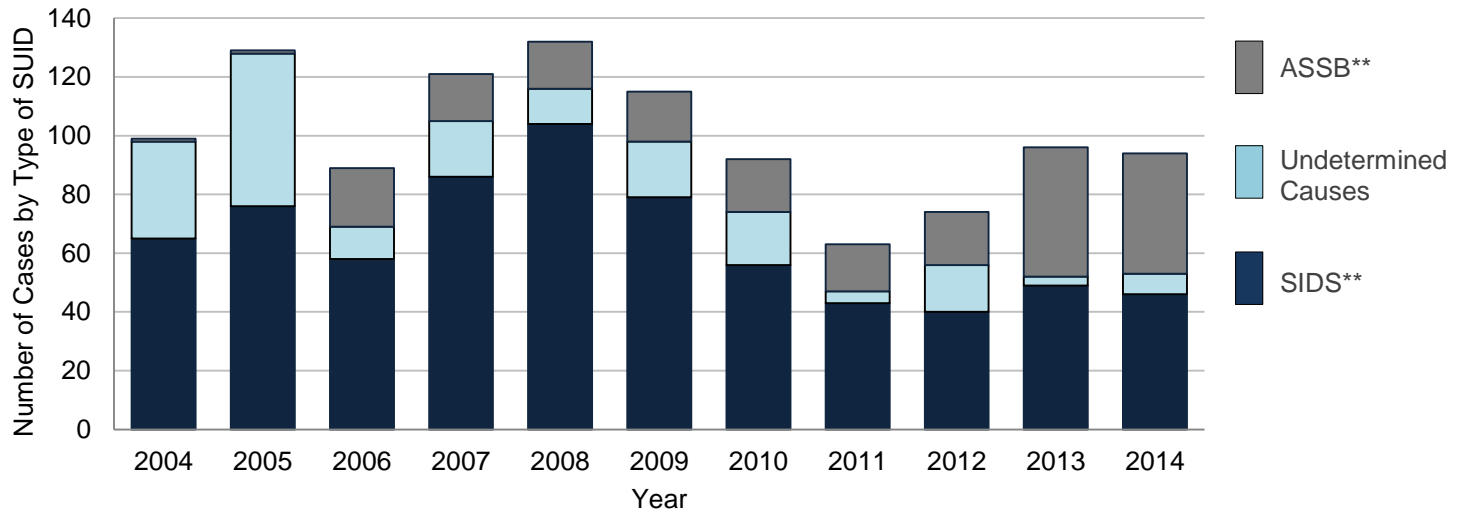
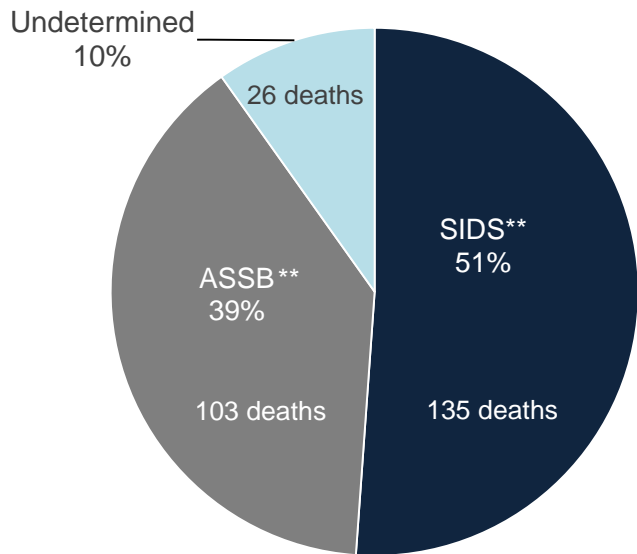


Table 8. SUID Rate per 1,000 Live Births by Region, Louisiana, 2012-2014<sup>5</sup>

Location	Rate	Number of Deaths
Louisiana	1.4	263
Region 1	1.7	58
Region 2	1.3	35
Region 3	1.1*	18
Region 4	1.0	26
Region 5	1.6	20
Region 6	1.4*	18
Region 7	1.3	29
Region 8	1.7	25
Region 9	1.2	27

Figure 10. Breakdown of SUID\*\* by Cause of Death, Louisiana, 2012-2014<sup>5</sup>



### Key Findings

Of the causes of death categorized under SUID, SIDS was the leading cause of death. Region 1 and Region 8 had the highest SUID rate in the state during 2012-2014, which was 1.2 times that of the rate in Louisiana. There was a 5% decrease in the number of SUID cases from 2004-2014. Please note that SUID rates are not available by race due to small counts.

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

\*\*SUID includes sudden infant death syndrome (SIDS), accidental suffocation and strangulation in bed (ASSB) and undetermined deaths.



