UNEXPECTED CHILD DEATHS IN LOUISIANA, 2002-2007

THE LOUISIANA STATE CHILD DEATH REVIEW PANEL

2010

Six-Year Cumulative Panel Case Review Report

In memory of all those children who have died in Louisiana, we hope that the information within this report will encourage additional efforts of parents, local communities and state leaders to keep every child in Louisiana safe and healthy.

Disclaimer: These images do not depict or bear any resemblance to those children who have died in Louisiana.

2010 State Child Death Review Panel Report Submission To:

Governor, State of Louisiana

Health & Welfare Committee, Louisiana Senate

Health & Welfare Committee, Louisiana House of Representative

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Glossary of Terms

Accidental Death – A manner of death indicating unintentional trauma.

Asphyxia – Death caused by deprivation of oxygen.

Autopsy - The dissection of a dead body to determine the cause or nature of death or disease.

Coroner – A jurisdictional official, usually elected, whose duty is to determine the cause and manner of sudden, suspicious or violent deaths. May or may not be a physician.

Death Scene Investigation - An attempt by a person functioning in an official capacity to gather information at the site where a fatal illness, injury, or event occurred, for the purpose of determining the cause and circumstance of the death.

Injury – Any physical, chemical, thermal, or electrical force that results in harm or death.

Intentional Injury Death – Public health term for death caused by another with the intent/desire to cause harm.

Manner of Death – The official vital statistics classification, whether natural, suicide, homicide, accidental, or undetermined.

Medical Examiner – A physician official whose duty is to investigate sudden, suspicious, or violent death to determine the cause.

Natural Cause – Death resulting from inherent, existing conditions, including but not limited to birth defects/congenital anomalies, medical causes, and SIDS (sudden infant death syndrome).

Trauma – An injury or wound brought due to an outside force.

Trend – In child death surveillance, refers to the changes occurring in the number and distribution of child deaths.

Undetermined Death – Death where the manner of death is not clear.

Unsupervised Death – Death which data suggests that the decedent may not have had adequate supervision at the time of the fatal injury or death event.

Unintentional Death – Public health term for death from an act tat was not deliberate, willful, or planned.

EXECUTIVE SUMMARY

Every 20 minutes a baby in the U.S. dies before its first birthday.
Twice every minute a child is abused or neglected.

The death of a child is a tragedy. Efforts to understand factors and circumstances causing a death may help to prevent future deaths and/or injury of other children. Participation by many individuals and groups is needed to accurately identify contributing factors in child deaths. Louisiana Child Death Review (CDR) is a collaborative, multi-disciplinary process that continues to bring people together at a state or local level to share and discuss comprehensive information on the circumstances leading to the deaths of children and to respond with actions to prevent other deaths.

This 2010 report takes a six-year retrospective look at unexpected child deaths from 2002 through 2007 in Louisiana. Presented are key findings from Louisiana Vital Statistics 2002-2007 data analysis and from individual case reviews of unexpected child deaths of children ages 0 through 14 years performed by the State CDR Panel and nine Local CDR Teams from 2004 through 2009. The report examines aggregate patterns of injury deaths among children ages 0 through 14 years based on cause and manner of death to provide a broader understanding of these deaths and to identify trends that require systemic solutions. Also, highlighted in this report are State CDRP actions, which occurred in 2005-2010, in response to panel recommendations from case reviews (of child deaths from 2002-2007) and to CDRP operational needs during this timeframe.

Not every child death case was reviewed by the State and/or Local CDR Panel. Case selection for review in Louisiana is based on the manner and cause of death and the age of the child, according to the documentation on the death certificate. The age of the child for review is 0 through 14 years, and the cause of death must be unexpected, unclear, unexplained/undetermined, or of a suspicious circumstance. Child death case reviews were limited to the leading causes of unexpected deaths in the state, which were primarily unintentional injuries and sudden unexpected infant deaths (sudden infant death syndrome, accidental suffocation, undetermined causes). All sudden, unexpected deaths of infants (SUID) less than 12 months of age are reviewed at the state level by the SIDS medical director. Case findings are further discussed with the State CDRP and with the Office of Public Health's SIDS Risk Reduction and Safe Sleep Program. Case reviews are not performed on child deaths due to natural causes, suicides, or homicides.

The goal of reviewing unexpected child deaths is to inform policies, laws, regulations, and prevention activities that prevent future deaths. Therefore, this report also presents key Child Death Review Panel recommendations based on case review findings and vital statistics data analysis of unexpected deaths of children from 2002 through 2007 in Louisiana. Raising awareness, educating parents and communities, and enacting policies and laws designed to protect children can influence circumstances that lead to unexpected deaths, including fatal injuries, and prevent them from occurring.

Key Case Review Findings

From 2002-2007, 5,373 children aged 0 through 14 years died in Louisiana. Most infant deaths (65%) were due to natural causes, and the leading causes of death to infants aged 0 through 11 months were prematurity, followed by birth defects and Sudden Infant Death Syndrome (SIDS). Most child deaths were due to unintentional (67%) causes, and the leading causes of death to children aged 1 through 14 years were external/injury causes, followed by neoplasms, and diseases of the nervous system.

Of the 5,373 child deaths, **1,468 (27%) children aged 0 through 14 years died *unexpectedly* in Louisiana.** From 2002-2007, 71% (1,048) of the unexpected child deaths were due to injuries, and 29% (420) were due to sudden infant death syndrome (SIDS). The manner of death for more than half (58%) of the deaths was unintentional or "accidental". From combined years 2002-2004 to 2005-2007, data showed the following:

- The total number of unexpected child deaths decreased by 3.7%, primarily due to a decrease in injury deaths during same timeframe.
- Unintentional injury death rates decreased by 11%, primarily due to a decrease in deaths related to motor vehicle crashes, drowning, fires, and poisoning. However, the death rates due to accidental firearm-related injuries increased by 40%, and rates due to accidental suffocation were unchanged.
- Intentional injury death rates increased for both infants and children. Homicide rates increased by 80% among infants and by 22% among children ages 1-14 years. Also, the suicide rate among children ages 10-14 years doubled during this timeframe.

Unintentional injury deaths of children aged 0 through 14 years, including SIDS, have been the primary focus of Louisiana Child Death Review Panel case reviews since they are the single largest contributors to unexpected deaths among Louisiana children. From 2004-2007, there were 420 infant deaths due to SIDS, and of the 1,048 unexpected injury child deaths, 845 (81%) were due to unintentional causes. Louisiana Vital Statistics data and case review data showed the following:

Leading Unintentional Injury Deaths

- 320 children died from *motor vehicle*-related injuries.
  - Motor vehicle deaths were the leading cause of unintentional injury death to children ages 0-14yrs in Louisiana.
  - Most children were white (54%), males (57%), 10-14 years of age (36%), and automobile passengers in the back seat. Protective equipment was mostly not used correctly or not used/not present.
- 164 children died from *acute suffocation/strangulation.*
  - Asphyxia was the leading cause of injury death to infants less than age 12 months of age and the second leading cause of unintentional injury deaths of children ages 0 through 14 years.
  - Most children were black (56%), males (62%), under 5 years of age (91%). For infants, most (98%) were sleep-related and due to overlay (64%), and leading mechanism (2005-2007) for children was accidental hanging.

- 124 children died from ***drowning/submersion.***
  - Drowning was the third leading cause of unintentional injury death to children aged 0 through 14 years.
  - Most children were white (54%), males (73%), and less than age 5 years (59%). Deaths occurred in pools, open water, and bath tubs. Lack of supervision was documented in most of the cases, with distractions to supervision contributing to half of those cases. Few barriers to open water sources and pools were identified. Most were rescued by an adult, usually a parent.
- 118 children died from *injuries related to fires/burns.*
  - Fire/burns were the fourth leading cause of unintentional injury death to children ages 0 through 14 years.
  - Most children were black (78%), males (62%), less than 5 years of age (59%), who died of smoke inhalation, in a residential dwelling (single family home/mobile home), where the flame source was a space heater.
- 25 children died from *accidental firearm* injuries.
  - Louisiana rates were three to five times higher than US rates of respective timeframes.
  - Data was not aggregated by age group, race, or gender for firearm-related injury deaths since there were too few reported deaths make reliable comparisons across years.
- 19 children died from *accidental poisoning.*
  - Although the Louisiana child death rate due to poisoning decreased by 16% from 0.31 per 100,000 to 0.26 per 100,000 in 2007, the rates were still higher than the national rate across the same timeframe.
  - Data was not aggregated by age group, race, or gender for poisoning-related injury fatalities since there were too few reported deaths make reliable comparisons across years

Sudden Infant Death Syndrome

- SIDS was the third leading cause of all infant deaths (11%) and the leading cause of unexpected deaths of infants one (1) month to twelve (12) months of age.
- Louisiana SIDS rates were twice the US rates and SIDS rates for black infants were almost 1.5 times higher than those of white infants.
- Non-modifiable risk factors included males (60%), aged 2-6 months (63%), fall/winter months (53%) at time of death. Also, with a very high percentage of unknown risk due to lack of documentation in the investigative records, only 3% were born to young mother; 17% were premature; and 25% were exposed to tobacco smoke in utero.
- Modifiable risk factors reviewed had a very high percentage of unknown risk due to limited documentation in investigative reports/case review data. Based on the available information, modifiable risk factors included an unsafe sleep position (32% placed on side or stomach); co-sharing a sleep surface with at least one other person (34%); second hand cigarette smoke exposure (31%). Also, 44% of infants (2005-2007 only) were on a sleep surface with soft/loose bedding.
- Protective Factors reviewed had a very high percentage of unknown risk due to limited documentation in investigative reports/case review data. Based on the available information, only 7% infants were breastfeeding at the time of death or used a pacifier while asleep.

Key State CDRP Prevention Recommendations

For State Legislators/Elected Officials:

- *Motor Vehicle Deaths:*
  - Invest state funds in child passenger safety and motor vehicle safety for children.
  - Medical (including Louisiana Medicaid) and/or vehicle liability insurance providers should cover the cost of car/booster seats and bicycle helmets for children.
- *SIDS and Asphyxia (Suffocation/Strangulation) Deaths:*
  - Medical insurance providers (including Louisiana Medicaid) should cover the cost of portable cribs for infants who qualify based on defined criteria.
- *Drowning/Submersion Deaths:*
  - Ensure effective building codes regarding proper pool and pond enclosures are enacted.
- *Fire/Burns-Related Deaths*:
  - Ensure effective building/residential codes requiring installation of smoke detectors in new and existing housing and codes requiring hard-wired detectors in new housing are enacted.
- *Poisoning Deaths:*
  - Invest state funds in Louisiana Poison Control Center for culturally competent poison prevention public awareness campaigns.
- *Firearm Deaths:*
  - Ensure strict gun safety laws that protect children are enacted.

For State/ Local Agencies and Officials:

- *Motor Vehicle Deaths:*
  - Re-engineer roads, improve signage, and create crosswalks, especially around schools and playgrounds
  - Provide car seats that convert to booster seats for infants and children who receive Medicaid, along with a mandatory prenatal educational class on child passenger safety for pregnant women who receive Medicaid.
  - Agencies that transport children should have several staff that are nationally certified child passenger technicians.
  - Implement motor vehicle safety campaigns and media outreach.
  - Enforce current motor vehicle and bicycle safety laws.
- *SIDS and Asphyxia (Suffocation/Strangulation) Deaths:*
  - Provide portable cribs for infants who receive Medicaid, and all pregnant women who receive Medicaid should have a mandatory educational class on infant safe sleep.
  - Implement culturally competent infant safe sleep public education campaigns.
  - Require infant safe sleep as a mandatory health and safety training requirement for child care center licensing.

- *Drowning/Submersion Deaths:*
  - Ensure local enforcement of building codes regarding proper pool and pond enclosures.
  - Placement of signage near bodies of water to warn of possible water dangers.
  - Implement culturally competent water safety public awareness campaigns on the "layers of protection" for water safety, which include:
    - Adult supervision is critical at all times while children are at play near or in water to prevent drowning.
    - Barriers – closed/locked doors, fences, gates, pool alarms surrounding bodies of water – should be in place in case adult supervision is lacking,
    - CPR (cardio-pulmonary resuscitation) Classes and swimming lessons can save lives.
- *Fire/Burns-Related Deaths*:
  - Ensure enforcement of local ordinances regarding building/residential codes for the installation of smoke detectors and hard-wired detectors in residential dwellings, including rental units.
  - Support distribution of free or reduced-cost smoke alarms in low income neighborhoods.
  - Implement culturally competent fire safety public awareness campaigns.
  - Support the use of "Smoke Houses" by the fire departments to teach children how fires start and spread and how best to escape a burning house.
- *Poisoning Deaths:*
  - Support the Louisiana Poison Control Center's efforts and culturally competent poison prevention public awareness campaigns.
- *Firearm Deaths:*
  - Support the distribution of free or reduced-cost gun locks to caregivers of children who own firearms.
  - Support the implementation of culturally competent gun safety public awareness campaigns.

For Healthcare Professionals

- *All Injury Deaths:*
  - Provide injury prevention education and anticipatory guidance to expectant parents in childbirth/prenatal classes, to new parents in the hospitals, and to parents/caregivers during each well-baby visit.
- *SIDS and Asphyxia (Suffocation/Strangulation) Deaths:*
  - Require in-hospital assessments with parents to assess the safety of infants sleep environment education prior to discharge of the infant.
  - Provide and/or require parent education on infant safe sleep at childbirth/prenatal classes, in hospitals to expectant and new parents, and well-baby visits on bathtub safety for infants.

Note: General prevention recommendations for communities are listed under the corresponding causes of deaths in the *Louisiana Child Death Review Panel Case Review Findings and Recommendations* section of this report.

Key CDRP Activities

The most important reason to review unexpected child deaths is to understand the risk factors and circumstances surrounding these deaths in order to prevent other children from dying. Louisiana Child Death Review has provided a powerful, multi-disciplinary platform not only for case reviews of child deaths but also for being a catalyst for change in preventing future unexpected deaths of children in Louisiana. Highlighted below are State CDRP actions, which occurred in 2005-2010, in response to panel recommendations from case reviews (of child deaths from 2002-2007) and to CDRP operational needs during this timeframe. They illustrate how the State and Local Child Death Review Panels improved the efficiency and effectiveness of case reviews and how CDRP moved recommendations to primary prevention interventions. The CDRP actions were centered on the following areas: organizational practices, professional training, community education, and policy and legislation.

- Changing Organizational Practices

  Prior to 2008, the local CDR coordinators were 100% funded through the Maternal and Child Health (MCH) Title V Block Grant; hired locally within each of the public health regions through contracts negotiated and monitored by the OPH regional directors; and coordinated by the OPH Injury Research and Prevention Program because they also served as Injury Prevention Coordinators within their respective OPH regions. The local CDR Panel meetings and operations followed state CDR guidelines, but there was limited coordination between the local panels by the IRPP program. In 2008, Louisiana Child Death Review Program was restructured to enhance coordination of the State and Local Child Death Review Panels. The Louisiana CDR *Program* Coordinator, which is within the Department of Health and Hospitals' Office of Public Health (OPH), manages the entire Louisiana CDRP process by providing oversight and coordination of the State CDR Panel and the network of nine (9) Local CDR Panels within the OPH regions. The State CDR *Panel* coordinator manages the review process and facilitates the meetings for the state panel only, and each of the Local CDR Panel coordinators provides the same services for their respective OPH regional panels. A multi-disciplinary group of public health professionals, which consists of the SIDS and infant safe sleep health educator, SIDS medical director, a child mental health specialist, the Louisiana Safe Kids executive director, and an injury prevention epidemiologist, assist the Louisiana CDR Program with program planning, policy and program improvement; and case review data abstraction, management and analysis. An epidemiologist from Louisiana Vital Statistics assists with the selection of death certificates, and their submission to the CDR Program, for case reviews. The Louisiana Office of Public Health's Injury Research and Prevention Program's (IRPP) epidemiologist manage the Child Death Review case reporting database, examines the data, and prepares an annual report of findings.

  The Louisiana CDR Program provides home visitation services to families who lost an infant to SIDS. Prior to 2008, the home visits were performed by public health nurses and/or social workers and were primarily used to gather additional information related to the death of the infant because many infant death investigative reports contained incomplete information or were never received. To improve delivery of services to children and families who have lost an infant suddenly and unexpectedly, the home visitation service was changed to a bereavement support only visit in 2008.

This new home visitation service delivery model was consistent with the model recommended by HRSA-MCHB's SIDS & Infant Death Program for home visitations. OPH approved the change in nursing policy and procedures to reflect the changes to the home visitation service, trainings have been held, and the new service has been implemented. Also, a bereavement card was designed specifically for the Office of Public Health, and it was mailed out to the families in advance of a visit or if they refused a home visit. The card contained a sympathy message from OPH and a list of bereavement support resources that the families could utilize to help them through their time of grief. Families who lost an infant suddenly and unexpectedly from to SIDS or undetermined received home visits that were still being provided by a public health nurse or social worker. Children's Bureau's Project last provided the bereavement home visits in New Orleans and Jefferson Parishes only.

