

# **MASSACHUSETTS CHILD FATALITY REVIEW PROGRAM**

## **A Multi-Disciplinary Approach to the Prevention of Child Deaths**

**2013-2014**

**Henry M. Nields, MD, PhD, Co-Chair  
Carlene Pavlos, MTS, Co-Chair**

***2015***



## **Acknowledgments**

This report was prepared by Justine Egan, MPH; Lisa McCarthy-Licorish, MPH, MM; and Holly Hackman, MD, MPH of the Division of Violence and Injury Prevention, Bureau of Community Health and Prevention, Massachusetts Department of Public Health. Malena Hood, MPH of the Office of Data Management and Outcomes Assessment, Massachusetts Department of Public Health; Cristina de Almeida of the Middlesex District Attorney's Office; and Elizabeth Armstrong, B.S. Nursing, J.D. of the Office of the Child Advocate also made significant contributions to the report.

Special thanks to all the members of the State and Local Child Fatality Review Teams who come to the table for this important work. We value your commitment.

## Table of Contents

Executive Summary & Recommendations.....	1
Introduction.....	5
The Child Fatality Process Review in Massachusetts.....	8
Methods.....	9
Epidemiology of Child Fatalities in Massachusetts.....	10
Child Injury Deaths.....	13
Special Focus Area: Youth Suicide.....	15
Local and State Child Fatality Review Team Activities.....	18
Local Child Fatality Review Team Activities.....	18
State Child Fatality Review Team Activities.....	19
Challenges to the Child Fatality Review Process.....	20
Middlesex Child Fatality Review Team: Best Practices.....	21
Challenges to the Local Teams.....	22
 <b>Appendices</b>	
Appendix 1: Child Fatality Review Legislation.....	23
Appendix 2: Massachusetts State Child Fatality Review Team Members.....	27
Appendix 3: Massachusetts Local Child Fatality Review Team Members .....	28
Appendix 4: List of Recommendations.....	29
Appendix 5: Local Team Meetings and Types of Cases Reviewed.....	35
Appendix 6: Child Deaths by District of Residence.....	37
Appendix 7: Trends and Comparisons in Massachusetts Child Deaths .....	39
Appendix 8: Disparities in Massachusetts Child Deaths.....	40

# Massachusetts Child Fatality Review Program: Multi-Disciplinary Approach to the Prevention of Child Deaths 2013-2014

## Executive Summary

A child's death is a sentinel event that should urge communities to identify other children at risk for illness or injury.<sup>1</sup> The purpose of Child Fatality Review is to conduct a comprehensive, multi-disciplinary review of child deaths, to better understand how and why children die, and to use the findings to take action that can prevent other deaths and improve the health and safety of children.<sup>2</sup> In Massachusetts, Local Child Fatality Review Teams examine the circumstances of child deaths under their jurisdiction to determine if the death was preventable and to formulate recommendations outlining education, policy, and prevention action steps to take to prevent similar deaths in the future. These local recommendations inform the statewide prevention efforts of the State Child Fatality Review Team.

## Activities:

During 2013-2014 Local Teams reviewed over 140 child deaths and made more than 50 recommendations to the State Team to prevent future deaths. The State Team also took several action steps during this period on the leading causes of child death.

- **Sudden unexpected infant death (SUID)** is the leading cause of death among infants 1-11 months in Massachusetts. Abstraction of information on the circumstances of SUID in the state will increase our understanding of these deaths and enhance prevention. In 2013 and 2014, a dedicated SUID database was expanded through efforts of the MA Department of Public Health (MDPH) and the Office of the Chief Medical Examiner. In 2014, an Executive Office of Health and Human Services task force was convened to promote the prevention of SUID in Massachusetts through a media campaign on infant safe sleep and expanded trainings in state agencies.
- **Suicide** was *the* leading cause of injury death in children 0-17 years in Massachusetts during the two year period 2011 and 2012. In 2014, the MDPH provided technical guidance on suicide reviews to the State Team to improve their understanding of the evidence base for preventing these deaths.
- **Drowning** is another leading cause of injury death in children. Following a series of deaths that occurred in school pools, a multi-disciplinary work group, convened by the State Team in 2014, developed a "best practices" document to improve safety specifically in pools located within schools across the state.<sup>3</sup>

---

<sup>1</sup> The National Center for the Review & Prevention of Child Deaths, Michigan Public Health Institute. Retrieved on July 16, 2015 from: <https://www.childdeathreview.org/cdr-process/cdr-principles/>

<sup>2</sup> Ibid.