# Child Deaths

## Children Aged 1 to 4 Years

Figure 11. Child (1-4 Years) Mortality Rate per 100,000 Population by Region & Race, Louisiana, 2012-2014<sup>5,7</sup>

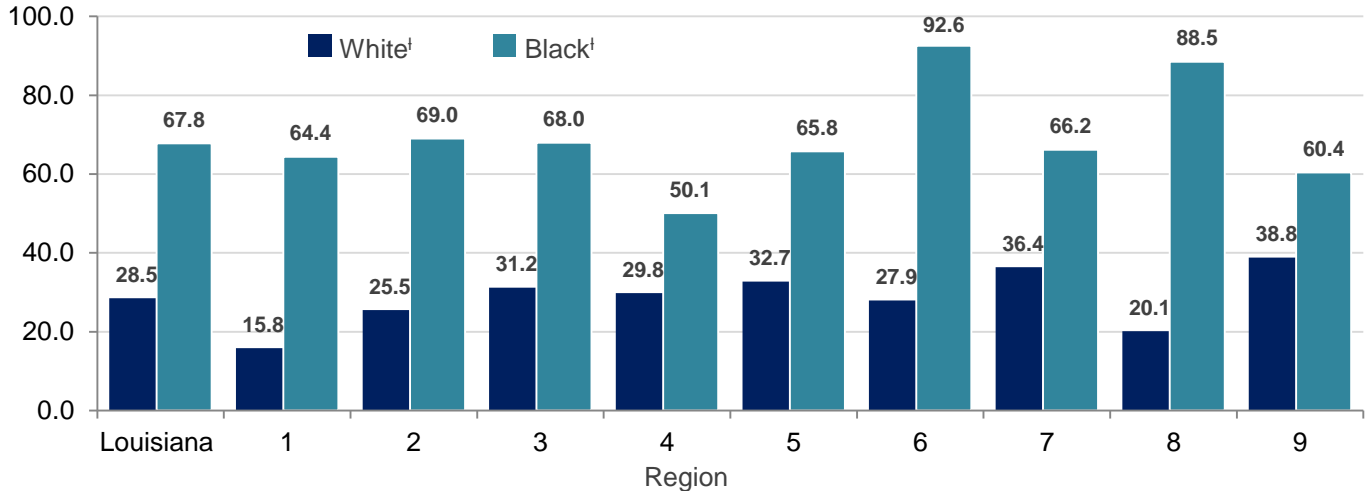


Figure 12. Leading Causes of Child Death (1-4 years), Louisiana, 2012-2014<sup>5</sup>

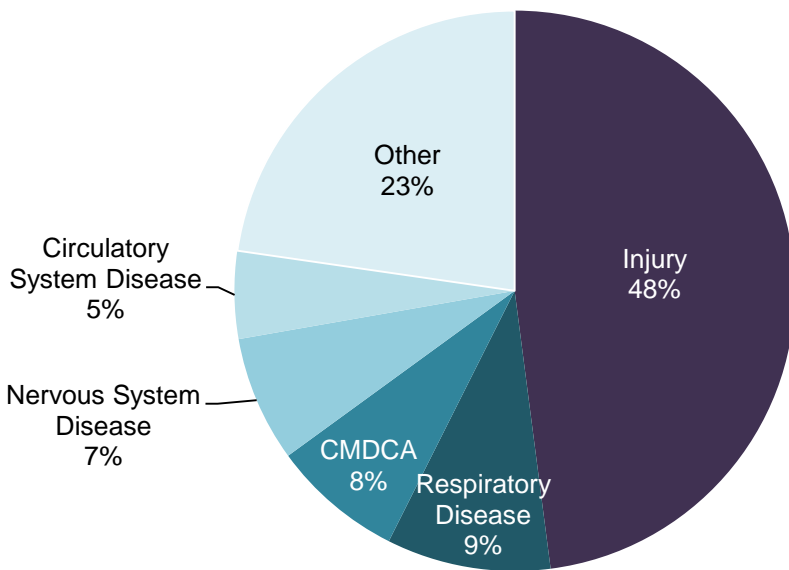


Table 9. Child (1-4 Years) Mortality Rate per 100,000 Population by Region, Louisiana, 2012-2014<sup>5, 7</sup>

Location	Rate	Number of Deaths
Louisiana	42.1	315
Region 1	39.7	53
Region 2	42.1	45
Region 3	40.3	27
Region 4	36.1	37
Region 5	43.0	21
Region 6	41.5	22
Region 7	49.4	45
Region 8	46.5	27
Region 9	43.1	38

### Key Findings

Injuries were the leading cause of death among children aged 1-4 years in Louisiana during 2012-2014. Of injury deaths, drowning was the leading cause (36 deaths), above motor vehicle accidents (34 deaths). Mortality rates for black<sup>†</sup> children were higher in every region compared to white<sup>†</sup> and Hispanic children. Overall, black<sup>†</sup> children aged 1-4 years were 2.4 times as likely to die as white<sup>†</sup> children ( $p>0.05$ ). Mortality rates for males were 1.3 times higher than females. There was not a statistically significant reduction in mortality among children aged 1-4 years in Louisiana from 2002-2014.