To better understand how and why children die so that effective preventive actions can be taken to prevent other deaths, Louisiana CDR adopted a CDC-revised SUIDI forms for death scene investigation reporting and a National Center for Child Death Review-revised case review reporting form for use by the CDR Panel coordinators. In 2006, to improve the investigation and reporting of sudden, unexpected infant deaths (SUID), CDC released the Sudden Unexplained Infant Death Investigation (SUIDI) reporting form for state and local use in infant death scene investigations in 2006. By 2007, use of this form for submission of findings from Louisiana death scene investigations of unexpected infant deaths to Louisiana CDR was required, especially for reimbursement considerations. In 2008, the State and Local CDR Panel coordinators, CDR staff, and several public health epidemiologists were trained by the Executive Director of the National Center for Child Death Review on the use of their new web-based reporting system developed by the National Center for Child Death Review. Users of this system can enter their child death case report data so that findings can be tabulated at the local, stat, and national level. Use of the hard copy has been implemented and required for use by the panel coordinators for case review documentation since the training in 2008. Now that there are local CDR Panel coordinators in each region and panel meetings are being held regularly by the local panels, the web-based system will be implemented in Louisiana within the next four to six months.

- <u>Professional Trainings to Improve Investigations of Child Deaths</u>

A 5-member team from Louisiana consisting of a medical examiner, a law enforcement officer, the medical director of the SIDS Program's (who was also a member of the State CDR Panel), and two death scene investigators attended the Center for Disease Control and Prevention's National SUIDI Training Academy in 2006. This train-the-trainer course provided instruction on how conduct a thorough infant death investigation using recommended practices. The training also demonstrated how to comprehensively report scene investigation data to the pathologist conducting the autopsy and determining the cause and manner of death. Trainings have been held for many investigative teams within Louisiana by one or both death scene investigators who attended this training.

To improve communications and linkages among local and state agencies and enhance coordination of efforts among investigators of child deaths, Louisiana Child Death Review, in collaboration with the National Center for Child Death Review, provided a statewide training on the investigation of sudden, unexplained infant and child deaths in 2008. The training highlighted, child growth and development, interviewing and investigative skills training, and training on performing scene

recreation using a doll. A team of trainers from the National Center trained over 100 professionals who engage in the investigation and/or review of child deaths in Louisiana, which included physicians, nurses, public health and child protective services social workers , emergency medical technicians, law enforcement, firefighters, child death review panel members, coordinators, and staff; and feto-infant mortality review (FIMR) coordinators. This training greatly increased the completion and submission of case reports to CDR, and improved communication with child protective services and their involvement with State and local panels.

- Influencing Policy and Legislation

In October 2009, the first Child Safety Needs Assessment for Louisiana Child Death Review and the MCH Title V Block Grant was performed in Louisiana. The needs assessment survey and presentation was given at the State and Local Child Death Review Panel meetings. The local CDR Panel coordinators facilitated the meeting of the panels and local stakeholder to participate in the needs assessment survey response process. Stakeholders completed the survey to gauge perceptions of injury prevention and child safety priority areas, resource and services, and strategies to address the priority areas. When the survey was completed, current state and regional injury data was presented. A post prioritization assessment was conducted at the end of the presentation and discussion to gauge if perceptions of priority areas changed, followed by perceptions of resources/services present and level of availability in their region. Stakeholder responses were tallied for each safety topic for the age group of 0-14yrs of age. The Child Health subgroup agreed to combine similar topic areas and assigned a new tally number, based on the average of the combined topic areas. The 10 safety topics that received the highest tallies and considered most important were compared with high-ranking infant and child safety topics from the Consumer survey and with existing child safety data that expressed high, increasing, and/or unchanging rates. Gaps, resource availability, and feasibility of impacting a priority area with existing capacity were discussed for each of these safety topics. Based on this process, the top priority areas for child safety were motor vehicle crashes, accidental suffocation, drowning/fire (a tie), and accidental firearms. For intentional injuries, child maltreatment was the top priority area to address. In 2010, the results of this Child Safety Needs Assessment drove the 5-year strategic planning for the Maternal and Child Health Program in the areas of child safety/injury prevention program at the state and local levels.

Key State CDRP Operational Recommendations

To State Legislators/Elected Officials:

The Panel recommends that the following changes be made to the State CDRP enabling legislation (R.S. 40:2019):

- The age of the child for review by the State CDRP is "fourteen years of age and below". However, in several sections of the state's current CDR legislation, the age of review is referenced as "*below* the age of fourteen", which is incorrect. Therefore, the primary requested legislative action is to change the incorrect age references to either "below the age of fifteen years" or "fourteen years of age and below".
- The State CDRP requests legislative action to *increase* the age of review from "fourteen years of age and below" to "seventeen years of age and below". The National Center for Child Death Review recommends that all states review the deaths of children to at least age 18 years. Louisiana and Alaska are the only two states with the maximum age of child death reviews of 14 years. Most states (39 of 50) have the maximum age of 17 years for child death reviews
- The State CDRP requests that state funding is maintained at or above $120,000 to support the operations of the State CDRP. The funds will continue to be used to maintain a full time State Child Death Review Panel Coordinator (~$60,000 salary and related benefits) and ($60,000) to reimburse coroners who submit complete death scene investigations on the standardized SUIDI reporting form and who perform comprehensive autopsies (microscopic exam and toxicology screen included) on all infants who die suddenly and unexpectedly in Louisiana. The cost to run the additional tests is at least $1,500. The current CDR reimbursement rate is $500 per complete autopsy and $100 per complete death scene investigation submitted on the approved SUIDI case reporting form. Such coroner reimbursement practices have yielded more complete investigative information to better understand how and why children die unexpectedly. Funding will also be used to provide additional investigative trainings to coroners and their staff and to State and Local CDRP members and coordinators.

To Coroners:

The State CDRP recommends that all coroners and their staff who investigate sudden unexpected infant and child deaths are trained on the current infant death investigation foundation skills needed to successfully perform an infant death investigation, on witness interviewing, on how to conduct a doll reenactment, and on infant pre- and post-autopsy reporting based on current recommended practices. These trainings can be requested through the Louisiana CDR Program, and training information is also available on the CDC website: http://www.cdc.gov/SIDS/TrainingMaterial.htm

To State/Local Agencies and Officials:

The State CDRP recommends that state and local agencies integrated injury prevention and child safety into their current program. Agencies should also support and/or implement statewide public awareness campaigns on child safety and injury prevention topics, such as: promotion of infant safe sleeping environments to reduce the risks of SIDS and suffocation deaths, child safety in and around cars (including pedestrian and bike safety), supervision of children around water and the layers of protection to prevent drowning, fire hazards and the importance of having an escape plan, and gun safety in the home. Agencies can support the distribution of car seats and booster seats for children, bicycle helmets, and portable cribs for infants. The State CDRP also encourages agency participation on the panels.

To Health Professionals:

The State CDRP encourages pediatricians and other family health providers to participate in Local CDRP meetings. Health professionals can provide CDRP teams with expert opinions on medical evidence in a child death and can provide medical information needed for a successful prevention campaign. Also encouraged is the availability of bereavement support services in the hospital emergency rooms for families who have lost an infant or child suddenly and unexpectedly. Pediatricians and family health providers should provide anticipatory guidance related to child safety and injury prevention at every well-child visit and in all birthing classes.

STATE CHILD DEATH REVIEW PANEL OPERATIONS & RECOMMENDATIONS

HISTORY OF LOUISIANA STATE CHILD DEATH REVIEW

The Louisiana State Child Death Review Panel (CDRP) was established in 1992 by the Louisiana Legislature. This multi-disciplinary team of 10 professionals was tasked with collecting and reviewing reports relating to the investigation of unexpected deaths of children under the age of seven to better understand how and why children die. Review findings are also used to take action to prevent other deaths and to improve health and safety of Louisiana's children. In the Regular Session of the Legislature in 1995**,** the age of the children included in the review was increased to include all deaths of children age nine years and below beginning on August 15, 1995. Louisiana legislation R.S 40:2019 (Appendix C), passed in the 1999 Louisiana Legislative Regular Session, increased the age to fourteen years and below and required that all unexpected deaths of children under the age of 15 years, including SIDS (sudden infant death syndrome), be investigated by a multi-disciplinary panel of 25 members of Louisiana state and non-governmental agencies and organizations with an interest in the prevention, investigation, and/or follow-up of child deaths.

In 2001, Local Child Death Review teams were started in each of Louisiana's nine Office of Public Health (OPH) Regions. Core panel members include representatives from the following agencies or professions: law enforcement, child protective services, District Attorney/prosecutor, medical examiner/coroner, public health, pediatrician or other family health provider, and emergency medical services. The local panels are tasked with the following:

1. To identify risk factors for injury or death of children
2. To share information among agencies which investigate child death and/or provides services to children and families
3. To improve local investigations of unexpected/unexplained child deaths by participating agencies
4. To improve existing services and systems for children and/or identify gaps in services at the local level.
5. To identify trends relevant to unexpected and/or unexplained child injury and death
6. To educate the local public about the causes of child injury and death and how to prevent such tragedies

Figure 1: Local Child Death Review Teams and 9 Respective Public Health Regions

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

The Purpose of the State CDRP is to perform multi-disciplinary, multi-agency reviews of unexpected, unintentional child deaths of children under 15 years of age to develop a greater understanding of the causes of child deaths, of the methods for preventing such deaths, and of the gaps in services and, thereby, reduce the incidence of injury and death to infants and children.

The Four Main Goals of the State CDRP are to:

1. Review the investigation and classification of each child death in Louisiana.
2. Describe unexpected child deaths in Louisiana.
3. Identify the risk factors of child deaths.
4. Disseminate the findings of the Panel to agencies and groups that can use this information to prevent future deaths.

The Objectives of the State CDRP are to:

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

The Operating Principles of Louisiana Child Death Review are to:

1. The death of a child is a community responsibility.
2. A child's death is a sentinel event that should urge communities to identify other children at risk for illness or injury
3. A death review requires multi-disciplinary participation from the community.
4. A review of case information should be comprehensive and broad.
5. A review should lead to an understanding of risk factors.
6. A review should focus on prevention and should lead to effective recommendations and actions to prevent deaths and to keep children healthy, safe, and protected.

The Louisiana State Child Death Review Panel (CDRP) Members include:

1. The state health officer or his designee.
2. The secretary of the Department of Health and Hospitals or his designee.
3. The secretary of the Department of Social Services or his designee.
4. The superintendent of the office of state police or his designee.
5. The state registrar of vital records in the office of public health or his designee.
6. The attorney general or his designee.
7. A member of the Senate appointed by the president of the Senate.
8. A member of the House of Representatives appointed by the speaker of the House
9. The commissioner of the Department of Insurance or his designee.
10. The executive director of the Highway Safety Commission of the Department of Public Safety and Corrections or his designee.
11. The state fire marshal or his designee.
12. A representative of the injury research and prevention section of the office of public health appointed by the assistant secretary of the office of public health.
13. The executive director of the Louisiana Maternal and Child Health Coalition.
14. A district attorney appointed by the Louisiana District Attorneys Association.
15. A sheriff appointed by the Louisiana Sheriff's Association.
16. A police chief appointed by the Louisiana Association of Chiefs of Police.
17. A forensic pathologist certified by the American Board of Pathology and licensed to practice medicine in the state appointed by the chairman of the Louisiana State Child Death Review Panel subject to Senate confirmation.
18. A pathologist experienced in pediatrics appointed by the Louisiana Pathology Society.
19. A coroner appointed by the president of the Louisiana Coroner's Association.
20. ***Six persons*** appointed by the governor, subject to Senate confirmation, for a term of three years as follows:
    (a) A health professional with expertise in Sudden Infant Death Syndrome appointed from a list of three names submitted by the Louisiana State Medical Society.
    (b) A pediatrician with experience in diagnosing and treating child abuse and neglect appointed from a list of three names submitted by the state chapter of the American Academy of Pediatrics.
    (c) Four citizens from the state at large who represent different geographic areas of the state.

STATE CDRP PROCESS

Case Selection and Review

Louisiana Child Death Review (CDR) receives death certificates on all children less than 15 years of age. Investigative reports, including autopsies and death scene investigative reports, are requested for case reviews of the unexpected deaths. After complete review of each case, the Panel may revise the "cause" and "manner" of death. Therefore, case review data may differ from other documents published by the Department of Health and Hospitals which use vital statistics data only. Prevention recommendations are made by the State and/or Local CDRP's, and the recommendations and case review findings are then disseminated to agencies and groups that can use this information to prevent future deaths.

Not every child death case is reviewed by the State and/or Local CDR Panels. The State CDRP reviews certain types of deaths or a representative sample of cases. Case selection for review in Louisiana is based on the age of the child and on the manner and cause of death, according to the documentation on the death certificate. The age of the child for review is 0 through 14 years, and the cause of death must be unexpected, unclear, unexplained/undetermined, or of a suspicious circumstance. Child death case reviews were limited to the leading causes of unexpected deaths in the state, which were primarily unintentional injuries and sudden unexpected infant deaths (sudden infant death syndrome, accidental suffocation, undetermined causes). All sudden, unexpected deaths of infants (SUID) less than 12 months of age are reviewed at the state level by the SIDS medical director. Case findings are further discussed with the State CDRP and with the Office of Public Health's SIDS Risk Reduction and Safe Sleep Program. Case reviews are not performed on child deaths due to natural causes, suicides, homicides; child deaths under investigation by law enforcement; or pending/active criminal prosecution

The State and Local CDR Panels do not act as investigative bodies. Reviews are retrospective, which means that they take place after the investigation is completed and case information is readily available. Their purpose is to enhance the knowledge base of the mandated investigators and to evaluate the potential service and prevention interventions for the family and community. Law enforcement is responsible for investigating the deaths of children, and determining if crimes have occurred. Their role on the panel is to provide information on the case status and investigative information collected of the death scene; to provide expertise on law enforcement practices related to death scene investigations; and to act as liaison to other law enforcement agencies. Child Protective Services (CPS) is responsible for investigating allegations of child abuse or neglect and for recommending or providing services to children and families when abuse or neglect is alleged or confirmed. Their role on the panel is to provide information on child deaths under review, and information may be on the case status and investigation summaries; socio-economic factors that might (have) influence(d) family dynamics; other children in the home; and previous reports of neglect or abuse in the care of an alleged perpetrator, along with the disposition of those reports.

Data Sources and Analysis

Three primary data sources were used to formulate this report and to identify deaths among children aged 14 and under.

- *Death Certificates*: The death certificates are maintained by the Louisiana Vital Statistics Program within the Office of Public Health. Data from the death certificates provides information on the demographic characteristics of the child deaths such as: age, race, gender, date of death, cause of death, manner and parish and region where the injury occurred. The International Classification of Diseases (ICD) Tenth Revision ICD-10 coding structure and rules are used to determine and classify the underlying causes of death. The ICD-10 codes used for classification of Vital Statistics data in this report were selected to most closely correspond with the causes of death indicated on the CDR Case Report Tool and may not match the codes used for some causes of death in other reports or data systems.
- *Child Death Review Case Reports*: The CDR case report used to collect data on child deaths in Louisiana is the standardized data collection form provided by the National Center for Child Death Review. The case reports are completed by both state and local panel members. The data is then entered into the CDRP database by the State CDRP Coordinator. This data provides details on the circumstances surrounding child deaths. All deaths included in this report occurred in calendar years 2002 through 2007.
- *Web-based Injury Statistics Query and Reporting Systems (WISQARS)*: This is an interactive database system created by Centers for Disease Control and Prevention (National Center of Injury Prevention and Control). It provides customized reports of injury related data for United States.

Data analysis was performed using the recommendations made by the Centers for Disease Control and Prevention - National Center of Health Statistics (NCHS) and the National Child Death Review Program. Statistical software SAS version 9.0 and SPSS version 11.0 were used to analyze vital statistics data, and to compute the following: Number, Percent, Crude Rates, Age-adjusted rates. The crude and age-adjusted death rates in children aged 14 and under were calculated using population data from the Bureau of the US Census. Calculations of rates and trends presented in this report were performed on vital statistics data only. Maps were created using GIS software. (Maptitude version 4.6). The CDRP data was entered into EPI-info database (version 2002) and exported into SPSS version 11.0 to carry out data linkage and further analysis. Rates were not calculated on CDR data because not all child deaths were reviewed. Instead of rates, CDR statistics were reported as a proportion of the total reviews.

All data sources were subject to sufficient sample size in analyses. When possible, data were combined across years and/or only provided when sufficient numbers of events were available. Rates to analyze trends were calculated as combined years when the data sizes for each of the reported years were small. Also, case review findings presented in some areas of the report were descriptive due to the small number of reviews and/or because the actual percentages calculated from previously analyzed case review data were inaccessible when the report was prepared.

CDRP Confidentiality

In accordance with the provisions in the State CDRP legislation and in accordance with the Health Insurance Portability and Accountability Act (HIPAA), information related to Louisiana CDR is confidential. All records obtained by the state panel or any local or regional panel or its agent, as well as the results of any child death investigation report, shall be confidential and shall not be available for subpoena nor shall such information be disclosed, discoverable, or compelled to be produced in any civil, criminal, administrative, or other proceeding nor shall such records be deemed admissible as evidence in any civil, criminal, administrative, or other tribunal or court for any reason. The furnishing of confidential information, documents, and reports in accordance with the State CDRP legislation by any person, agency, or entity furnishing such information, documents, and reports shall not expose the person, agency, or entity to liability and shall not be considered a violation of any privileged or confidential relationship, provided the participant has acted in good faith in the reporting as required in this Section. Also, the state panel can release a report of statistical compilations relating to unexpected child deaths of infants and children fourteen years of age or below which do not identify individual cases or individual physicians, hospitals, clinics, or other health care providers. State and Local CDR Panel members and staff sign a confidentiality agreement before sharing information in a panel meeting. The HIPAA Privacy Rule protects the privacy and security of individual health data provided to the panes and establishes accountability and penalties for failing to use the rule to protect personal health information privacy. In order to protect confidentiality, data submitted in this report contain no identifying information.