<sup>\*\*</sup>Congenital malformations, deformations and chromosomal abnormalities (CMDCA)

<sup>†</sup> Black indicates non-Hispanic black, and white indicates non-Hispanic white.

# Child Deaths

## Children Aged 5 to 9 Years

Table 10. Child Mortality (5-9 Years) Rate per 100,000 Population by Region and Race/Ethnicity<sup>5,7</sup> Louisiana, 2012-2014<sup>5,7</sup>

Location	Black	White	Hispanic	All Races
Louisiana	27.1	9.8	17.9	15.9
Region 1	26.8*	7.6*	--	15.8
Region 2	41.8	7.0*	--	22.3
Region 3	--	10.3*	--	13.8*
Region 4	33.7	--	--	12.2*
Region 5	--	17.4*	--	19.6*
Region 6	--	--	--	8.1*
Region 7	25.8*	12.5*	--	17.9
Region 8	21.9*	11.2*	--	17.5*
Region 9	25.5*	11.3*	--	14.1*

Figure 13. Proportion of Child Mortality by Gender, 5-9 years, 2012-2014<sup>5</sup>

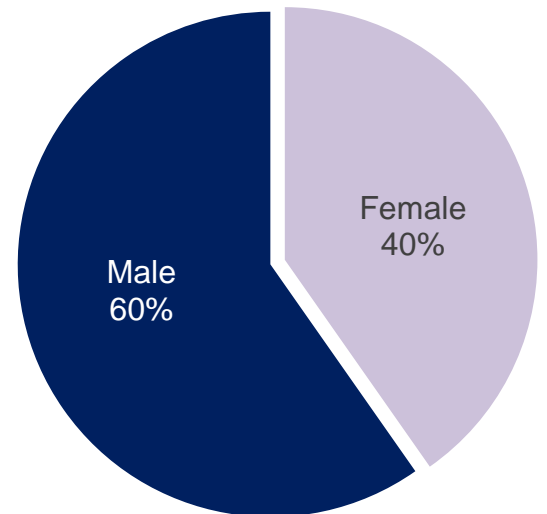
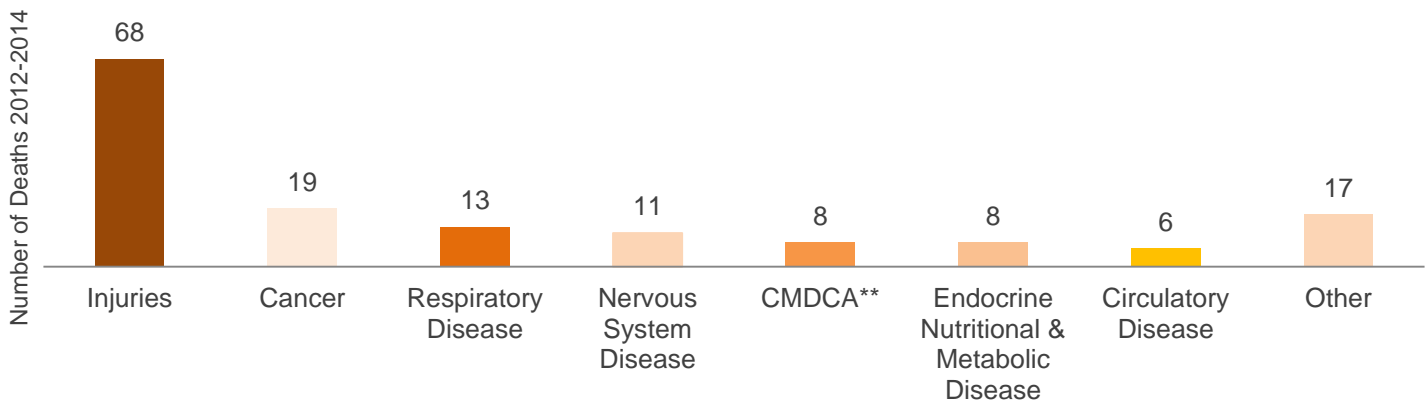


Figure 14. Leading Causes of Child Death, 5-9 Years, Louisiana, 2012-2014<sup>5</sup>



### Key Findings

Injuries, of which motor vehicle accidents were the primary contributor (21 deaths), were the leading cause of death among children aged 5-9 years in Louisiana during 2012-2014. Overall, black<sup>†</sup> children aged 5-9 years were 2.8 times as likely to die compared to white<sup>†</sup> children in the same age group ( $p < 0.05$ ). Mortality rates for males were 1.5 times higher than females aged 5-9 years.