STATE CDRP ACTIVITY HIGHLIGHTS & CHALLENGES *(2005-2010)*

Activity Highlights

The most important reason to review unexpected child deaths is to understand the risk factors and circumstances surrounding these deaths in order to prevent other children from dying. Louisiana Child Death Review has provided a powerful, multi-disciplinary platform not only for case reviews of child deaths but also for being a catalyst for change in preventing future unexpected deaths of children in Louisiana. Highlighted below are State CDRP actions, which occurred in 2005-2010, in response to panel recommendations from case reviews (of child deaths from 2002-2007) and CDRP operational needs during this timeframe. They illustrate how the State and Local Child Death Review Panels improved the efficiency and effectiveness of case reviews and how CDRP moved recommendations to primary prevention interventions. The CDRP actions were centered on the following areas: organizational practices, professional training, community education, and policy and legislation.

- Changing Organizational Practices

  Prior to 2008, the local CDR coordinators were 100% funded through the Maternal and Child Health (MCH) Title V Block Grant; hired locally within each of the public health regions through contracts negotiated and monitored by the OPH regional directors; and coordinated by the OPH Injury Research and Prevention Program because they also served as Injury Prevention Coordinators within their respective OPH regions. The local CDR Panel meetings and operations followed state CDR guidelines, but there was limited coordination between the local panels by the IRPP program. In 2008, Louisiana Child Death Review Program was restructured to enhance coordination of the State and Local Child Death Review Panels. The Louisiana CDR *Program* Coordinator, which is within the Department of Health and Hospitals' Office of Public Health (OPH), manages the entire Louisiana CDRP process by providing oversight and coordination of the State CDR Panel and the network of nine (9) Local CDR Panels within the OPH regions. The State CDR *Panel* coordinator manages the review process and facilitates the meetings for the state panel only, and each of the Local CDR Panel coordinators provides the same services for their respective OPH regional panels. A multi-disciplinary group of public health professionals, which consists of the SIDS and infant safe sleep health educator, SIDS medical director, a child mental health specialist, the Louisiana Safe Kids executive director, and an injury prevention epidemiologist, assist the Louisiana CDR Program with program planning, policy and program improvement; and case review data abstraction, management and analysis. An epidemiologist from Louisiana Vital Statistics assists with the selection of death certificates, and their submission to the CDR Program, for case reviews. The Louisiana Office of Public Health's Injury Research and Prevention Program's (IRPP) epidemiologist manage the Child Death Review case reporting database, examines the data, and prepares an annual report of findings.

  The Louisiana CDR Program provides home visitation services to families who lost an infant to SIDS. Prior to 2008, the home visits were performed by public health nurses and/or social workers and were primarily used to gather additional information related to the death of the infant because many infant death investigative reports contained incomplete information or were never received. To improve delivery of services to children and families who have lost an infant suddenly and

unexpectedly, the home visitation service was changed to a bereavement support only visit in 2008. This new home visitation service delivery model was consistent with the model recommended by HRSA-MCHB's SIDS & Infant Death Program for home visitations. OPH approved the change in nursing policy and procedures to reflect the changes to the home visitation service, trainings have been held, and the new service has been implemented. Also, a bereavement card was designed specifically for the Office of Public Health, and it was mailed out to the families in advance of a visit or if they refused a home visit. The card contained a sympathy message from OPH and a list of bereavement support resources that the families could utilize to help them through their time of grief. Families who lost an infant suddenly and unexpectedly from to SIDS or undetermined received home visits that were still being provided by a public health nurse or social worker. Children's Bureau's Project last provided the bereavement home visits in New Orleans and Jefferson Parishes only.

To better understand how and why children die so that effective preventive actions can be taken to prevent other deaths, Louisiana CDR adopted a CDC-revised SUIDI forms for death scene investigation reporting and a National Center for Child Death Review-revised case review reporting form for use by the CDR Panel coordinators. In 2006, to improve the investigation and reporting of sudden, unexpected infant deaths (SUID), CDC released the Sudden Unexplained Infant Death Investigation (SUIDI) reporting form for state and local use in infant death scene investigations in 2006. By 2007, use of this form for submission of findings from Louisiana death scene investigations of unexpected infant deaths to Louisiana CDR was required, especially for reimbursement considerations. In 2008, the State and Local CDR Panel coordinators, CDR staff, and several public health epidemiologists were trained by the Executive Director of the National Center for Child Death Review on the use of their new web-based reporting system developed by the National Center for Child Death Review. Users of this system can enter their child death case report data so that findings can be tabulated at the local, stat, and national level. Use of the hard copy has been implemented and required for use by the panel coordinators for case review documentation since the training in 2008. Now that there are local CDR Panel coordinators in each region and panel meetings are being held regularly by the local panels, the web-based system will be implemented in Louisiana within the next four to six months.

- <u>Professional Trainings to Improve Investigations of Child Deaths</u>

A 5-member team from Louisiana consisting of a medical examiner, a law enforcement officer, the medical director of the SIDS Program's (who was also a member of the State CDR Panel), and two death scene investigators attended the Center for Disease Control and Prevention's National SUIDI Training Academy in 2006. This train-the-trainer course provided instruction on how conduct a thorough infant death investigation using recommended practices. The training also demonstrated how to comprehensively report scene investigation data to the pathologist conducting the autopsy and determining the cause and manner of death. Trainings have been held for many investigative teams within Louisiana by one or both death scene investigators who attended this training.

To improve communications and linkages among local and state agencies and enhance coordination of efforts among investigators of child deaths, Louisiana Child Death Review, in collaboration with the National Center for Child Death Review, provided a statewide training on the investigation of sudden, unexplained infant and child deaths in 2008. The training highlighted, child growth and

development, interviewing and investigative skills training, and training on performing scene recreation using a doll. A team of trainers from the National Center trained over 100 professsionals who engage in the investigation and/or review of child deaths in Louisiana, which included physicians, nurses, public health and child protective services social workers , emergency medical technicians, law enforcement, firefighters, child death review panel members, coordinators, and staff; and feto-infant mortality review (FIMR) coordinators. This training greatly increased the completion and submission of case reports to CDR, and improved communication with child protective services and their involvement with State and local panels.

- Influencing Policy and Legislation

  In October 2009, the first Child Safety Needs Assessment for Louisiana Child Death Review and the MCH Title V Block Grant was performed in Louisiana. The needs assessment survey and presentation was given at the State and Local Child Death Review Panel meetings. The local CDR Panel coordinators facilitated the meeting of the panels and local stakeholder to participate in the needs assessment survey response process. Stakeholders completed the survey to gauge perceptions of injury prevention and child safety priority areas, resource and services, and strategies to address the priority areas. When the survey was completed, current state and regional injury data was presented. A post prioritization assessment was conducted at the end of the presentation and discussion to gauge if perceptions of priority areas changed, followed by perceptions of resources/services present and level of availability in their region. Stakeholder responses were tallied for each safety topic for the age group of 0-14yrs of age. The Child Health subgroup agreed to combine similar topic areas and assigned a new tally number, based on the average of the combined topic areas. The 10 safety topics that received the highest tallies and considered most important were compared with high-ranking infant and child safety topics from the Consumer survey and with existing child safety data that expressed high, increasing, and/or unchanging rates. Gaps, resource availability, and feasibility of impacting a priority area with existing capacity were discussed for each of these safety topics. Based on this process, the top priority areas for child safety were motor vehicle crashes, accidental suffocation, drowning/fire (a tie), and accidental firearms. For intentional injuries, child maltreatment was the top priority area to address. In 2010, the results of this Child Safety Needs Assessment drove the 5-year strategic planning for the Maternal and Child Health Program in the areas of child safety/injury prevention program at the state and local levels.

CDRP Challenges

The State CDRP has experienced challenges which limited its capacity to efficiently perform case reviews and report findings and to effectively formulate prevention recommendations. Outlined below are some of the challenges as they relate to the 4 main goals of the State CDRP.

Goal 1: Review the investigation and classification of each child death in Louisiana.

Staffing

Since 2005, there have been five different State CDR Panel Coordinators (one retirement), and three different SIDS medical directors who performed the state-level SIDS/SUID case reviews. There have been two different State CDR Program Coordinators, primarily due to the retirement of the person in this

position in September 2005, and the current State CDR Program coordinator has been in place since September 2005. Also, five of nine local CDR Panels have had at least two different coordinators since 2005. However, three of the local panels have retained their original panel coordinators since 2001, which is when the local panels were implemented. The most commonly expressed reasons by former staff for leaving the position were the stressful/depressing nature of the subject matter of child deaths, personal/medical reasons, and career move. Much work has been done to recruit and retain local CDR Panel coordinators, and Louisiana now has a coordinator for in place for each of the nine OPH regions.

Untimely receipt of death certificates from Vital Record, though improved significantly, resulted in delayed case reviews by the State and/or local CDR Panels. Delays in submission of death certificates to Louisiana CDR were due to staffing shortage and a 6-month death certificate "closeout period beyond the end of a calendar year. Also, priority processing of death certificates from Hurricane Katrina also contributed to the delay. As a result, case reviews and panel recommendations occurred almost a year after the deaths. However, over the last year, the death certificates have been received within 2-4 months of the dates of death. Some of the cases reviewed may not have been brought before a panel until the year 2009. Some death certificates were received with "Pending Investigation", which delayed the Case reviews were delayed or not performed at all on those death certificates received as "Pending Investigation".

Panel Meetings

Hurricanes Katrina and Rita devastated the southeastern and southwestern parts of the state, respectively, in August and September 2005. State and Local Panel members had prioritized duties related to post-storm response and recovery. Therefore, State CDRP meetings were placed on hold until late 2006. Local CDRP meetings were also postponed during this time, but some panel meetings did occur in north Louisiana. Also, it took about 2 years to fill the local CDR Panel coordinator positions in two of the heavily storm-impacted OPH regions of the state.

Multiple levels of oversight of local CDRP's, along with different levels of competing priorities, resulted in few local panel meetings being held. Prior to 2008, the local CDR coordinators were 100% funded through the Maternal and Child Health (MCH) Title V Block Grant; hired locally within each of the public health regions through contracts negotiated and monitored by the OPH regional directors; and coordinated by the OPH Injury Research and Prevention Program because they also served as Injury Prevention Coordinators within their respective OPH regions. The local CDR Panel meetings and operations followed state CDR guidelines, but there was limited coordination between the local panels by the IRPP program. Local panel meetings were held consistently in north Louisiana because a tri-regional CDR Panel coordinator was still in place (from a previous CDRP operational model) to coordinate and facilitate panel meetings. Since the Local CDR Panel coordinators also served as the regional Injury Prevention Coordinators (now called MCH Child Safety Coordinators) within their respective panel regions, their priority was primarily to coordinate and/or implement childhood injury prevention efforts locally rather than on holding CDRP meetings. Therefore, meetings were held consistently in 3 regions (north LA), sporadically in several OPH regions, and/or not held at all in a few regions or when the coordinator positions were vacant.

Goal 2: Describe unexpected child deaths in Louisiana.

The availability of finalized vital statistics data has continued to lag behind CDRP reporting year. The most current finalized data from Vital Records available for inclusion in this report was 2007 child deaths. There is a 6-month period beyond the end of a calendar year to "closeout" death certificates, which automatically outdates the availability of vital statistics data for reporting for a given year by 18 months. Death certificates that were filed late and/or revised were received during this 6-month period. Also, there were many deaths where both the cause of death and contributing medical conditions were listed on the death certificate as the "cause of death". This practice made it difficult to identify the actual cause of death so that the correct ICD-10 code could be assigned. Also, some death certificates had SIDS and another medical condition, such as sepsis or pneumonia, listed as the causes of death. Some of these were coded as SIDS and some had the medical condition coded as the cause of death, which made it challenging to interpret SIDS vital statistics data.

Goal 3: Identify the risk factors of child deaths.

Case Reporting to CDR Panels

Case reviews are based upon information contained within reports from such sources as coroners, law enforcement, first responders, fire departments, healthcare providers, and child protective services. Autopsy findings should be reported to Louisiana Child Death Review and/or the respective regional public health offices where the death occurred within three days of the conclusion of the death investigation. A copy of the death investigation report, or any portion thereof, including law enforcement, coroner, fire department, and medical providers, or any other information relative to the death investigation should be provided to the state panel within thirty days from the date the state panel requests such information. Many times, some or all the investigative reports needed to perform a comprehensive case review were missing. Lack of information greatly hindered the Panel in using these data to develop interventions to prevent similar deaths in the future. However, over the last year, more death scene investigators of infant deaths are using the nationally standardized SUIDI Case Reporting form and are submitting them, along with complete autopsies, to the State CDRP coordinator in a more timely fashion.

- Death Scene Investigations (DSI's) Reports

  A death can be accurately classified only if it is investigated thoroughly. The quality of a death scene investigation determines whether or not an autopsy or other types of investigations are necessary to be sure that the apparent cause of death is the true cause of death. A child death was investigated by the parish Coroner's office or by law enforcement agencies. Death investigations varied greatly in their completeness and quality due to limited availability of resources and/or level of expertise or experience needed to perform thorough investigations of infants and children who die suddenly and unexpectedly. Some improvement with investigative was seen with the implementation of the standardized investigative case reporting form for sudden unexpected infant deaths (SUID) from the National Center for Child Death Review. In many instances, death scene investigation reports were not available for use during case reviews because they were never submitted to Louisiana CDR, even upon request.

- Autopsy Reports

  A complete autopsy report for Louisiana CDR consists of the final cause of death, a summary of case findings and the final cause of death as well as documented findings from external, internal, and microscopic exams, blood and/or urine toxicology testing. In many instances, autopsy reports were not available for use during case reviews because they were never submitted to Louisiana CDR, even upon request. Many of the autopsy reports received were most commonly missing the microscopic exam and/or toxicology testing results.

Case Review Database

Missing information in report files have resulted in a less robust analysis of the data's commonalities, trends and patterns. Certain data was difficult to capture from the investigative reports because of inconsistent and/or missing documentation. The sudden unexpected infant death investigation (SUIDI) form was also revised, which resulted in reporting inconsistencies. Also, the CDR Panels were inconsistent in their reporting of information captured during case reviews. Revisions were made by the National Center for CDR to the CDRP case reporting template that was used to capture information from panel case reviews. Also, sections in the case review reporting form were unanswered in many cases rather than marked as "unknown" or were unanswered because information was not thought to be relevant, rather than marked as "not applicable". Frequently, the narrative and/or comments from reviews were very brief and did not clearly spell out the committee's rationale for conclusions or were not provided. Only some of the local CDRP case review findings were entered into the state CDRP database and included in the reports because not every active team submitted completed reviews.

Goal 4: Disseminate the findings of the Panel to agencies and groups that can use this information to prevent future deaths.

The Louisiana Office of Public Health's Injury Research and Prevention Program's (IRPP) epidemiologists manage the Child Death Review Surveillance database. They are also responsible for preparing the annual CDRP reports. However, the last annual report submitted to the legislature was in 2004. Due to Hurricanes Katrina and Rita, neither the presentation nor submission of the 2005 CDRP report to the Louisiana Legislature occurred. The State CDRP did not reconvene until December 2006, with new State CDR Panel and Program coordinators. Upon later discovery that the report was not submitted, the 2005 CDRP annual report, which initially contained review data and panel recommendations of child deaths that occurred in 2002, was reassessed by the State CDRP in 2007. The panel recommended that the 2005 annual CDRP report rewritten to include review data and panel recommendations of child deaths from 2002-2004 and to have the subsequent report to include data from 2005 to the most currently finalized vital records data. The panel also recommended that the IRPP epidemiologist create a summary page of the findings/important points to precede the executive summary. Due to IRPP staff changes (the retirement of the program director post-Hurricanes Katrina/Rita in 2007, the resignation of the IRPP epidemiology supervisor in 2008, and a reduction in the IRPP epidemiology staff to one employee due to the state's hiring freeze in 2009) and leadership change within the Office of Public Health, the report was not yet submitted to the legislature. Final revisions to this report has been made to include case review findings and panel recommendations of child deaths from 2002-2007 and to include the most current, finalized Louisiana vital statistics data.

STATE CDRP OPERATIONAL RECOMMENDATIONS

To State Legislators/Elected Officials:

The Panel recommends that the following changes be made to the State CDRP enabling legislation (R.S. 40:2019):

- The age of the child for review by the State CDRP is "fourteen years of age and below". However, in several sections of the state's current CDR legislation, the age of review is referenced as "*below* the age of fourteen", which is incorrect. Therefore, the primary requested legislative action is to change the incorrect age references to either "below the age of fifteen years" or "fourteen years of age and below".
- The State CDRP requests legislative action to *increase* the age of review from "fourteen years of age and below" to "seventeen years of age and below". The National Center for Child Death Review recommends that all states review the deaths of children to at least age 18 years. Louisiana and Alaska are the only two states with the maximum age of child death reviews of 14 years. Most states (39 of 50) have the maximum age of 17 years for child death reviews
- The State CDRP requests that state funding is maintained at or above $120,000 to support the operations of the State CDRP. The funds will continue to be used to maintain a full time State Child Death Review Panel Coordinator (~$60,000 salary and related benefits) and ($60,000) to reimburse coroners who submit complete death scene investigations on the standardized SUIDI reporting form and who perform comprehensive autopsies (microscopic exam and toxicology screen included) on all infants who die suddenly and unexpectedly in Louisiana. The cost to run the additional tests is at least $1,500. The current CDR reimbursement rate is $500 per complete autopsy and $100 per complete death scene investigation submitted on the approved SUIDI case reporting form. Such coroner reimbursement practices have yielded more complete investigative information to better understand how and why children die unexpectedly. Funding will also be used to provide additional investigative trainings to coroners and their staff and to State and Local CDRP members and coordinators.

Figure 2: Maximum Age of Child Deaths Reviewed by State

Max Age	State(s)	Total States
14 years	Alaska, **Louisiana**	2
17 years	Alabama, Arizona, Arkansas, California, Colorado, Connecticut, Florida, Georgia, Hawaii, Illinois, Indiana, Iowa, Kansas, Kentucky, Maine, Maryland, Massachusetts, Minnesota, Mississippi, Missouri, Montana, Nebraska, New Jersey, New Mexico, New York North Carolina, North Dakota, Ohio, Oklahoma, Oregon, Rhode Island, South Carolina, South Dakota, Tennessee, Texas, Vermont, Virginia, Washington, West Virginia	**39**
18 years	Delaware, Nevada, New Hampshire, Wyoming	4
19 years	Utah, Wisconsin	2
21 years	Michigan, Pennsylvania	2
n/a	Idaho	1

To Coroners:

The State CDRP recommends that all coroners and their staff who investigate sudden unexpected infant and child deaths are trained on the current infant death investigation foundation skills needed to successfully perform an infant death investigation, on witness interviewing, on how to conduct a doll reenactment, and on infant pre- and post-autopsy reporting based on current recommended practices. These trainings can be requested through the Louisiana CDR Program, and training information is also available on the CDC website: http://www.cdc.gov/SIDS/TrainingMaterial.htm

To State/Local Agencies and Officials:

The State CDRP recommends that state and local agencies integrated injury prevention and child safety into their current program. Agencies should also support and/or implement statewide public awareness campaigns on child safety and injury prevention topics, such as: promotion of infant safe sleeping environments to reduce the risks of SIDS and suffocation deaths, child safety in and around cars (including pedestrian and bike safety), supervision of children around water and the layers of protection to prevent drowning, fire hazards and the importance of having an escape plan, and gun safety in the home. Agencies can support the distribution of car seats and booster seats for children, bicycle helmets, and portable cribs for infants. The State CDRP also encourages agency participation on the panels.

To Health Professionals:

The State CDRP encourages pediatricians and other family health providers to participate in Local CDRP meetings. Health professionals can provide CDRP teams with expert opinions on medical evidence in a child death and can provide medical information needed for a successful prevention campaign. Also encouraged is the availability of bereavement support services in the hospital emergency rooms for families who have lost an infant or child suddenly and unexpectedly. Pediatricians and family health providers should provide anticipatory guidance related to child safety and injury prevention at every well-child visit and in all birthing classes.

LOUISIANA CHILD DEATH REVIEW PANEL CASE REVIEW FINDINGS & RECOMMENDATIONS

UNEXPECTED CHILD DEATHS

The deaths of children ages 0 through 14 years continue to be a major public health concern in Louisiana. Therefore, it is imperative to understand "how and why" (circumstances) surrounding these deaths. The following Louisiana CDRP findings resulted from six years of retrospective individual case reviews by the State and Local Child Death Review Panels of unexpected child deaths ages 0 through 14 years that occurred in years 2002 through 2007. The panels did not act as investigative bodies. Their purpose is to enhance the knowledge base of the mandated investigators and to evaluate the potential service and prevention interventions for the family and community.

Unexpected child deaths are due to undiagnosed disease; trauma in which the surrounding circumstances are suspicious, obscure, or otherwise unexplained; or another cause whereby the circumstances of which are suspicious, obscure, or otherwise unexplained. A clinical diagnosis of death due to Sudden Infant Death Syndrome (SIDS) is also considered an unexpected death. Unintentional injury deaths and SIDS were the primary focus of case reviews since they are the single largest contributors to unexpected deaths among Louisiana children. Case reviews of natural and intentional injury-related child deaths were not performed by Louisiana Child Death Review (CDR). In this section of the report, ***unexpected*** child death data represents infant deaths and child deaths combined. Therefore, the age range is 0 (birth) through 14 years.

From 2002 - 2007, 1,468 children ages 0 through 14 years died unexpectedly in Louisiana.

Trend of Unexpected Child Deaths, ages 0 through 14 years

- The total number of unexpected child deaths decreased by 3.7% from combined years 2002-2004 to 2005-2007. The decrease is due to a decrease in injury deaths during same timeframe.
- From 2002-2004 to 2005-2007, unintentional injury death rates decreased by 11%.
- Louisiana unintentional injury child death rates are higher than the national average rates.

Figure 3: Louisiana Unexpected Child Deaths, ages 0-14 years

	2002-2004	2005-2007	Total 2002-2007	Percent
SIDS	199	221	420	29%
External/Injury Deaths (all causes)	549	499	1,048	71%
Total	748	720	1,468	100%

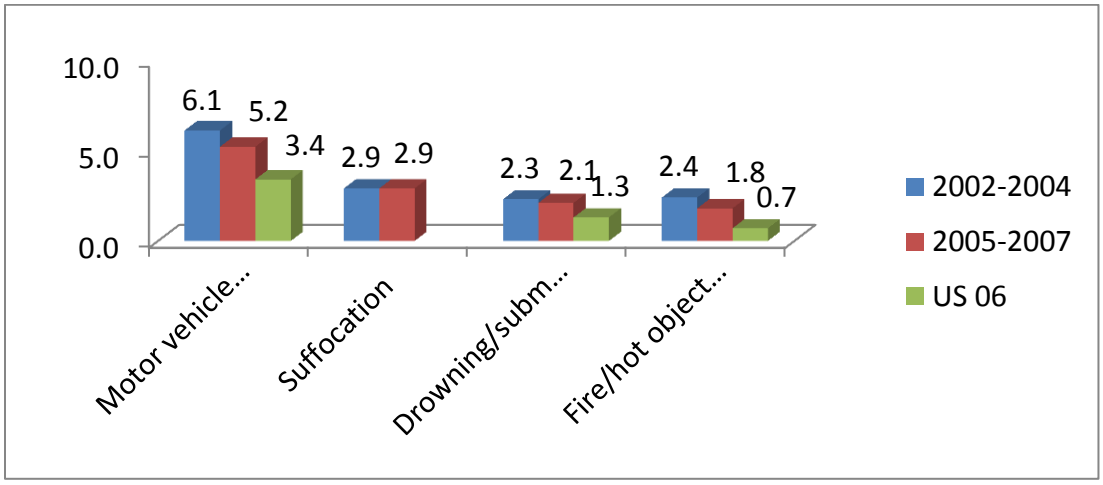
Figure 4: All Unintentional Injury Child Deaths, ages 0-14 yrs

Rates per 100,000 child population	2002-2004		2005-2007		% change of rate	US rate 2006
	n	rate	n	rate		
All unintentional injury deaths	460	15.8	385	14.1	-10.9	8.3
Cause-specific unintentional injury deaths						
Motor vehicle accident	177	6.1	143	5.2	-14.0	3.4
Suffocation	85	2.9	79	2.9	-1.0	-
Drowning/submersion	67	2.3	57	2.1	-9.4	1.3
Fire/hot object or substance	70	2.4	48	1.8	-27.0	0.7

Causes and Manner of Unexpected Child Deaths, ages 0 through 14 years

- From combined years 2002-2004 to 2005-2007, the total number of unexpected child deaths (1,468) represented 27% of all (5,373) child deaths during the same timeframe.
- Most of the unexpected child deaths (71%) were due to external/injuries, and 29% were due to SIDS.
- From 2002 - 2007, unintentional injury was the leading cause of unexpected death to children ages 0 through 14 years.
- Of the 1,468 unexpected child deaths, 845 (58%) were due to unintentional injury causes.
- Leading causes of unintentional injury were motor vehicle crashes (38%) followed by suffocation (19%), drowning/submersion (15%), and fire (14%).

Figure 5: Unintentional Injury Child Deaths, ages 0-14 yrs



MOTOR VEHICLE DEATHS

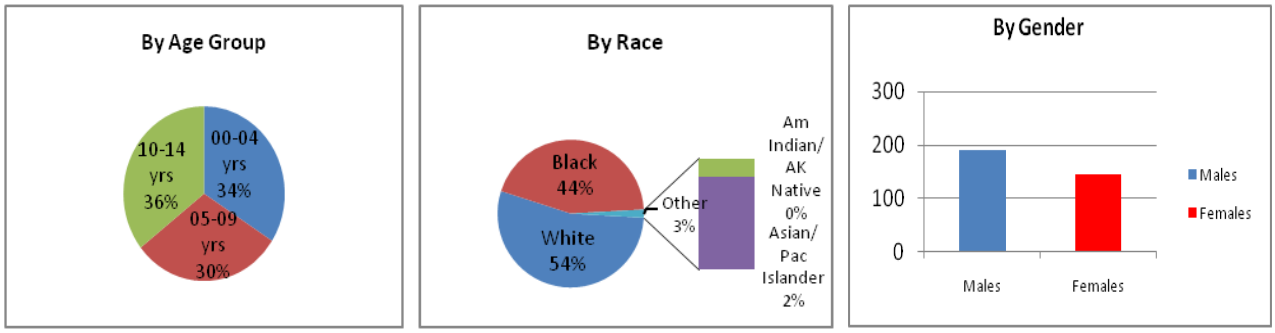
From 2002 through 2007, motor vehicle deaths was the leading cause of injury deaths to children aged 0-14 years in Louisiana. These deaths include those involving cars, trucks, SUVs, bicycles, trains, snowmobiles, motorcycles, buses, tractors, and all-terrain vehicles. Victims include drivers of moving vehicles, pedestrians, and pedal cyclists (bicyclists) involved in collisions, and back rollovers.

From 2002 - 2007, *320 children died from motor vehicle-related injuries in Louisiana.*

➢ *Summary Louisiana Vital Statistics, 2002-2007 (rates per 100,000)*

- From combined years 2002-2004 to 2005-2007, the motor vehicle death rate decreased by 15%.
- Louisiana motor vehicle child death rates were approximately doubled the US rates (2002 rate of 3.87, 2004 rate of 4, 2005 rate of 3.65, and 2007 rate of 3.22).
- Most children who died of motor vehicle-related injuries were white (54%), males (57%), 10-14 years of age.

Figure 6: Motor Vehicle Deaths by Age Group, Race, and Gender (2002-2007)



➢ *Summary Child Death Review Panel Findings*

More than 43% (137 deaths) were reviewed by Louisiana Child Death Review Panels.

Risk Factors:

- From 2002-2004 case reviews, driver carelessness and error were primary factors, followed by lack of supervision related to child-pedestrian fatalities. (NOTE: Due to the devastating effects of Hurricane Katrina in 2005 and the leveling of the State building, case review files of child deaths from 2002-2004 were no longer accessible to obtain additional information on risk factors).

- From 2005-2007 case reviews, children who died were predominantly automobile passengers in the back seat, followed by pedestrians and children on bicycles.
    - Most deaths resulted from driver error, driver recklessness, and drug/alcohol impairment were the leading factors in motor vehicle deaths. Speeding, driver distraction and inexperience, and poor visibility were also factors in these deaths.
    - For factors specifically related to the driver
        - Equal numbers of cases reflected the child's driver to be responsible as those that reflected the *other* vehicle driver as responsible.
        - Equal numbers of drivers of children and drivers of the other vehicles reflected alcohol/drug impairment as a factor.
        - Age of the operator(s)/driver(s) of the vehicles with the child occupant(s) ranged from 8 to 57 years.
        - Age of those driving the *other* vehicle(s) ranged from 7 to 77 years.

Protective Factors:

- Only half of the cases reviewed had documentation regarding the use of air bags, lap and/or shoulder belts, cars seats, booster seats.
- One quarter of the cases identified child car seats as the protective factor needed and/or used.
- Protective equipment was mostly not used correctly or not used/not present.

➢ ***CDRP Recommended Prevention Strategies***

Education was the most frequently recommended type of prevention strategy, followed by promotion of/changes to current practices, legislation, and community safety. The Louisiana Child Death Review Panels, both state and regional, continue to align themselves with prevention recommendations of the American Academy of Pediatrics, the Children's Safety Network, Safe Kids, and the National Center for Child Death Review. Actions to prevent motor vehicle deaths to children ages 0 through 14 years, in Louisiana include the following:

For State Legislators/Elected Officials

- Invest state funds in child passenger safety and motor vehicle safety for children.
- Medical or vehicle liability insurance providers should cover the cost of car/booster seats for children.

COST SAVINGS (on average):

- ***A $52 child safety car seat yields a cost-savings of about $2,200***
- ***A $35 child booster seat yields a cost-savings of about $2,500***
- ***A $12 bicycle helmet for a child ages 3-13 years yields a cost-savings of $580***

For State/ Local Agencies and Officials

- Re-engineer roads, improve signage, and create crosswalks, especially around schools and playgrounds
- Provide car seats that convert to booster seats for infants and children who receive Medicaid, along with a mandatory prenatal educational class on child passenger safety for pregnant women who receive Medicaid.
- Agencies that transport children should have several staff that are nationally certified child passenger technicians.
- Implement motor vehicle safety campaigns and media outreach.
- Enforce current motor vehicle and bicycle safety laws.

For Healthcare Professionals

- Provide injury prevention education and anticipatory guidance to expectant parents in childbirth/prenatal classes, to new parents in the hospitals, and to parents/caregivers during each well-baby visit.

Injury prevention counseling by pediatricians (TIPP) costs $11 per child ages 0-4 years and generates $97 in benefits to society.

General Prevention Strategies For Communities

- ***Support Child Passenger Safety-***
  - Education on Louisiana Child Passenger Safety Law to increase car seat usage and booster safety seat usage for children between 40 and 80 pounds.
  - Education, awareness, and support of Child Safety Seat Inspection Programs in communities to provide on-site safety seat inspections and trainings on car seat installation for caregivers of children by nationally certified child passenger safety technicians.
  - Free or reduced-cost car safety seat and booster seat distribution to needy families.
- ***Support Bicycle Safety***
  - Education on Louisiana Bicycle Helmet Law to increase usage and on traffic rules for bicyclists.
  - Education and increase awareness on the need for and use of safety equipment, like properly-fitted bike helmets and reflectors, and bike paths in communities.
  - Free or reduced-cost bicycle helmet distribution.
- ***Support Pedestrian Safety***
  - Support pedestrian safety through education to caregiver s and children on how to and where to safely cross streets and to drivers on pedestrian awareness.

ASPHYXIA (SUFFOCATION/STRANGULATION) DEATHS

In Louisiana, asphyxia was the leading cause of injury deaths to infants less than age 12 months of age and was the second leading cause of unintentional injury deaths of children aged 0 through 14 years from 2002 through 2007.

From 2002 - 2007, *164 children died from acute suffocation in Louisiana.*

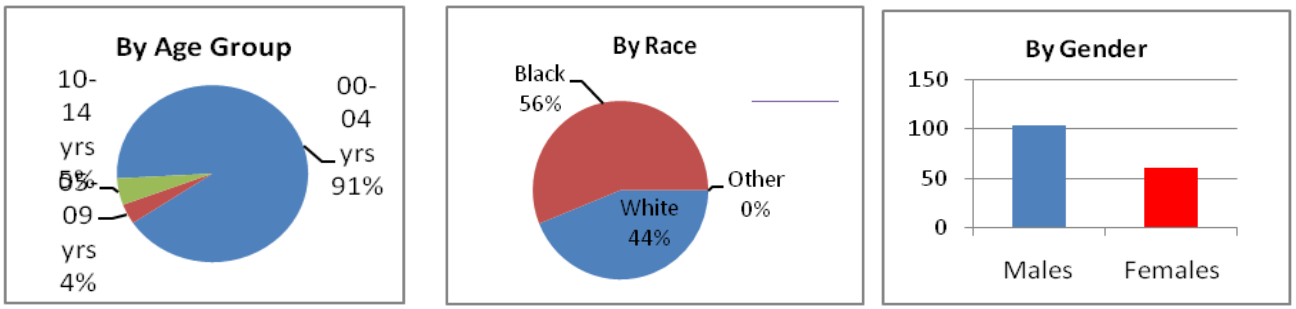
Suffocation is defined as death due to compression or blockage of the air passage, which resulted from either of the following causes:

- *Overlay* - a person who is sleeping with a child unintentionally rolls onto the child
- *Positional asphyxia* - a child's face becomes trapped in soft bedding or wedged in a small space, such as between a mattress and a wall or couch cushions
- *Covering of face*- an object blocks the external air passages (nose, mouth), such as a heavy blanket, pillow, stuffed animal, or plastic bag
- *Compression of chest* – an object is upon or tightly bound around the child's chest
- *Choking* – an object becomes lodged in the air passage, such as a piece of food or a small toy.
- *Confinement* – trapped in an airtight place, such as a refrigerator or toy chest
- *Strangulation* – external compression of the air passage by a rope, cord, hands, or other objects.

➢ ***Summary Louisiana Vital Statistics, 2002-2007 (rates per 100,000)***

- From 2002-2004 to 2005-2007, the suffocation rates of children ages 0 through 14 years in Louisiana were unchanged at 2.9 per 100,000.
- Louisiana suffocation rates were approximately 1.5 times higher than averaged US rates (1.46 in 2002, 1.59 in 2004, 1.61 in 2005, and 1.99 in 2007) during the same timeframe.
- Children most likely to die of suffocation are African American (56%), males (63%), under 5 years of age (91%) during this same time period.