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

\*\*Congenital malformations, deformations and chromosomal abnormalities (CMDCA)

--Rates based on counts <5 are suppressed to maintain confidentiality.

† Black indicates non-Hispanic black and white indicates non-Hispanic white.

# Child Deaths Due to Injury

## Children Aged 1 to 9 Years

Figure 15: Trend in Injuries among Children, 1-9 Years, All Races, Louisiana & US, 2002-2014<sup>3, 5</sup>

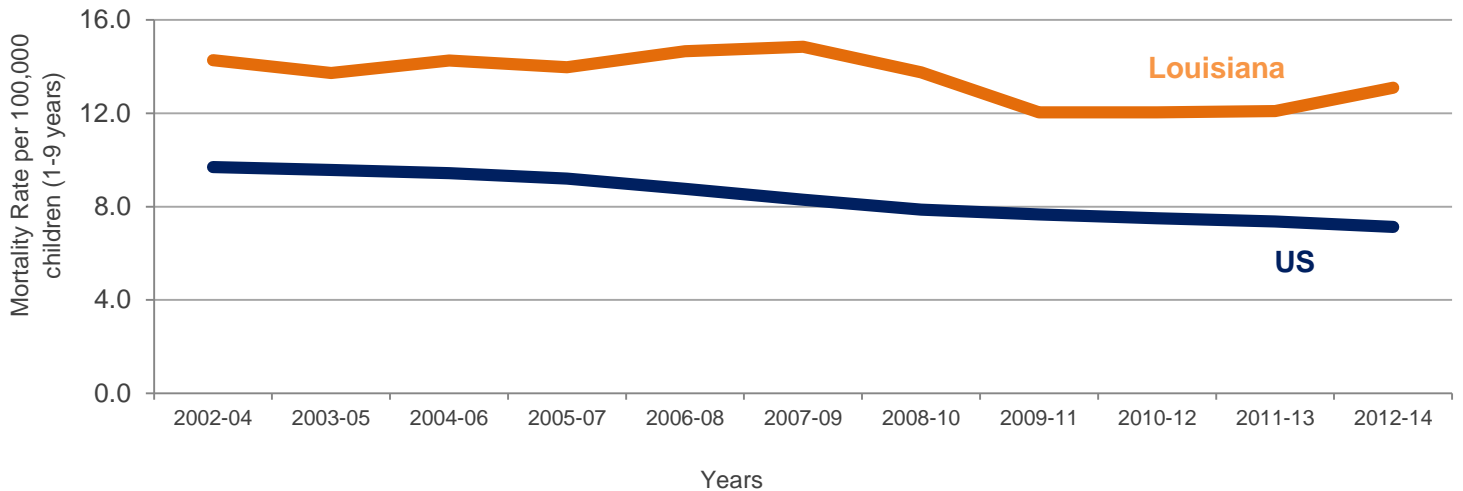


Figure 16: Proportion of Intentional and Unintentional Injuries among Children, 1-9 Years, Louisiana, 2012-2014<sup>5</sup>

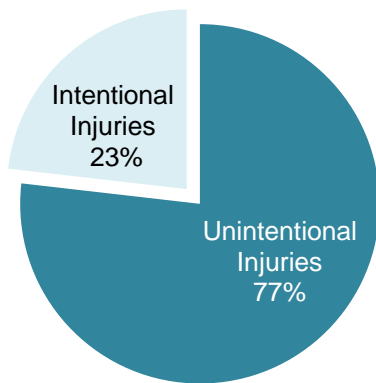


Table 11. Leading Causes of Fatal Injury among Children, Aged 1-9 Years, Louisiana, 2012-2014<sup>5</sup>

Rank	Cause of Death	Number of Deaths
1	Homicide	51
2	Motor Vehicle Accidents	48
3	Accidental Drowning and Submersion	42

**Injuries were the leading cause of death in children 1-9 years.<sup>7</sup>**

### Key Findings

Unintentional injuries accounted for more than 75% of all injury deaths among children aged 1-9 years old in Louisiana during 2012-2014. During 2012-2014, 50 children 1-9 years died due to homicide, the leading injury death. Please note that injury rates are not available by race, ethnicity and region due to small numbers. There was a reduction in injury fatalities among all races in Louisiana from 2002-2014.