Figure 7: Suffocation Deaths by Age Group, Race, and Gender (2002-2007)



- ***Summary Child Death Review Findings***

Louisiana Child Death Review Panels reviewed 93% (153) of the child suffocation deaths. Of the reviewed 58 suffocation deaths from 2005-2007, 86% were infants under 12 months of age.

Risk Factors:

- From 2002-2004, available/accessible case review findings showed that 11 infant deaths were due to overlay, 7 were due to object around the neck and covering the mouth and 4 were due to wedging. 17 cases reported that the incident occurred during sleep and in 14 cases the descendent was found on an adult bed. (NOTE: Due to the devastating effects of Hurricane Katrina in 2005 and the leveling of the State building, case review files of child deaths from 2002-2004 were no longer accessible to obtain additional information on risk factors).
- From 2005-2007, case review findings showed
  - The leading mechanisms of unintentional suffocation for infants ages 0 through 11 months was overlay (64%) followed by positioning (28%) and soft bedding (6%).
  - The leading mechanism for children ages 1through 14 years was accidental hanging. (NOTE: Suicide by hanging was the cause of acute suffocation deaths for 2 children who were 12 and 14 years of age.)
  - Of the 50 infant suffocation cases reviewed
    - Suffocation was sleep-related in 98% (49 of 50) of the infant deaths.
    - Average maternal age was 24 years
    - Environmental exposure to cigarette smoke occurred with 17 (34%) infants. (NOTE: This is an approximate number because 27, or 54%, were lacking documentation regarding cigarette smoke exposure.)
    - Most were males (66%), aged 6 months and less, sharing an adult bed with another person (86%).
    - Sharing a bed with an adult occurred with 8 of 10 (80%) infants born premature (less that 37 weeks gestation).
    - Only one infant was in a crib, and 41 (82%) were placed to sleep on an unsafe sleep surface, with a sofa as the most frequently used site. The sleep surface was unknown for 8 children.

Protective Factors:

- Only six of cases reviewed had documentation regarding the presence of a crib or bassinet in the home, and of the six, one infant died of suffocation in the crib.
- Of the nine suffocation deaths that were not sleep-related, 4 lacked any adult supervision at the time of death, and 5 lacked documentation of supervision.

- ***CDRP Recommended Prevention Strategies***

Education was the most frequently recommended type of prevention strategy, followed by promotion of/changes to current practices, legislation, and community safety. The Louisiana Child Death Review Panels, both state and regional, continue to align themselves with prevention recommendations of the American Academy of Pediatrics, the Children's Safety Network, Safe Kids, and the National Center for Child Death Review. Actions to prevent suffocation deaths to children ages 0 through 14 years, in Louisiana include the following:

For State Legislators/Elected Officials

- Medical insurance providers should cover the cost of portable cribs for infants who qualify based on defined criteria.

For State/ Local Agencies and Officials

- Provide portable cribs for infants who receive Medicaid, and all pregnant women who receive Medicaid should have a mandatory educational class on infant safe sleep.
- Implement culturally competent infant safe sleep public education campaigns.
- Require infant safe sleep as a mandatory health and safety training requirement for child care center licensing.

For Healthcare Professionals

- Require in-hospital assessments with parents to assess the safety of infants sleep environment education prior to discharge of the infant.
- Provide and/or require parent education on infant safe sleep at childbirth/prenatal classes, in hospitals to expectant and new parents, and well-baby visits on bathtub safety for infants

Injury prevention counseling by pediatricians (TIPP) costs $11 per child ages 0-4 years and generates $97 in benefits to society.

General Prevention Strategies For Communities

- Education and awareness of the Consumer Product Safety Commission (CPSC) for child product safety, for product recall notifications/listings, and for notifying CPSC in cases of suspicious deaths due to child products.
- Education and awareness of all suffocation risks to all child caregivers.
- Free or reduced-cost portable crib distribution to needy families.

DROWNING/SUBMERSION DEATHS

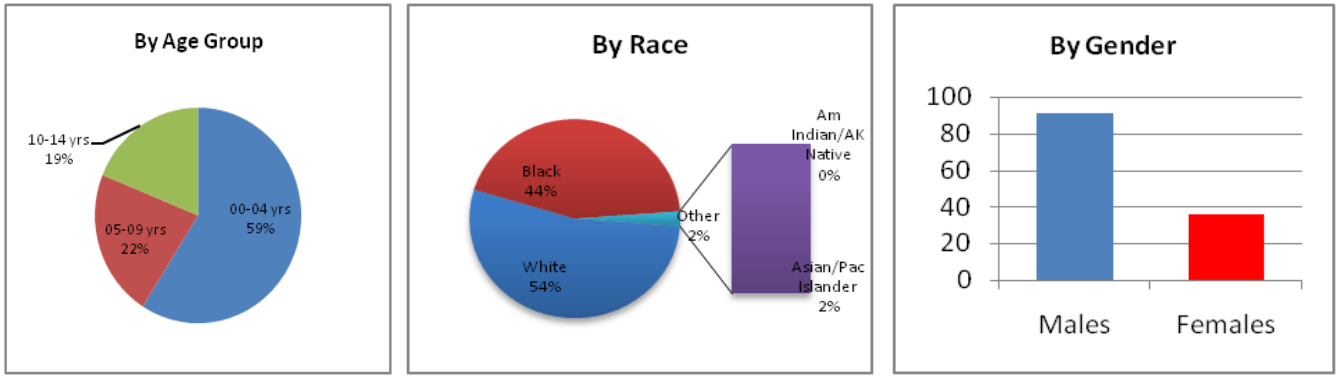
In Louisiana, drowning/submersion was the third leading cause of injury deaths to children ages 0 through 14 years from 2002 through 2007. Included are drowning deaths in open water, ponds, drainage ditches, fountains, swimming pools, spas, bath tubs, and buckets.

From 2002 - 2007, *124 children died from drowning/submersion in Louisiana.*

➢ *Summary Louisiana Vital Statistics, 2002-2007 (rates per 100,000)*

- From 2002-2004 to 2005-2007, the drowning/submersion death rates of children ages 0 through 14 years decreased by 9% from 2.3 per 100,000 to 2.1 per 100,000, respectively. Although a decrease, the overall death rate due to drowning/submersion remains higher than that of the national rate in the same timeframe.
- Most children who died due to a drowning/submersion were white (54%), males (73%), less than age 5 years.

Figure 8: Drowning/Submersion Deaths by Age Group, Race, and Gender (2002-2007)



➢ *Summary Child Death Review Findings*

Louisiana Child Death Review Panels reviewed 63% (78) of the drowning/submersion deaths.

Risk Factors:

- Case reviews of drowning/submersion deaths from 2002-2004 showed
  - Most deaths occurred while child was playing near swimming pools or in natural bodies of water.
  - Almost half of the cases reported the child not wearing a personal flotation device and in several cases the descendent could not swim.
  - Other significant risk factors identified during case review were an open gate and a fence scaled by a child.

- Case reviews of drowning/submersion deaths from 2005 through 2007specifically considered risk factors regarding the water source, adult supervision, and protective barriers.
    - Regarding water source, a majority of the cases identified accidental drowning fatalities in pools, open water, and bath tubs.
    - Lack of supervision was documented in most of the cases, with distractions to supervision contributing to half of those cases.
    - Few barriers to open water sources and pools were identified, and where fatalities did occur with a fence or gate present, the fence was penetrable and/or the gate was open.
    - Regarding recovery, most of the deceased children were rescued by an adult, usually a parent. In one case, another child attempted to rescue the drowning child and also drowned.

Protective Factors:

- Adequate adult supervision was lacking in most of the drowning/submersion deaths from 2005 through 2007, with adult distractions as a primary cause.
- Layers of barrier protection were inadequate or lacking in most cases.
- In many cases, attempts to perform CPR not well-documented.

➢ ***CDRP Recommended Prevention Strategies***

Education was the most frequently recommended type of prevention strategy, followed by promotion of/changes to current practices, and community safety. The Louisiana Child Death Review Panels, both state and regional, continue to align themselves with prevention recommendations of the American Academy of Pediatrics, the Children's Safety Network, Safe Kids, and the National Center for Child Death Review. Actions to prevent suffocation deaths to children ages 0 through 14 years, in Louisiana include the following:

For State Legislators/Elected Officials

- Ensure effective building codes regarding proper pool and pond enclosures are enacted.

For State/ Local Agencies and Officials

- Ensure local enforcement of building codes regarding proper pool and pond enclosures.
- Placement of signage near bodies of water to warn of possible water dangers.
- Implement culturally competent water safety public awareness campaigns on the "layers of protection" for water safety, which include:
    - Adult supervision is critical at all times while children are at play near or in water to prevent drowning.
    - Barriers – closed/locked doors, fences, gates, pool alarms surrounding bodies of water – should be in place in case adult supervision is lacking,
    - CPR (cardio-pulmonary resuscitation) Classes and swimming lessons can safe lives.

For Healthcare Professionals

- Provide and/or require parent education on bathtub safety for infants at childbirth/prenatal classes, in hospitals to expectant and new parents, and well-baby visits on bathtub safety for infants.

> ***Injury prevention counseling by pediatricians (TIPP) costs $11 per child ages 0-4 years and generates $97 in benefits to society.***

General Prevention Strategies For Communities

- Education and awareness of the Consumer Product Safety Commission (CPSC) for product safety information.
- Offer free or reduced cost CPR classes and swimming lessons.
- Education and awareness of all drowning/submersion risks and the "layers of protection" to all caregivers of children.

FIRE AND BURNS-RELATED DEATHS

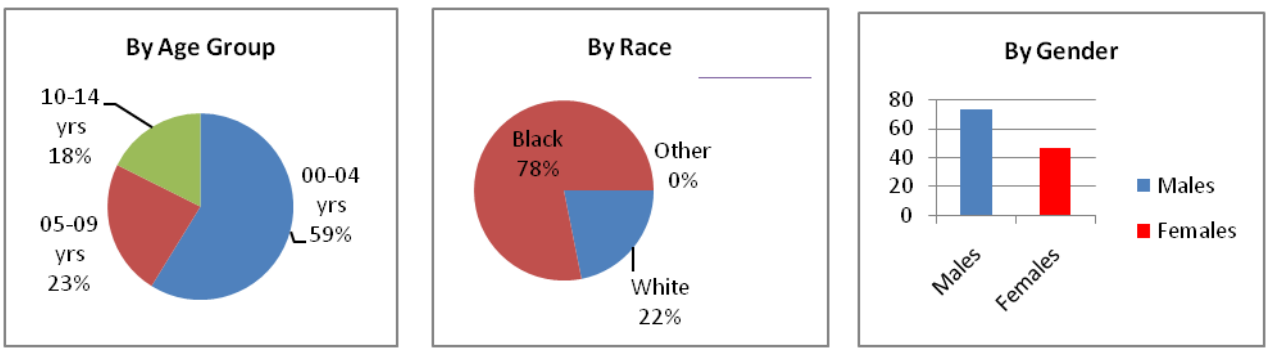
In Louisiana, fire/burns was the fourth leading cause of injury deaths to children ages 0 through 14 years from 2002 through 2007. Most fire-related deaths to children are due to smoke inhalation, not burns. Also, children who play with matches or lighters in their home cause most of the fires.

> **From 2002 - 2007, *118 children died from fires/burns in Louisiana.***

➢ ***Summary Louisiana Vital Statistics, 2002-2007 (rates per 100,000)***

- Fire-related child death rates of children ages 0 through 14 years decreased by 25% from 2.4 per 100,000 in 2002-2004 to 1.8 per 100,000 in 2005-2007. Louisiana rates were more than twice the US rates for the same age group (0.86 in 2002, 0.84 in 2004, 0.77 in 2005, and 0.75 in 2007).
- From 2002 to 2007 more children in Louisiana who died of fire/burn-related injuries were less than 5yrs of age (59%), black (78%), males (62%).

Figure 9: Fire-Related Child Deaths, by Age Group, Race, & Gender (2002-2007)



- ***Summary Child Death Review Findings***

Louisiana Child Death Review Panels reviewed 25% (30) of the fire/burn-related deaths.

Risk Factors:

- Case reviews findings from 2002-2004 showed
    - Space heaters were a common source of the flame and the fires were often initiated while the child was playing.
    - Several cases documented that a smoke alarm was not present in the home and that the smoke alarm was not functional when present in the home.

(NOTE: Due to lack of data, CDRP was not able to determine the source of fire for most cases.)

- Case reviews from 2005-2007 showed
    - Fires occurred in residential dwellings – single family homes and trailer/mobile homes.
    - Almost all deaths were due to smoke inhalation, not burns.
    - Less than half of the cases documented the presence of a smoke detector, and when present, they were non-functioning at the time of the fire.
    - Regarding supervision, most cases identified the presence of an authority figure ranging from 17yrs to 41yrs of age. However, the level of supervision was unclear.

(NOTE: Limited case information was available due to inconsistent documentation of incident details on investigative fire reports.)

Protective Factors:

- Level of supervision and presence of a smoke alarms were not well-documented in the investigative case reports.

- ***CDRP Recommended Prevention Strategies***

Education was the most frequently recommended type of prevention strategy, followed by promotion of/changes to current practices, and community safety. The Louisiana Child Death Review Panels, both state and regional, continue to align themselves with prevention recommendations of the American Academy of Pediatrics, the Children's Safety Network, Safe Kids, and the National Center for Child Death Review. Actions to prevent fire/burn-related deaths to children ages 0 through 14 years in Louisiana include the following:

For State Legislators/Elected Officials

- Ensure effective building/residential codes requiring installation of smoke detectors in new and existing housing and codes requiring hard-wired detectors in new housing are enacted.

For State/ Local Agencies and Officials

- Ensure enforcement of local ordinances regarding building/residential codes for the installation of smoke detectors and hard-wired detectors in residential dwellings, including rental units.
- Support distribution of free or reduced-cost smoke alarms in low income neighborhoods.
- Implement culturally competent fire safety public awareness campaigns.
- Support the use of "Smoke Houses" by the fire departments to teach children how fires start and spread and how best to escape a burning house.

For Healthcare Professionals

- Provide and/or require parent education on fire safety for children during preventive, well-child visits.

Injury prevention counseling by pediatricians (TIPP) costs $11 per child ages 0-4 years and generates $97 in benefits to society.

General Prevention Strategies For Communities

- Education and awareness of fire and burn injury risks and injury prevention measures that target children and their caregivers.
- Offer free or reduced cost smoke detectors in high risk neighborhoods.
- Education and awareness on the importance of families to develop and practice a family fire escape plan.

For every $0.05 spent per lighter to childproof cigarette lighters generates$4 in benefits to society.

POISONING -RELATED DEATHS

Poisoning-related injury deaths resulted from children ingesting, inhaling, or internalizing toxic and/or harmful substances that pose a fatal risk to the child.

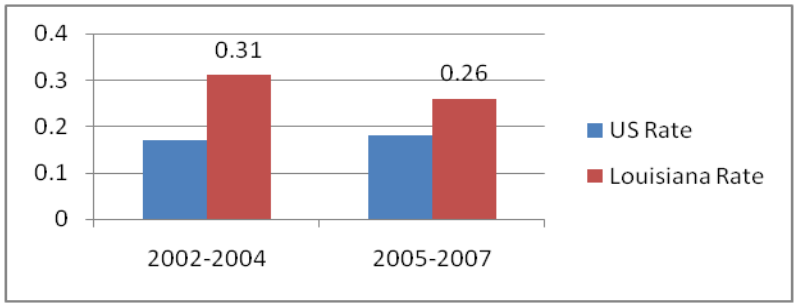
From 2002 - 2007*, 19 children died from poisoning in Louisiana.*

➢ *Summary Louisiana Vital Statistics, 2002-2007 (rates per 100,000)*

- Although the Louisiana child death rate due to poisoning decreased by 16% from 0.31 per 100,000 to 0.26 per 100,000 in 2007, the rates were still higher than the national rate across the same timeframe.

- Data was not aggregated by age group, race, or gender for poisoning-related injury fatalities since there were too few reported deaths make reliable comparisons across years.

Figure 10: Child Poisoning Death Rates, 2002-2007 (per 100,000)



➢ ***Summary Child Death Review Findings***

Louisiana Child Death Review Panels reviewed 50% of the poisoning-related deaths.

(NOTE: Due to the limited amount of data on very few cases, CDRP was unable to draw any overarching conclusions regarding trends in risk factors associated with accidental poisoning. However, the Panels will continue to collect data associated with risk for accidental poisoning, such as the substance(s) involved, location of the substance in relation to the child, whether it was the child's prescription medication, how the substance was packaged at the time of the incident (ie, was the substance in its original container; did the container have a child safety cap), and whether a Poison Control Center was alerted.)

➢ ***CDRP Recommended Prevention Strategies***

Education was the most frequently recommended type of prevention strategy, followed by promotion of/changes to current practices, and community safety. The Louisiana Child Death Review Panels, both state and regional, continue to align themselves with prevention recommendations of the American Academy of Pediatrics, the Children's Safety Network, Safe Kids, and the National Center for Child Death Review. Actions to prevent accidental poisoning-related deaths to children ages 0 through 14yrs of age in Louisiana include the following:

For State/ Local Agencies and Officials

- Support the Louisiana Poison Control Center's efforts and culturally competent poison prevention public awareness campaigns.

Each $1 spent on poison control center service saves $7 in poisoning-related medical costs.