# Adolescent Deaths

## Adolescents Aged 10 to 14 Years

Figure 17. Proportion of Adolescent Mortality by Gender, 10-14 years, 2012-2014<sup>5</sup>

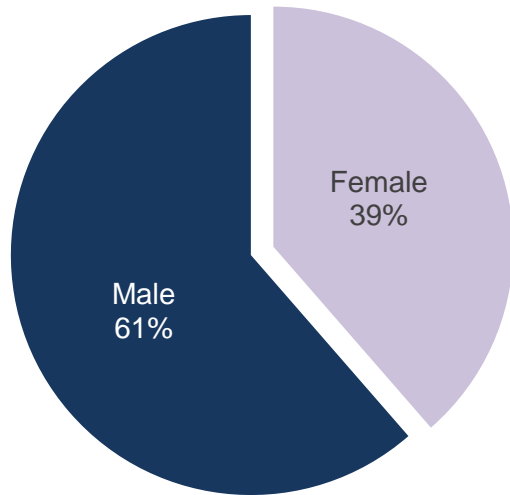
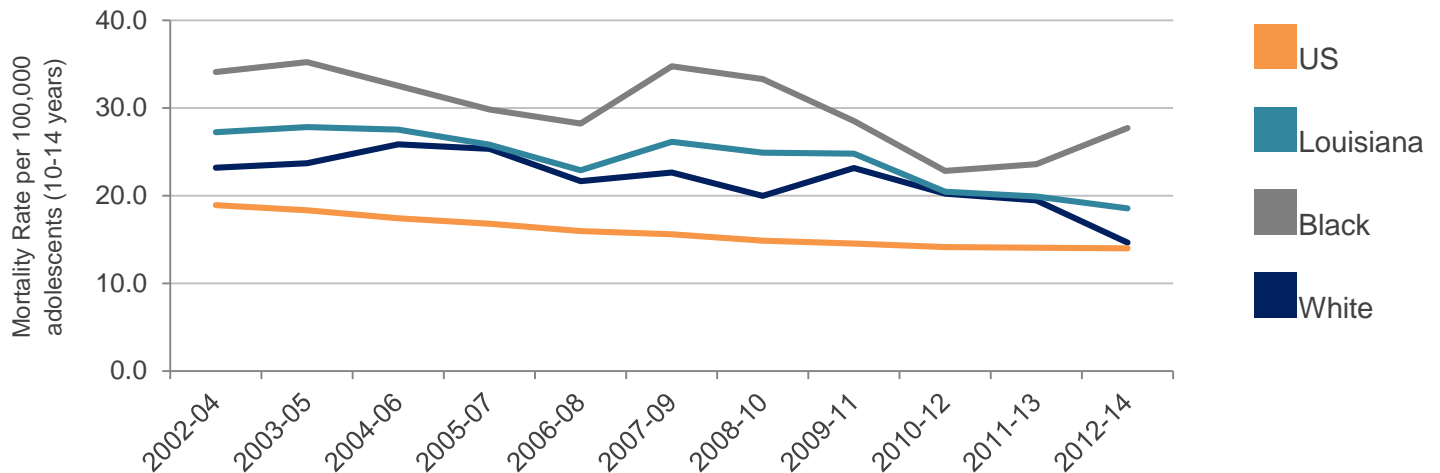


Table 12. Adolescent Mortality Rate per 100,000 Population by Race, 10-14 Years, Louisiana, 2012-2014<sup>5, 7</sup>

Location	Black <sup>†</sup>	White <sup>†</sup>	All Races
Louisiana	27.7	14.6	18.6
Region 1	33.7	--	15.9
Region 2	31.4*	12.1*	19.4
Region 3	48.5*	15.9*	23.6
Region 4	27.2*	15.5*	18.9
Region 5	37.5*	23.7*	26.0*
Region 6	--	13.1*	15.0*
Region 7	11.9*	19.0*	15.4*
Region 8	22.9*	25.3*	25.0*
Region 9	--	13.7*	13.5*

Figure 18. Trend in Adolescent Mortality by Race/Ethnicity, Aged 10-14 Years, Louisiana, 2002-2014<sup>3, 5</sup>



### Key Findings

Though black<sup>†</sup> adolescents had higher mortality rates compared to white<sup>†</sup> and Hispanic adolescents, the overall difference at the state level was not statistically significant during 2012-2014. Males aged 10-14 years in Louisiana were 1.6 times as likely to die as their female counterparts ( $p < 0.05$ ). There was a reduction in deaths among adolescents of all races from 2002-2014. Region 5 (Lake Charles area) had the highest rate of adolescent mortality from 2012-2014.

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

--Rates based on counts <5 are suppressed to maintain confidentiality.