For Healthcare Professionals

- Provide and/or require parent education on poison prevention during preventive, well-child visits.

Injury prevention counseling by pediatricians (TIPP) costs $11 per child ages 0-4 years and generates $97 in benefits to society.

General Prevention Strategies For Communities

- Promote the poison control center phone number in Louisiana
- Support and conduct public awareness and education messages that include using child resistant packaging; disposal of old medications properly; storage of medications, alcohol, pesticides and cleaning products properly and use cabinet locks; read product labels and follow all product directions carefully.
- Encourage strategies to prevent carbon monoxide poisoning, such as installing carbon monoxide detectors near bedrooms and on each floor of the home; inspect furnaces, fireplaces, wood-burning stoves, and fuel-burning appliances annually.
- Teach about the dangers of leaving a car engine running in an attached and enclosed garage.
- Educate about the dangers of using gasoline-powered tools and engines indoors (i.e. generators).

FIREARM DEATHS

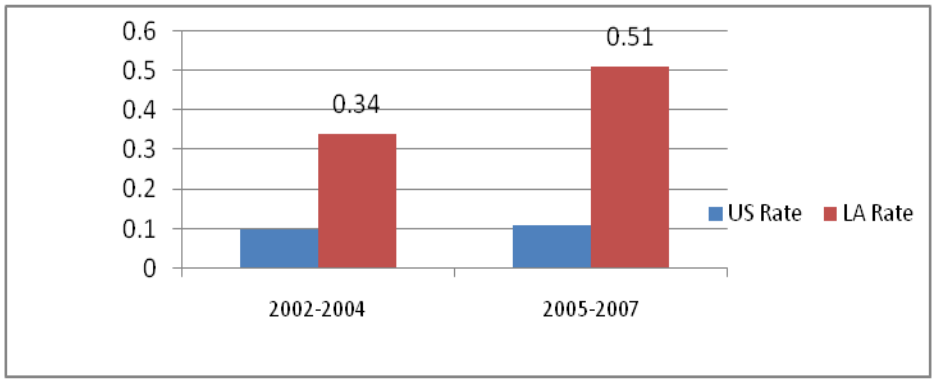
More than 44 million Americans own firearms and of the 192 million firearms owned in the United States, and more than half are handguns.

From 2002 - 2007, 25 *children died from accidental firearm injuries in Louisiana.*

➢ ***Summary Louisiana Vital Statistics, 2002-2007 (rates per 100,000)***

- Accidental firearm injury death rates of children ages 0 through 14 years have increased by 40% in Louisiana from 0.34 in 2002-2004 to 0.51 in 2005-2007. Louisiana rates were three to five times higher than US rates of respective timeframes.
- Data was not aggregated by age group, race, or gender for firearm-related injury deaths since there were too few reported deaths make reliable comparisons across years.

Figure 11: Accidental Firearm Deaths, 2002-22007



- ***Summary Child Death Review Findings***

Louisiana Child Death Review Panels reviewed about 50% of the firearm deaths.

(NOTE: Due to the limited amount of data on very few cases, CDRP was unable to draw any overarching conclusions regarding trends in risk factors associated with accidental firearm injury deaths. However, the Louisiana Child Death Review Panels will continue to gather details regarding risk factors for accidental firearm fatalities, such as age and gender of the decedent, type of firearm accessed for fatality to occur, ownership of the firearm, safety features of the firearm, storage and location during the time of incident, and location of the injury, causing fatality.)

- ***CDRP Recommended Prevention Strategies***

Education was the most frequently recommended type of prevention strategy, followed by promotion of/changes to current practices, and community safety. The Louisiana Child Death Review Panels, both state and regional, continue to align themselves with prevention recommendations of the American Academy of Pediatrics, the Children's Safety Network, Safe Kids, and the National Center for Child Death Review. Actions to prevent accidental firearm injury deaths to children ages 0 through 14 years in Louisiana include the following:

For State Legislators/Elected Officials

- Ensure strict gun safety laws that protect children are enacted and enforced.

For State/ Local Agencies and Officials and General Prevention Strategies

- Support the distribution of free or reduced-cost gun locks to caregivers of children who own firearms.
- Support the implementation of culturally competent gun safety public awareness campaigns.

For Healthcare Professionals

- Provide and/or require parent education on gun safety during preventive, well-child visits.

Injury prevention counseling by pediatricians (TIPP) costs $11 per child ages 0-4 years and generates $97 in benefits to society.

General Prevention Strategies For Communities

- Support and conduct education and awareness to caregivers, of proper gun safety and storage, away from children. This includes always keeping the gun unloaded & locked up, and storing the bullets in a separate area away from the gun, and hiding the keys to the locked cabinet.
- Support and conduction education and awareness activities directly with children about the dangers of guns.

SUDDEN INFANT DEATH SYNDROME

Sudden Unexpected Infant Death (SUID) is an infant death of no immediately obvious cause. SUID designation is made prior to a comprehensive death scene investigation and autopsy, and it is not synonymous with sudden infant death syndrome (SIDS). In the U.S., SUIDs account for about 4,600 infant deaths annually, and nearly half were due to Sudden Infant Death Syndrome (SIDS). Other causes identified after a comprehensive investigation include accidental suffocation, abuse/neglect, homicide, poisoning, medical illness, metabolic disorders, poisoning, hyperthermia (excessive heat exposure/ overheated), hypothermia (excessive cold exposure), or of undetermined/unknown cause.

From 2002 through 2007, there were 585 sudden unexpected infant deaths (SUIDs) in Louisiana. Of these deaths, 336 (57%) were reviewed by Louisiana CDR. Case reviews of 2002-2007 SUIDs by Louisiana Child Death Review included infant deaths due to SIDS and undetermined causes, as selected by the cause of death on the death certificates.

- Louisiana CDRP legislation mandates agencies that investigate child deaths to supply CDRP with a copy of their report(s). For SUID reviews, a complete set of investigative documents is needed, which is a complete autopsy and a sudden unexpected infant death scene investigative (SUIDI) report form. However, CDRP was challenged with the unavailability of complete investigative reports for many 2002-2007 unexpected infant deaths. They were either not submitted after multiple requests were made by the CDR staff to obtain the reports or, in the case of death scene investigative reports (SUIDIs), they were not performed or they were incomplete. *Of the 336 SUIDs reviewed, 179 (53%) death scene investigative reports and 277 (82%) autopsies were received and, therefore, used for case reviews by Louisiana State CDRP.*
- Case review data is based on the opinion of the State Child Death Review Panel and may include revisions to the "cause" and "manner" of death after careful review of each case. *Of 134 SUIDs reviewed by CDRP, 81 (60%) were reclassified to undetermined (38 total), followed by accidental suffocation (37 total), and medical causes (6 total).*

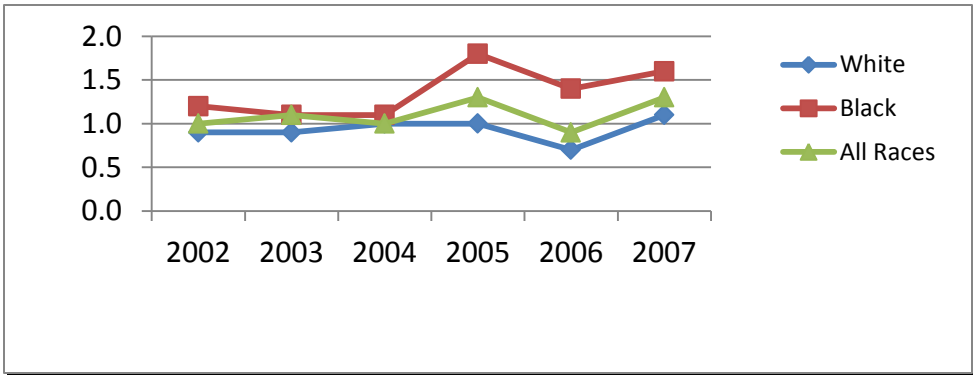
Sudden Infant Death Syndrome (SIDS) is the sudden, death of an infant under one year (12 months) of age which remains unexplained after a thorough investigation has occurred. SIDS investigation must include a thorough review of the autopsy, death scene investigation, and review of the infant's medical history. A comprehensive autopsy includes an internal, external, and microscopic examination as well as a blood toxicology screen on the infant. SIDS is a diagnosis of exclusion and should only be used when there is no other possible cause of death. Also, SIDS is considered a *natural* cause of death. SIDS most commonly occurs during sleep and is rare during the first month of life. Most SIDS deaths occur by the end of age 6 months for infant.

From 2002 - 2007, 420 (11%) infants died of SIDS in Louisiana.

➢ ***Summary Louisiana SIDS Vital Statistics, 2002-2007 (rates per 1,000 live births)***

- SIDS was the third leading cause of all infant deaths and the leading cause of unexpected deaths of infants one (1) month to twelve (12) months of age in Louisiana from 2002- 2007.
- SIDS rate increased by 30% from 1.0 per 1,000 live births in 2002 to 1.3 per 1,000 live births in 2007. Louisiana SIDS rates are twice the US rates (0.06 per 1,000 for 2002 and 5.05 per 1,000 live births for years 2003-2006) for the same timeframe.
- The average rates of SIDS deaths for black infants were almost 1.5 times higher than rates of white infants from 2002-2007 in Louisiana.

Figure 12: Louisiana SIDS Rates, 2002-2007



	2002	2003	2004	2005	2006	2007
White	0.9	0.9	1.0	1.0	0.7	1.1
Black	1.2	1.1	1.1	1.8	1.4	1.6
All Races	**1.0**	**1.1**	**1.0**	**1.3**	**0.9**	**1.3**
Black/white	1.3	1.2	1.1	1.8	2.0	1.5

Note: Rates per 1,000 per live births; Data source is Louisiana Vital Statistics

➢ ***Summary Child Death Review Findings***

Of 420 SIDS death from 2002 through 2007, 302 (72%) were reviewed by Louisiana CDR.

- Revisions to the SIDS "cause" and/or "manner" of death were made, after careful review of each case by the CDR Panels and the SIDS medical director.
  - Of 100 SIDS deaths from 2005-2007 reviewed, 75 (75%) were reclassified to either undetermined (38 total) followed by accidental suffocation (33 total), and medical causes (4 total). NOTE: Due to limited access to case review information of SIDS deaths from 2002-2004, reclassification statistics for this timeframe is not reported.

SIDS Risk Factors:

Louisiana CDRP's case reviews of SIDS were based on modifiable, non-modifiable, and protective risk factors identified by the Louisiana American Academy of Pediatrics (AAP). When considering which infants were most at risk, case review results with a high percentage of unknown risk were difficult to interpret because so much is unknown. Therefore, the following case review information must be used with caution when developing prevention strategies for SIDS deaths.

- ***Non-Modifiable Risk Factors***
  - Most infants who died of SIDS from 2002 through 2007 in Louisiana were males (60%), aged 2-6 month (63%), during the fall/winter months (53%).
  - Of those risk factors with a very high percentage of unknown risk, only 3% were born to young mother; 17% were premature; and 25% were exposed to tobacco smoke in utero.

Figure 13: SIDS Non-Modifiable Risk Factors, 2002-2007

SIDS Non-Modifiable Risk Factors					
n=302	Yes	No	Unknown	% risk unknown	% At Risk
Age 2-6 months	189	113	0	0	63%
Male Gender	180	122	0	0	60%
Prematurity (<37 wks gestation)	50	112	140	46%	17%
Maternal Smoking During Pregnancy	75	31	196	65%	25%
Young Maternal Age (<18 years)	10	138	154	51%	3%
Fall -Winter Season Fall – 60 (20%) Winter – 99 (33%) Spring – 70 (23%) Summer – 72 (24%) (1-case was not recorded from 2002-2004)	159	142	1	<1%	53%
No Prenatal Care	6	74	222	74%	2%

- ***Modifiable Risk Factors***

  All of these risks also had a very high percentage of unknown risk due to lack of documentation.

  - 32% of infants were placed to sleep in an unsafe position (side or on stomach). The safest position for an infant to sleep is on his/her back only.
  - 34% of infants shared a sleep surface with at least one other person. The safest place for an infant to sleep is alone, in a crib (portable or stationary) or bassinet.
  - 31% were exposed to second hand cigarette smoke. No smoking should be allowed around infants.
  - Of the 2005-2007 SIDS cases, 44% of infants were on a sleep surface with soft/loose bedding. The safest sleep surface for an infant is on a firm mattress, with a tight fitting sheet and absence of wide spaces between the rails and mattress, and without sleep positioners, bumper pads, pillows, blankets, and stuffed animals.

Figure 14: SIDS Modifiable Risk Factors, 2002-2007

SIDS Modifiable Risk Factors					
n= 302	**Yes**	No	**Unknown**	% risk unknown	% At Risk
Sleep Position (non-supine/not on back) • Supine – 68 • Prone – 60 • Side – 30 • Other – 8 • Unknown -- 136	**98**	68	**136**	45%	32%
Bedsharing or Sharing Sleep Surface	**103**	67	**132**	44%	34%
Environmental Tobacco Smoke Exposure	**94**	47	**151**	50%	31%
Soft/Loose Bedding (2005-2007 only and n=100)** 2002-2004 data unavailable	**44**	14	**42**	42%	44%

- ***Protective Factors***
    - Only 7% infants were breastfeeding at the time of death or used a pacifier while asleep.

Figure 15: SIDS Protective Factors, 2002-2007

SIDS Protective Factors					
N=302	Yes	No	Unknown	% risk unknown	% At Risk
Breastfeeding	22	138	142	47%	7%
Pacifier	22	12	152	50%	7%

- ***CDRP Recommended Prevention Strategies***

Education was the most frequently recommended type of prevention strategy, followed by promotion of/changes to current practices, legislation, and community safety. The Louisiana Child Death Review Panels, both state and regional, continue to align themselves with prevention recommendations of the American Academy of Pediatrics, the Children's Safety Network, Safe Kids, and the National Center for Child Death Review. Actions to prevent SIDS of infants, ages 0 through 11 months, in Louisiana include the following.

For State Legislators/Elected Officials

- Medical insurance providers should cover the cost of portable cribs for infants who qualify based on defined criteria.

For State/ Local Agencies and Officials

- Provide portable cribs for infants who receive Medicaid, and all pregnant women who receive Medicaid should have a mandatory educational class on SIDS risk reduction.
- Implement culturally competent SIDS risk reduction public education campaigns, such as "This Side Up" and "Give Your Baby Space" campaigns developed and managed by the Office of Public Health's Maternal and Child Health Program.
- Require SIDS risk reduction and infant safe sleep as a mandatory health and safety training requirement for all child care center licensing.

For Healthcare Professionals

- Require in-hospital assessments with parents on the safety of infants sleep environments and provide SIDS risk reduction and infant safe sleep education prior to discharge of the infant.
- Require in-services on SIDS risk reduction and infant safe sleep practices for all health professionals who care for infants in hospitals and provide home health services to infants.

- Promote breastfeeding and use of pacifiers by infants while sleeping.
- Frequently counsel pregnant females and parents of infants about the SIDS risk associated with smoking during pregnancy and with second hand smoke exposure.
- Screen pregnant women and mothers of infants for substance use, cigarette use, perinatal depression. Make the necessary referrals for any positive screens.
- Provide and/or require parent education on SIDS risk reduction and infant safe sleep practices at childbirth/prenatal classes, in hospitals to expectant and new parents, and well-baby visits on bathtub safety for infants

Injury prevention counseling by pediatricians (TIPP) costs $11 per child ages 0-4 years and generates $97 in benefits to society.

- ***General Prevention Strategies For Communities***

- Education and awareness of the Consumer Product Safety Commission (CPSC) for child product safety, for product recall notifications/listings, and for notifying CPSC in cases of suspicious deaths due to child products.
- Free or reduced-cost portable crib distribution to needy families.
- Education and awareness of all modifiable SIDS risk factors and on all protective factors all caregivers of children.
- To provide counseling for families bereaved by the sudden and unexpected loss of their infants;
- Back to Sleep: Infants should be place to sleep in a supine position (on his/her back). Tummy and side sleeping is not the safest position and is not advised.
- Use a firm sleep surface for an infant: A firm crib mattress, covered by a tight fitting sheet is recommended.
- Keep soft object and loose bedding out of the crib: An infant's sleep environment should be free of bumper pads, pillows, stuffed animals, quilts, comforters, foam pads, and wedges/positioners. If a light blanket is to be used, tuck it in around the crib mattress. Infant sleep sacks are a good alternative to light blankets.
- Do not smoke during pregnancy or around an infant. Avoid an infant's exposure to second-hand smoke.
- A separate but proximate sleeping environment is recommended. "Share the room but not the bed."
- Consider offering a pacifier to an infant at nap time and bed time.
- Avoid overheating and overbundling an infant.
- Avoid commercial devices marketed to reduce the risk of SIDS. None have been tested sufficiently to show its safety or efficacy.
- Encourage tummy time when an infant is awake only.