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

# Causes of Adolescent Death

## Adolescents Aged 10 to 14 Years

Figure 19. Causes of Adolescent Death, 10-14 Years, Louisiana, 2012-2014<sup>5</sup>

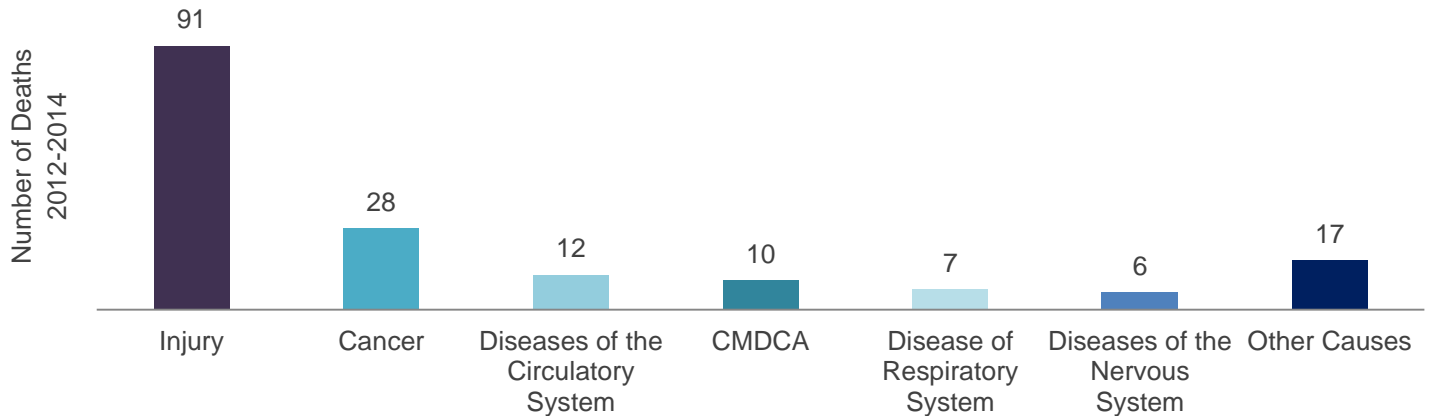


Figure 20. Causes of Adolescent Injury Death, 10-14 Years, Louisiana, 2012-2014<sup>5</sup>

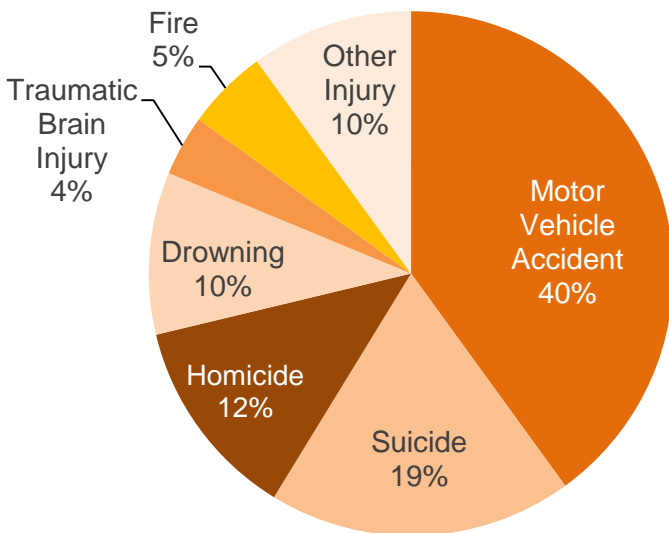
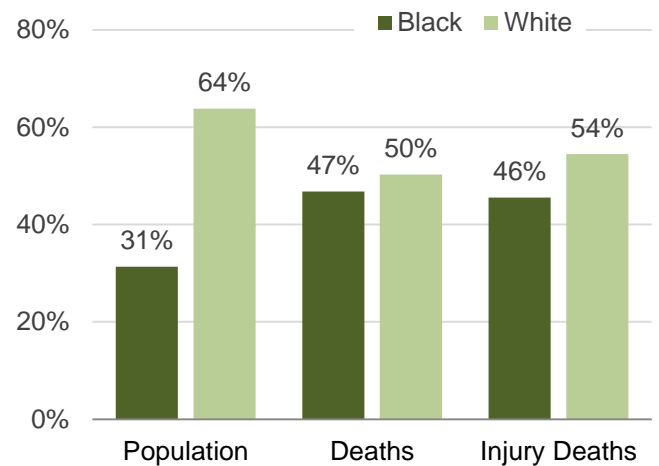


Figure 21. Proportion of Adolescent Population, Deaths and Injury Death by Race, Louisiana, 2012-2014<sup>5</sup>



**Injury is the leading cause of death among adolescents.<sup>7</sup>**

### Key Findings

Injuries were the leading cause of death among adolescents aged 10-14 years in Louisiana during 2012-2014, causing more than three times as many deaths as the next leading cause in this age group. Among fatal injuries, motor vehicle accidents accounted for the largest proportion of deaths at 30%. Black<sup>†</sup> adolescents were almost twice as likely to die as white<sup>†</sup> adolescents.