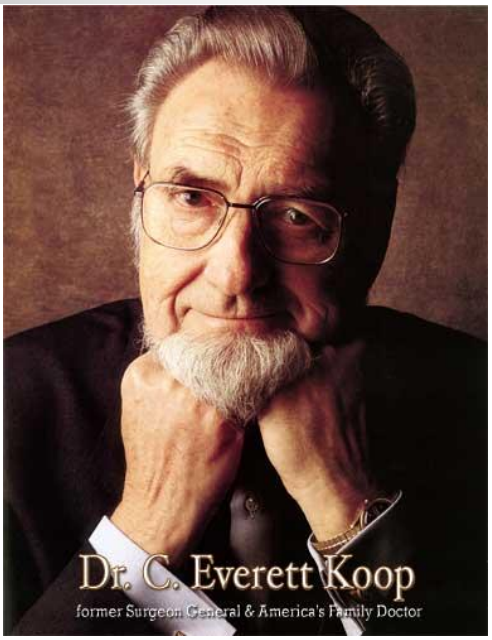
CLOSING REMARKS

Because the death of a child is such a tragedy, efforts to understand factors and circumstances causing a death may help to prevent future deaths, poor health outcomes, and/or injury of other children. Raising awareness, educating parents and communities, and enacting policies and laws designed to protect children can influence circumstances that lead to fatal injuries and prevent them from occurring. With adequate attention and support, the occurrence of unexpected child deaths can be reduced.

FOOD FOR THOUGHT

"If a disease were killing our children in the proportions that injuries are, people would be outraged and demand that this killer be stopped."

C. Everett Koop, M.D.
Former Surgeon General



APPENDICES

APPENDIX A: Louisiana State Child Death Review Panels, 2004-2009

**Co-Chairpersons

2004-2006	2007-2009	State Panel Representation
Dr. Jimmy Guidry **	Dr. Jimmy Guidry **	State Health Officer/ Department of Health and Hospitals
Cynthia Phillips **	Cynthia Phillips **	Department of Social Services
Devin George	Devin George	State Vital Records
Gieselle Hall	Lynn Watson	State Injury Research and Prevention Program
	Boyd Petty	State Fire Marshall
Pamela Bollinger	Scott Kipper	Department of Insurance
Julie Cullen	Julie Cullen	Department of Justice
Representative Yvonne Dorsey	Representative Yvonne Dorsey	Louisiana House of Representatives
Senator Lydia Jackson	Senator Lydia Jackson	Louisiana Senate
	Captain Mark Fournet	Louisiana State Police
Karen Sanders	Bob Thompson	Louisiana Highway Safety Commission
Honorable James "Jay" Lemoine	Honorable James "Jay" Lemoine	Louisiana District Attorneys Association
Angela Inzerrella	Angela Inzerrella	Louisiana Sheriff's Association
Deborah Cavalier	Deborah Cavalier	Louisiana Pathology Society
Steven Venters	Steven Venters	Louisiana Coroner's Association
Scott Benton	Scott Benton	Louisiana State Medical Society
Dr. Robert Beckerman	Dr. Robert Beckerman	Louisiana American Academy of Pediatrics
Sandra Adams	Sandra Adams	Louisiana Maternal and Child Health Coalition
Paul Ramagos	Paul Ramagos	Citizen-at-Large
Peggy Whitty Tucker		Citizen-at-Large

APPENDIX B: State & Local CDR Panel Coordinators, 2004-2009

STATE CDRP COORDINATORS

	Year(s) served
Joyce Mernin	Retired in 2005
Arleen Antoine	2005-2006
Regina Williams	2007-2008
Janie Kelly	2008-2009

LOCAL CDRP COORDINATORS

Served at some time as a Local Child Death Review Panel Coordinators From 2004-2009		Public Health Regions
Wanda Rose	Andrea Blunt	OPH Region 1 (Orleans)
Janie Kelly	Cara Bozeman	OPH Region 2 (Baton Rouge)
Linda Savoie		OPH Region 3 (Lafourche)
Tracy LeMaire		OPH Region 4 (Lafayette)
Lisa Spooner	Alisa Stevens	OPH Region 5 (Lake Charles)
Katherine Fontenette		OPH Region 6 (Alexandria)
Sharon Reed		OPH Region 7 (Shreveport)
Wilma Davenport		OPH Region 8 (Monroe)
Melissa Bordes	Jamilyn Hinchey	OPH Region 9 (St. Tammany)
Judy Christian		North Louisiana Tri-Regional Coordinator (Children's Justice Act Taskforce)

§2019. Child death investigation

A. Findings and purpose.

(1) The legislature hereby finds and declares that:

(a) Protection of the health and welfare of the children of this state is a goal of its people, and the unexpected death of infants and children is an important public health concern that requires legislative action.

(b) Collecting data on the causes of unexpected deaths will better enable the state to protect some infants and children from preventable deaths and will help reduce the incidence of such deaths.

(c) Identifying persons responsible for abuse or neglect resulting in unexpected death will better enable the state to protect other children who may be under the care of the same persons and will help reduce the incidence of such deaths.

(d) Multidisciplinary and multiagency reviews of child deaths can assist the state in the investigation of child deaths, in the development of a greater understanding of the incidence and causes of child deaths and the methods for preventing such deaths, and in identifying gaps in services to children and families.

(2) The purpose of this Section is to identify the cause of death of children fourteen years of age and below, and thereby reduce the incidence of injury and death to infants and children by requiring that a death investigation be performed in the case of all unexpected deaths of children fourteen years of age and below, and establishing the Louisiana State Child Death Review Panel to collect data from such investigations and report to the legislature regarding the causes of such deaths and share information among local and regional panels, health care providers, and state agencies which provide services to children and families.

B. Definitions. For the purpose of this Section, the following terms shall have the following meaning:

(1) "Autopsy" means a post-mortem external and internal physical examination conducted in accordance with accepted medical practice and the laws of this state using a standardized child death investigation protocol performed by a forensic pathologist or, if a forensic pathologist is unavailable, a pathologist licensed or otherwise appointed to conduct such an examination under such laws.

(2) "Death investigation" means the process of determining the cause and manner of death and shall include the following:

(a) A postmortem examination which may be limited to an external examination or may include an autopsy.

(b) An inquiry by any law enforcement agency having jurisdiction into the circumstances of the death, including a death scene investigation and interview with the child's parent, legal guardian, or caretaker, and the person who reported the child's death.

(c) A review of information regarding the child from any other relevant agency, professional, or health care provider.

(3) "Unexpected death" means a death which is a result of undiagnosed disease, or trauma in which the surrounding circumstances are suspicious, obscure, or otherwise unexplained, or other death the circumstances of which are suspicious, obscure, or otherwise unexplained. A clinical diagnosis of death due to Sudden Infant Death Syndrome (SIDS) shall be deemed an unexpected death.

C. Child Death Review Panel. There is established within the Department of Health and Hospitals the Louisiana State Child Death Review Panel, hereinafter referred to as the "state panel" which shall be composed of twenty-five persons. Members of the panel shall include:

(1) The state health officer or his designee.
(2) The secretary of the Department of Health and Hospitals or his designee.
(3) The secretary of the Department of Social Services or his designee.
(4) The superintendent of the office of state police or his designee.
(5) The state registrar of vital records in the office of public health or his designee.
(6) The attorney general or his designee.
(7) A member of the Senate appointed by the president of the Senate.
(8) A member of the House of Representatives appointed by the speaker of the House of Representatives.
(9) The commissioner of the Department of Insurance or his designee.
(10) The executive director of the Highway Safety Commission of the Department of Public Safety and Corrections or his designee.
(11) The state fire marshal or his designee.
(12) A representative of the injury research and prevention section of the office of public health appointed by the assistant secretary of the office of public health.
(13) The executive director of the Louisiana Maternal and Child Health Coalition.
(14) A district attorney appointed by the Louisiana District Attorneys Association.
(15) A sheriff appointed by the Louisiana Sheriff's Association.
(16) A police chief appointed by the Louisiana Association of Chiefs of Police.
(17) A forensic pathologist certified by the American Board of Pathology and licensed to practice medicine in the state appointed by the chairman of the Louisiana State Child Death Review Panel subject to Senate confirmation.
(18) A pathologist experienced in pediatrics appointed by the Louisiana Pathology Society.
(19) A coroner appointed by the president of the Louisiana Coroner's Association.
(20) Six persons appointed by the governor, subject to Senate confirmation, for a term of three years as follows:
(a) A health professional with expertise in Sudden Infant Death Syndrome appointed from a list of three names submitted by the Louisiana State Medical Society.
(b) A pediatrician with experience in diagnosing and treating child abuse and neglect appointed from a list of three names submitted by the state chapter of the American Academy of Pediatrics.

(c) Four citizens from the state at large who represent different geographic areas of the state.

D. Functions and duties of panel.

(1) The state panel shall:

(a) Establish a standardized child death investigation protocol which shall require at a minimum that all death investigations be completed within thirty working days of the report of the death. The protocol shall include procedures for all law enforcement agencies and local departments of social services to follow in response to a child death.

(b) Establish criteria for information that must be included in a death investigation report and provide such information to the appropriate agencies and medical providers to be used as a guideline in preparing the death investigation report.

(c) Collect, review, and analyze all death investigation reports prepared in accordance with this Section, and such other information as the state panel deems appropriate, to use in preparation of reports to the legislature concerning the causes of and methods of decreasing unexpected deaths of infants and children.

(d) Recommend changes within the agencies represented on the state panel which may prevent child deaths.

(2) The state panel may:

(a) Establish local and regional panels to which it may delegate some or all of its responsibilities under this Section.

(b) Analyze any data available through any state systems that may decrease the incidence of injury and unexpected death to infants and children below the age of fourteen.

E. Child death investigation.

(1) In each unexpected death of a child fourteen years of age and below, a death investigation shall be performed in accordance with the child death investigation protocol established by the Louisiana State Child Death Review Panel which may include, at the discretion of the coroner but not be limited to, a complete autopsy performed by the coroner of the parish where the death occurred pursuant to the death investigation procedure established by R.S. 33:1563. The death investigation findings shall be reported to appropriate authorities including the police, health care providers, and the child protective services if appropriate, within three days of the conclusion of the death investigation.

(2) A copy of the death investigation report, or any portion thereof, including law enforcement, coroner, fire department, and medical providers, or any other information relative to the death investigation shall be provided to the state panel within thirty days from the date the state panel requests such information.

(3) Nothing in this Section shall be construed to change, alter, or restrict the authority or jurisdiction of a coroner as established in R.S. 33:1551 et seq.

(4) Nothing in this Section shall be construed as requiring a finding of negligent treatment or maltreatment when the state panel determines that the parents or guardians were treating the

child solely according to the tenets and practices of a well-recognized religious method of treatment which has a reasonable, proven record of success.

F. Records; confidentiality; prohibited disclosure and discovery.

(1) Notwithstanding any other provision of law to the contrary, the state panel, and any local or regional panel or its agent thereof, shall be authorized to access medical and vital records in the custody of physicians, hospitals, clinics, and other health care providers, and the office of public health, and to any other information, documents, or records pertaining to the completed investigation of unexpected deaths of infants and children below the age of fourteen in the custody of any law enforcement agency or child protective service agency in order that it may perform its functions and duties as provided in Subsection D. All such records obtained by the state panel or any local or regional panel or its agent in accordance with the provisions of this Subsection, as well as the results of any child death investigation report, shall be confidential and shall not be available for subpoena nor shall such information be disclosed, discoverable, or compelled to be produced in any civil, criminal, administrative, or other proceeding nor shall such records be deemed admissible as evidence in any civil, criminal, administrative, or other tribunal or court for any reason.

(2) The furnishing of confidential information, documents, and reports in accordance with this Section by any person, agency, or entity furnishing such information, documents, and reports shall not expose such person, agency, or entity to liability and shall not be considered a violation of any privileged or confidential relationship, provided the participant has acted in good faith in the reporting as required in this Section.

(3) Nothing in this Subsection shall prohibit the publishing by the state panel of statistical compilations relating to unexpected child deaths of infants and children fourteen years of age or below which do not identify individual cases or individual physicians, hospitals, clinics, or other health care providers.

G. Report. The state panel shall report to the legislature annually concerning the causes of unexpected deaths of infants and children below the age of fourteen. The report shall include analysis of factual information obtained through review of death investigation reports required in Subsection D of this Section. Acts 1992, No. 745, §1, eff. July 7, 1992; Acts 1995, No. 893, §1; Acts 1999, No. 736, §1; Acts 1999, No. 965, §1, eff. July 9, 1999.

APPENDIX D: LOUISIANA VITAL STATISTICS OF CHILD DEATHS

Data from the death certificates provide information on the "who" (age, race, gender), from "what" (cause, manner), "where" (state, parish, public health region), and "when" (day, month, year, season) of child deaths. Data from case reviews and investigative reports provide information on the "how and why" (circumstances) of child deaths. See Appendix D for Child Death data by OPH regions.

Death certificates showed that 5,373 children died in Louisiana from 2002-2007.

- Most deaths (70%) were of infants ages 0 through 11 months (3,783), and 30 % were ages 1 through 14 years (1,590).
- More black children died (2,715 or 51%) than white children (2,583 or 48%) and other races (75 or 1%).

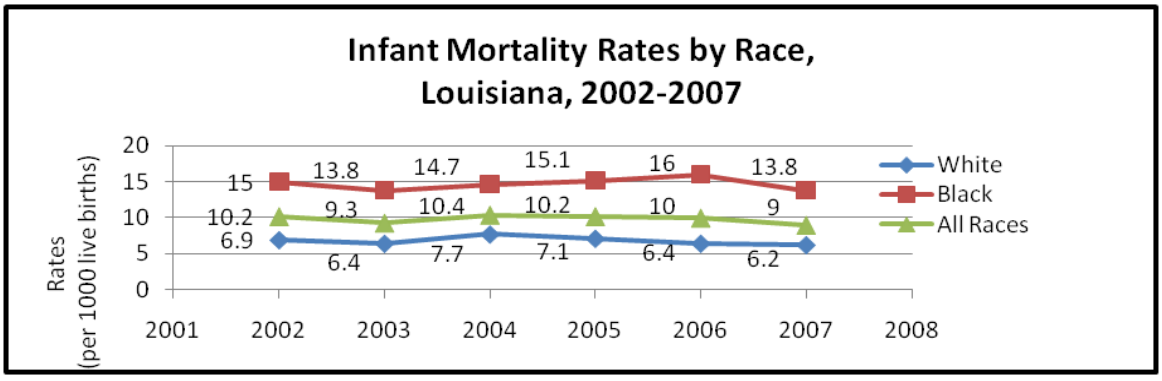
LOUISIANA INFANT MORTALITY (2002-2007)

Infant mortality continues to be a major health concern in Louisiana. According to National Vital Statistics Reports, Louisiana is one of the top five (5) states in the nation with the highest death rates of infants age 0 through 11 months each year and ranks 49th in the nation, according to Annie E. Casey Foundation's KIDS COUNT and United Health Foundation. Louisiana infant mortality rates (IMR), or infant deaths per 1000 live births, have consistently failed to meet the Healthy People 2010 objective of less than 4.5 infant deaths per 1,000 live births.

➢ *Trends of Infant Mortality Rates (2002-2007)*

- IMR decreased for all races by 2.2 % from 10.2 per 1000 in 2002 to 9.0 per 1,000 in 2007.
  - The average annual percentage change for white IMRs from 2002 through 2007 was a 1.5 % decrease compared to a 1.3 % decrease for black IMRs.
- IMRs for blacks were about twice those of whites each year from 2002 through 2007.
  - The largest disparity was in 2006 due to an increasing IMR for the black population but a decreasing IMR for the white population compared to the other years.

Figure 16: Infant Mortality Rates by Race



- ***Manner and Causes of Infant Mortality (2002-2007)***

- Most infant deaths (65%) were natural, or resulting from a natural biological process culminating in death.

- The leading causes of all infants ages 0 (birth) through 11 months were conditions originating in the perinatal period (i.e. prematurity, low birth weight, medical complications), followed by congenital malformations/deformations/ chromosomal abnormalities, sudden infant death syndrome (SIDS), and external causes (injuries). However, SIDS and external causes (injuries) were the leading causes of infant deaths aged 1 month through 11 months.

- Approximately 73% of all external causes of infant deaths were injuries that resulted from suffocation/ strangulation (53%), followed by homicide (11%), and motor vehicle crashes (9%).

- SIDS rates increased by 20% from combined years 2002-2004 to 2005-2007.

- Homicide rates increased by 80% from combined years 2002-2004 to 2005-2007.

- No significant change occurred with death rates due to suffocation and motor vehicle accidents from combined years 2002-2004 to 2005-2007.

Figure 17: Infant Deaths by Leading Causes

	Percent	****Mortality Rate**	
Leading Causes of Infant Deaths	**2002-2007**	**2002-2004**	**2005-2007**
Conditions originating in the perinatal period	47.0	4.7	4.5
Congenital malformations, deformations, and chromosomal abnormalities	18.0	1.9	1.7
Sudden infant death syndrome	11.1	1.0	1.2
External causes of mortality	6.3	0.6	0.6
**Rates per 1000 live births			

Figure 18: External/Injury Causes of Infant Deaths

	Percent	****Mortality Rate**	
External (Injury) causes	**2002-07**	**2002-2004**	**2005-2007**
Suffocation	53.0	0.33	0.32
Homicide	11.4	0.05	0.09
Moto vehicle accidents	8.5	0.05	0.05
**Rates per 1000 live births			

LOUISIANA CHILD MORTALITY (2002-2007)

Mortality rates of children are valuable measures of the well-being of children in Louisiana. According to Annie E. Casey Foundation's KIDS COUNT Databook, Louisiana's national ranking for child deaths improved from 35th in 2002 to 29th in 2007. Louisiana child mortality rates consistently exceeded the US rates of 21 per 100,000 for 2002-2003, 20 per 100,000 for 2004-2005, and 19 per 100,000 for 2006-2007.