<sup>†</sup> Black indicates non-Hispanic black, and white indicates non-Hispanic white.

# Data Sources and Methodology

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## **Data Methods**

Data were analyzed using Statistical Analysis System (SAS) 9.2 and Epi Info 7. The alpha level was set at 0.05 when testing for statistical significance.

## **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, objectives are selected with a goal of meeting the targets by the end of the decade. All Healthy People objectives have standardized indicators with known numerators and denominators.

## **LDH-OPH Vital Records and Statistics**

Data from LDH-OPH Vital Records and Statistics were used to categorize cause of death. The Bureau of Family Health adheres to the International Classification of Diseases (ICD) 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 death occurrence.

## **Child Death Review Case Reporting System**

The Child Death Review Case Reporting System hosts data collected about deaths that occur in Louisiana among children under 14 years old. Information is obtained from personal interviews, autopsy reports, medical records, death investigations and death reviews and recorded in the system by maternal and child health regional coordinators. Data from this system were used to report the proportion of deaths reviewed according to age.

# Limitations

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## **Small Number of Events**

Many key indicators are presented at the regional level. Despite the inclusion of multi-year data, some sub-group population counts were less than five and are not presented in the report in order to preserve confidentiality. Though event counts above five are reported, counts less than 20 are considered unstable and should be interpreted with caution, taking into consideration that these numbers, percentages or rates may change drastically in the future. Unstable rates are noted with an asterisk. Furthermore, trends based on unstable rates are not represented in this report. As a result, Hispanics were not included in any trend figures.

## **Data Systems**

LDH-OPH Vital Records: Cause of death coding for out-of-state residents was unavailable in death data from 2012, but may become available at a later date.

Child Death Review Case Reporting System: Missing and incomplete data limit the value of child death review (CDR) data prior to 2013, after which the data entry process was improved. Inconsistency in historic data severely limits the use of the data in this system due to an inability to accurately analyze trends and clusters. Due to these limitations, data related to the CDR process from 2012-2014 are unavailable and not reported. Instead, CDR data for years 2013-2014 are reported. These data cannot be compared to data from 2012-2014. In addition to these limitations, quality assessment is currently being conducted for data entered in the CDR Case Reporting System. Thus the reliability and validity of the data are unknown.

# Appendix A: 2016 State CDRP Members

Position	Current Incumbent
Attorney general or designee	Emily Andrews
Citizens-at-large, representing different geographic areas of the state (4)	Dr. Dawn Vick Pam Cart Ashlyn Melton **
Commissioner of the Department of Insurance or designee	Korey Harvey
Louisiana District Attorneys' Association	Joseph Waitz Jr.
Department of Public Safety, Louisiana State Police	Lt. Dave Kolb
Executive director of Highway Safety Commission of the Department of Public Safety and Corrections or designee	Col. John Le Blanc
Executive director of the Louisiana Maternal and Child Health Coalition	*
Forensic pathologist certified by the American Board of Pathology and licensed to practice medicine in the State	**
Health professional with expertise in SIDS and appointed from a list of three names submitted by the Louisiana State Medical Society	Dr. Louis Cataldie
Injury Prevention and Research Center appointee	*
Member of the House of Representatives	The Honorable Scott Simon
Member of the Senate	**
Pathologist experienced in pediatrics	Deborah Cavalier
Pediatrician with expertise in diagnosing and treating child abuse and neglect and nominated by the State chapter of the American Academy of Pediatrics	Dr. Reynaldo Dela Rosa
Louisiana Association of Chiefs of Police	Timothy Lentz Frank Edwards
Louisiana Coroner's Association	Yancy Guerin
Secretary of the Department of Children and Family Services or designee	Jan Byland
Secretary of the Louisiana Department of Health or designee	Amy Zapata
Louisiana Sheriffs' Association	Lauren Meher
State fire marshal or designee	Cindy Gonthier
State health officer or designee	Dr. Takeisha Davis
State registrar of vital records or designee	Devin George

\*Entity no longer exists



# Appendix B: 2016 Local CDR 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.
Region 5	Linda Pickett, R.N.
Region 6	Lisa Norman, R.N.; Annelle Tanner, Ed.D., R.N.
Region 7	Shelley Ryan-Gray, B.N., R.N.
Region 8	Amy Pyles, R.N.
Region 9	Martha Hennegan, R.N.
Statewide	Robin Gruenfeld, M.P.H.

Note: With the exception of the Child Death Review Program (CDRP) coordinators, local CDRPs did not have permanent members.