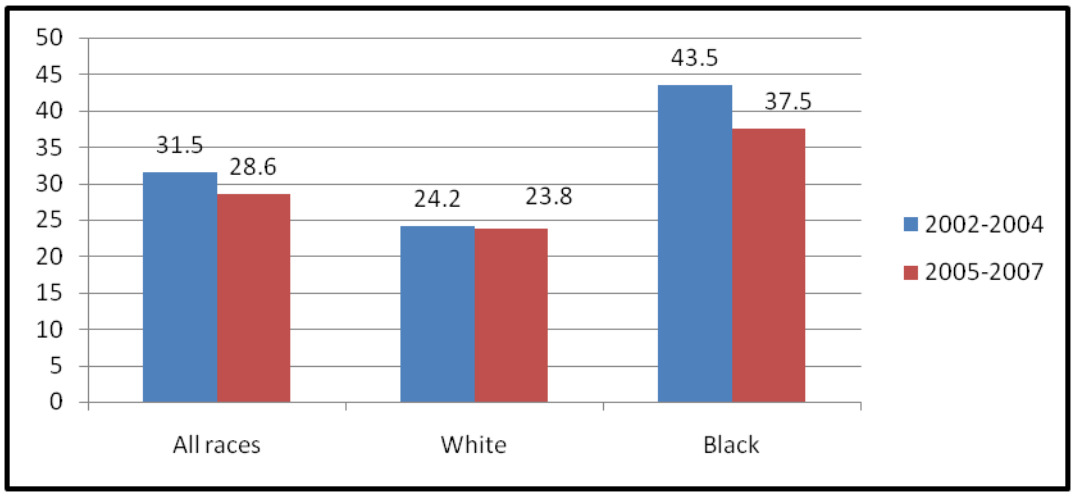
➢ *Trends of Child Mortality Rates (2002-2007)*

- From combined years 2002-2004 to 2005-2007, the child death rate decreased by 9.1%.
- Although black children died at higher rates than white children, the decrease in the child death rate from 2002 to 2007 was primarily due to a decrease in the death rate of black children by 13.9%.

Figure 19: Death Rates of Children ages 1-14 years

	2002-2004		2005-2007		
Race	Number	Rate	Number	Rate	% change of rate
All races	858	31.5	732	28.6	-9.1
White	372	24.2	349	23.8	-1.8
Black	473	43.5	368	37.5	-13.9
	Rates per 100,000 child population				

Figure 20: Trend of Death Rates of Children ages 1-14 years



- ***Manner and Causes of Child Mortality (2002-2007)***

- More children ages 1-14 years died of injuries than all medical causes combined.
  - The leading causes of death to children aged 1 to 14 years were external/injury causes (51.1%) followed by neoplasms (9%) and diseases of the nervous system (8.6%).
  - Approximately 67% of all external/injury causes of child deaths were unintentional, resulting mostly from motor vehicle crashes (38%) followed by accidental drowning/ submersion (15%), and accidental exposure to smoke/ fire/flames (14%).
- Unintentional injury death rates among children ages 1-14 years decreased from 2002-2007.
  - Death rates due to smoke/fire/flame exposure decreased from 2002-2007 by 27.3%.
  - Death rates due to motor vehicle crashes decreased from 2002-2007 by 15.1%.
  - Death rates due to drowning decreased by 12.8%.
- Intentional injuries among children ages 1-14 years increased from 2002-2007.
  - Homicide rate among children increased by 22.7% from combined years 2002-2004 to 2005-2007.
  - Suicide rate among children ages 10-14 years doubled from 0.9 per 100,000 in 2002-2004 (n=9) to 1.8 per 100,000 in 2005-2007 (n=17)

Figure 21: Child Deaths by Cause, ages 1-14 years

Cause of deaths	2002-2007	2002-2004		2005-2007		% change of rate
	Percent (%)	n	**rate	n	**rate	
External causes of mortality	51.1	431	15.8	379	14.8	-6.3
Neoplasm	9.0	85	3.1	57	2.2	-28.5
Diseases of nervous system	8.6	73	2.7	63	2.5	-8.0
Congenital malformations, deformations, and chromosomal abnormalities	7.2	70	2.6	44	1.7	-33.0
Disease of the respiratory system	6.0	49	1.8	46	1.8	0.0
Disease of the circulatory system	5.5	39	1.4	48	1.9	31.2
**Rates per 100,000 population of Louisiana children ages 1-14 years						

Figure 22: External/Injury Child Deaths, ages 1-14 years

External causes of deaths	2002-2007	2002-2004		2005-2007		% change of rate
	Percent (%)	n	rate	n	rate	
Motor vehicle accidents	37.8	167	6.1	133	5.2	-15.1
Accidental drowning/submersion	15.1	66	2.4	54	2.1	-12.8
Accidents by exposure to smoke/fire/flames	14.0	66	2.4	45	1.8	-27.3
Homicide	8.9	33	1.2	38	1.5	22.7
**Rates per 100,000 population of Louisiana children ages 1-14 years						

APPENDIX E: Child Death Injury Data by OPH Regions, 2002-2007

Data prepared by: Tri Tran, M.D., MPH, Epidemiologist, LA Office of Public Health Maternal and Child Health Program

OPH Region I, 2002-2007	2002-2004		2005-2007		% change
(-) numbers less than 5 and greater than 0	Number	Rate	Number	Rate	of rate
Total death rate of children aged 1-14	166	28.1	131	30.6	8.9
Total death rate of children ages 15-19	266	118.7	229	128.3	8.0
All unintentional injury death rate of children ages 0-14	66	10.4	60	13.0	25.2
Cause-specific injury death rate of children ages 0-14					
Drowning/submersion	13	2.1	6	1.3	-36.4
Fire/hot object or substance	13	2.1	8	1.7	-15.3
Motor vehicle accident	23	3.6	20	4.3	19.7
Suffocation	9	1.4	12	2.6	83.6
Death rate by suicide among children ages 10-14	-	-	-	-	-
Death rate by homicide among children ages 0-14	17	2.7	12	2.6	-2.8
All unintentional injury death rate of children ages 15-19	75	33.5	63	35.3	5.4
Cause-specific injury death rate of children ages 15-19					
Drowning/submersion	8	3.6	-	-	-
Fire/hot object or substance	-	-	-	-	-
Firearm	-	-	-	-	-
Motor vehicle accident	37	16.5	37	20.7	25.5
Poisoning	16	7.1	11	6.2	-13.7
Death rate by suicide among children ages 15 -19	17	7.6	15	8.4	10.7
Death rate by homicide among children ages 15 -19	113	50.4	118	66.1	31.0

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OPH Region II, 2002-2007	2002-2004		2005-2007		% change of rate
(-) numbers less than 5 and greater than 0.	Number	Rate	Number	Rate	
Total death rate of children aged 1-14	116	32.1	85	23.1	-28.2
Total death rate of children ages 15-19	125	82.3	129	85.4	3.7
All unintentional injury death rate of children ages 0-14	74	19.1	36	9.1	-52.4
Cause-specific injury death rate of children ages 0-14					
Drowning/submersion	10	2.6	10	2.5	-2.1
Fire/hot object or substance	17	4.4	6	1.5	-65.4
Motor vehicle accident	32	8.3	12	3.0	-63.3
Suffocation	13	3.4	5	1.3	-62.3
Death rate by suicide among children ages 10-14	0	0.0	-	-	-
Death rate by homicide among children ages 0-14	6	1.6	11	2.8	79.5
All unintentional injury death rate of children ages 15-19	58	38.2	56	37.1	-2.9
Cause-specific injury death rate of children ages 15-19					
Drowning/submersion	-	-	-	-	-
Fire/hot object or substance	-	-	0	0.0	-
Firearm	-	-	-	-	-
Motor vehicle accident	42	27.7	38	25.2	-9.0
Poisoning	8	5.3	9	6.0	13.1
Death rate by suicide among children ages 15 -19	14	9.2	7	4.6	-49.7
Death rate by homicide among children ages 15 -19	29	19.1	35	23.2	21.3

OPH Region III, 2002-2007	2002-2004		2005-2007		% change of rate
(-) numbers less than 5 and greater than 0	Number	Rate	Number	Rate	
Total death rate of children aged 1-14	86	35.0	73	30.6	-12.6
Total death rate of children ages 15-19	101	109.2	76	83.6	-23.5
All unintentional injury death rate of children ages 0-14	41	15.6	37	14.5	-7.3
Cause-specific injury death rate of children ages 0-14					
Drowning/submersion	6	2.3	8	3.1	36.9
Fire/hot object or substance	7	2.7	-	-	-
Motor vehicle accident	19	7.2	17	6.7	-8.1
Suffocation	-	-	-	-	-
Death rate by suicide among children ages 10-14	-	-	-	-	-
Death rate by homicide among children ages 0-14	-	-	6	2.3	-
All unintentional injury death rate of children ages 15-19	59	63.8	42	46.2	-27.6
Cause-specific injury death rate of children ages 15-19					
Drowning/submersion	-	-	-	-	-
Fire/hot object or substance	-	-	0	0.0	-
Firearm	-	-	-	-	-
Motor vehicle accident	39	42.2	30	33.0	-21.8
Poisoning	8	8.7	-	-	-
Death rate by suicide among children ages 15 -19	7	7.6	7	7.7	1.7
Death rate by homicide among children ages 15 -19	6	6.5	9	9.9	52.6

OPH Region IV, 2002-2007	2002-2004		2005-2007		% change of rate
(-) numbers less than 5 and greater than 0.	Number	Rate	Number	Rate	
Total death rate of children aged 1-14	132	37.5	91	26.0	-30.7
Total death rate of children ages 15-19	113	86.5	117	90.5	4.7
All unintentional injury death rate of children ages 0-14	72	19.1	51	13.6	-28.9
Cause-specific injury death rate of children ages 0-14					
Drowning/submersion	7	1.9	9	2.4	29.1
Fire/hot object or substance	14	3.7	9	2.4	-35.4
Motor vehicle accident	24	6.4	19	5.1	-20.5
Suffocation	11	2.9	10	2.7	-8.7
Death rate by suicide among children ages 10-14	-	-	-	-	-
Death rate by homicide among children ages 0-14	11	2.9	11	2.9	0.4
All unintentional injury death rate of children ages 15-19	71	54.3	68	52.6	-3.1
Cause-specific injury death rate of children ages 15-19					
Drowning/submersion	-	-	-	-	-
Fire/hot object or substance	-	-	-	-	-
Firearm	-	-	-	-	-
Motor vehicle accident	53	40.6	49	37.9	-6.5
Poisoning	6	4.6	9	7.0	51.7
Death rate by suicide among children ages 15 -19	10	7.7	13	10.1	31.5
Death rate by homicide among children ages 15 -19	5	3.8	11	8.5	122.5

OPH Region V, 2002-2007	2002-2004		2005-2007		% change
(-) numbers less than 5 and greater than 0.	Number	Rate	Number	Rate	of rate
Total death rate of children aged 1-14	54	31.3	59	35.2	12.5
Total death rate of children ages 15-19	45	72.7	50	83.0	14.1
All unintentional injury death rate of children ages 0-14	33	17.9	39	21.7	21.6
Cause-specific injury death rate of children ages 0-14					
Drowning/submersion	8	4.3	-	-	-
Fire/hot object or substance	-	-	5	2.8	-
Motor vehicle accident	9	4.9	10	5.6	14.3
Suffocation	10	5.4	18	10.0	85.2
Death rate by suicide among children ages 10-14	-	-	0	0.0	-
Death rate by homicide among children ages 0-14	6	3.3	7	3.9	20.0
All unintentional injury death rate of children ages 15-19	20	32.3	24	39.8	23.3
Cause-specific injury death rate of children ages 15-19					
Drowning/submersion	-	-	-	-	-
Fire/hot object or substance	0	0.0	0	0.0	0
Firearm	-	-	-	-	-
Motor vehicle accident	18	29.1	17	28.2	-3.0
Poisoning	0	0.0	-	-	-
Death rate by suicide among children ages 15 -19	9	14.5	-	-	-
Death rate by homicide among children ages 15 -19	7	11.3	9	14.9	32.1

OPH Region VI, 2002-2007	2002-2004		2005-2007		% change of rate
(-) numbers less than 5 and greater than 0.	Number	Rate	Number	Rate	
Total death rate of children aged 1-14	62	33.6	52	28.4	-15.3
Total death rate of children ages 15-19	61	93.0	58	90.4	-2.7
All unintentional injury death rate of children ages 0-14	32	16.2	41	20.9	29.4
Cause-specific injury death rate of children ages 0-14					
Drowning/submersion	-	-	5	2.6	-
Fire/hot object or substance	-	-	8	4.1	-
Motor vehicle accident	12	6.1	12	6.1	0
Suffocation	8	4.0	11	5.6	38.9
Death rate by suicide among children ages 10-14	0	0.0	0	0.0	
Death rate by homicide among children ages 0-14	5	2.5	-	-	-
All unintentional injury death rate of children ages 15-19	30	45.7	25	39.0	-14.7
Cause-specific injury death rate of children ages 15-19					
Drowning/submersion	-	-	-	-	-
Fire/hot object or substance	-	-	0	0.0	-
Firearm	-	-	-	-	-
Motor vehicle accident	20	30.5	19	29.6	-2.8
Poisoning	-	-	-	-	-
Death rate by suicide among children ages 15 -19	9	13.7	6	9.4	-31.8
Death rate by homicide among children ages 15 -19	-	-	7	10.9	-

OPH Region VII, 2002-2007	2002-2004		2005-2007		% change
(-) numbers less than 5 and greater than 0.	Number	Rate	Number	Rate	of rate
Total death rate of children aged 1-14	97	31.0	88	28.4	-8.4
Total death rate of children ages 15-19	118	96.8	86	71.6	-26.0
All unintentional injury death rate of children ages 0-14	49	14.6	42	12.6	-13.6
Cause-specific injury death rate of children ages 0-14					
Drowning/submersion	6	1.8	5	1.5	-16.0
Fire/hot object or substance	5	1.5	-	-	-
Motor vehicle accident	18	5.4	21	6.3	17.6
Suffocation	13	3.9	9	2.7	-30.2
Death rate by suicide among children ages 10-14	-	-	-	-	-
Death rate by homicide among children ages 0-14	6	1.8	11	3.3	84.8
All unintentional injury death rate of children ages 15-19	67	55.0	39	32.5	-40.9
Cause-specific injury death rate of children ages 15-19					
Drowning/submersion	0	0.0	-	-	-
Fire/hot object or substance	-	-	0	0.0	-0
Firearm	-	-	0	0.0	-
Motor vehicle accident	51	41.8	24	20.0	-52.2
Poisoning	-	-	10	8.3	-
Death rate by suicide among children ages 15 -19	11	9.0	13	10.8	20.0
Death rate by homicide among children ages 15 -19	19	15.6	18	15.0	-3.8

OPH Region VIII, 2002-2007	2002-2004		2005-2007		% change
(-) numbers less than 5 and greater than 0.	Number	Rate	Number	Rate	of rate
Total death rate of children aged 1-14	59	28.2	59	29.3	3.8
Total death rate of children ages 15-19	73	82.7	64	75.2	-9.1
All unintentional injury death rate of children ages 0-14	34	15.2	35	16.2	6.7
Cause-specific injury death rate of children ages 0-14					
Drowning/submersion	-	-	-	-	-
Fire/hot object or substance	6	2.7	6	2.8	3.7
Motor vehicle accident	14	6.3	13	6.0	-3.7
Suffocation	9	4.0	6	2.8	-30.9
Death rate by suicide among children ages 10-14	0	0.0	-	-	-
Death rate by homicide among children ages 0-14	5	2.2	5	2.3	3.7
All unintentional injury death rate of children ages 15-19	43	48.7	35	41.1	-15.6
Cause-specific injury death rate of children ages 15-19					
Drowning/submersion	-	-	-	-	-
Fire/hot object or substance	0	0.0	0	0.0	0
Firearm	-	-	-	-	-
Motor vehicle accident	37	41.9	29	34.1	-18.8
Poisoning	-	-	-	-	-
Death rate by suicide among children ages 15 -19	-	-	7	8.2	-
Death rate by homicide among children ages 15 -19	11	12.5	6	7.0	-43.5

OPH Region IX, 2002-2007	2002-2004		2005-2007		% change
(-) numbers less than 5 and greater than 0	Number	Rate	Number	Rate	of rate
Total death rate of children aged 1-14	86	29.2	93	30.2	3.7
Total death rate of children ages 15-19	109	102.6	112	101.9	-0.7
All unintentional injury death rate of children ages 0-14	59	18.7	44	13.4	-28.6
Cause-specific injury death rate of children ages 0-14					
Drowning/submersion	11	3.5	7	2.1	-39.0
Fire/hot object or substance	-	-	0	0.0	-
Motor vehicle accident	26	8.3	19	5.8	-30.0
Suffocation	9	2.9	5	1.5	-46.8
Death rate by suicide among children ages 10-14	-	-	-	-	-
Death rate by homicide among children ages 0-14	5	1.6	8	2.4	53.3
All unintentional injury death rate of children ages 15-19	71	66.8	68	61.9	-7.4
Cause-specific injury death rate of children ages 15-19					
Drowning/submersion	-	-	-	-	-
Fire/hot object or substance	-	-	-	-	-
Firearm	-	-	-	-	-
Motor vehicle accident	50	47.1	47	42.8	-9.1
Poisoning	12	11.3	10	9.1	-19.4
Death rate by suicide among children ages 15 -19	12	11.3	12	10.9	-3.3
Death rate by homicide among children ages 15 -19	5	4.7	11	10.0	112.7