# Appendix C: Infant Death Review

## A Snapshot of Reviewed Deaths among Infants Less than One Year Old

Louisiana Child Death Review Panels (CDRPs) review all cases of Unexpected Child Death less than 15 years old.

### Overview of Deaths Reviewed by CDRPs in Louisiana from 2012-2014

Deaths reviewed are categorized as accidental, natural, homicide, suicide, or undetermined deaths. Within natural deaths reviewed, causes of death included pneumonia and infections. Within accidental deaths reviewed, causes of death included asphyxia, SIDS, fatal weapon injuries, motor vehicle accidents (MVs), drowning and falls.

### Risk Factors Identified for SUID by CDRPs in Louisiana

- All SUID cases were reviewed from 2013-2014 and unsafe sleep was a frequent factor among SUID cases reviewed.
- 50% of cases were not sleeping on their back
- 63% were sleeping with other people
- 67% of deaths were 0-3 months old

### What is being done in Louisiana?

- **All 52 birthing hospitals in Louisiana have achieved recognition as safe sleep hospitals** under the Louisiana Safe Sleep Champion Initiative. Designation as a safe sleep champion indicates adherence to American Academy of Pediatrics safe sleep guidelines, ensuring a united and standardized message on safe sleep practices for Louisiana parents and caretakers.
- **Online Coroner and forensic investigator training** is run by the Bureau of Family Health. The statewide training portal follows CDC guidelines to instruct coroners and forensic investigators on how to properly conduct a SUID investigation, leading to better surveillance of true SIDS and other deaths.
- **Statewide public education and outreach** is conducted by the Bureau of Family Health to promote healthy behaviors to reduce infant mortality. These efforts include safe sleep education and resources; the toll-free helpline, 1-800-251-BABY; and supporting websites.

### What recommendations were made to help prevent infant deaths in the future?

Increased and improved parental education was recommended by many CDRPs, which noted that parents needed to be informed of:

- the need to eliminate soft bedding, bumper pads and other objects from an infant's sleep environment;
- the need for attentive caregiving (i.e. not impaired in any way) while an infant is sleeping and for parents to check on their babies at regular intervals, regardless of whether or not they are moving or making noises;
- the need for smoke-free environments for all newborns; and
- the need to promote both placing an infant on his or her back rather than his or her tummy or side and to avoid sharing any sleep surface with an infant.

# Appendix D: Child Death Review

## A Snapshot of Reviewed Child Deaths among Children Aged 1-14 Years

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**Child Death Review Panels (CDRPs) reviewed 32.3% of eligible deaths among children 1-14 years old that occurred from 2012-2014 in Louisiana.<sup>5</sup>**

### Overview of Deaths Reviewed by CDRPs in Louisiana during 2012-2014

Natural deaths, accidental deaths, suicides and homicides were reviewed. The majority of deaths reviewed were determined to be preventable. Accidental deaths were the most frequently reviewed and those causes of death included motor vehicle accidents (MVAs), drowning, fatal weapon injuries, asphyxia, fire/burns, poisonings/overdoses and falls. The majority of cases reviewed were 1-4 years old.

### What recommendations were made to help prevent child deaths in the future?

- Tire wear should be included in vehicle inspections to reduce unsafe driving conditions for pedestrians and drivers.
- Public education related to the use of prescription drugs while driving was identified as an area needing improvement in Louisiana. Pharmacists should be encouraged to review driving precautions with individuals receiving prescription drugs that influence driving ability or to add a safety brochure to the prescription packets for such drugs.
- Seat belt laws with age and size limits for children riding in the front seat should be strictly enforced.
- Regulations on booster seat usage in Louisiana should be made to match national recommendations.
- Laws prohibiting all-terrain vehicle (ATV) use on public roads should be strictly enforced, laws requiring helmet use while on an ATV should be implemented, and ATV safety education should be delivered in schools and by wildlife and fishery organizations.
- Regulations and enforcement on the presence of barriers (e.g. fences, alarms and gates) and other methods used to prevent drownings should be improved.

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### What is being done in Louisiana?

Shreveport's Sheriff's Safety Town is a miniature town that allows children to practice safety skills learned within the classroom in a simulated setting. The program provides safety lessons on using or being in the presence of vehicles, bicycles, pedestrians, fire, guns, water and more. Since opening in 2008, over 33,000 children have visited Sheriff's Safety Town, resulting in a 22.2% increase in safety knowledge measured through pre- and post-test scores.<sup>8</sup>

Other efforts in Shreveport include child car seat inspections offered throughout the state, which can be located via [safercar.gov](http://safercar.gov), and the national seatbelt enforcement campaigns, Click It or Ticket and Buckle Up in Your Truck.

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Partners for Healthy Babies: [www.PartnersForHealthyBabies.org](http://www.PartnersForHealthyBabies.org)