<sup>3</sup> In June 2015, a memorandum (<http://www.doe.mass.edu/cnp/resources/SwimmingPools.pdf>) was released by the MA Department of Elementary and Secondary Education that included best practices from the work group and recommendations from the State Child Fatality Review team. The memorandum was distributed to school superintendents, charter schools leaders, and other interested parties.

**Recommendations:**

The State Child Fatality Review Team received and reviewed 57 recommendations from Local Child Fatality Review Teams. A list of all Local Team recommendations submitted during this period can be found in Appendix 4. Below are recommendations formulated by the State Team based on common themes found in Local Team recommendations.

**Sudden Unexpected Infant Death (SUID):*****The State Team recommends that:***

- The MA Department of Public Health (MDPH) support staff in birthing hospitals/centers and pediatricians' offices in providing clear, correct, and consistent messaging and education on safe sleep practices to new parents prenatally, while they are in the hospital, after the birth of a child, during follow-up postpartum visits, and during pediatric visits.
- The MDPH send a circular letter to birthing hospitals and centers encouraging the adoption of a standard infant safe sleep policy that mandates infant safe sleep practices in the hospital/birth center and education to new parents about SUID and safe sleep.
- The Department of Children and Families (DCF) continue to conduct environmental checks and provide safe sleep education during routine home visits to families with infants.
- The Department of Early Education and Care (EEC) continue to require safe sleep training for day care providers as part of re-licensure requirements and require day care providers to offer families information on safe sleep.
- Child-serving agencies and professionals who have direct and indirect contact with families offer information on the importance of choosing licensed daycare options, whether family or center-based.

**Suicide:*****The State Team recommends that:***

- The Department of Elementary and Secondary Education, working in collaboration with the Department of Public Health and any others they may deem necessary, develop best practice guidance for school district staff regarding suicidality and serious mental health concerns and protocols for making referrals to medical providers and community systems.
- Funding is provided to schools so that they may hire mental health clinicians and/or train counseling staff on suicide and mental health issues.

**Drowning:*****The State Team recommends that:***

- A database of school pools is developed to track pool inspection reports with an eye toward promoting best practice safety standards. The Department of Public Health should coordinate this effort and work in collaboration with local child fatality review teams, local boards of health, school districts, and the Department of Elementary and Secondary Education.
- Municipalities review their pool safety standards regarding school pools. Content of these safety standards may include, but is not limited to: securing the pool when swim classes are not in session; taking attendance before and after swimming classes; having a lifeguard present during all swim classes; educating students on the signs of drowning; using a buddy system; requiring staff to do a full perimeter walk following swim classes; use floats to

segment the pool during swim classes; and require students to wear color-coded wrist bands identifying swim level.<sup>4</sup>

**Other:**

***The State Team recommends that:***

- The Massachusetts Chapter of the American Academy of Pediatrics (AAP) and other professional organizations send a notice through the AAP and other professional organizations reminding physicians about the confidentiality of Child Fatality Review and the risk of re-traumatizing families by notifying them of requests for medical records.

**Challenges:**

The Child Fatality Review process was not without challenges during 2013-2014. At both the state and local level, Child Fatality Review continues to be an unfunded mandate. Local Team coordinators struggle with balancing existing work responsibilities with coordinating Local Team meetings, developing Local Team guidelines, gathering records for the review, and submitting data to the State Team. Delays in both death certificate and surveillance data also affect Local and State Teams' abilities to focus prevention efforts and measure progress.

**Next steps:**

Looking forward, the State Team will continue to work on enhancing SUID data collection and prevention activities and will work closely with Local Child Fatality Review Teams to improve the quality of reviews and to submit data in a more efficient manner. The State Team anticipates releasing the document on best practices for school pools to school districts in 2015.

---

<sup>4</sup> A memorandum (<http://www.doe.mass.edu/cnp/resources/SwimmingPools.pdf>) released by the MA Department of Elementary and Secondary Education in June 2015 includes these recommendations.





## Introduction

The Child Fatality Review program in Massachusetts was authorized by M.G.L., Chapter 38: Section 2A. The purpose of Child Fatality Review (CFR) is to conduct a comprehensive, multi-disciplinary review of child deaths, to better understand how and why children die, and to use these findings to take action to prevent other deaths and improve the health and safety of children.<sup>5</sup> This report:

- Describes the multi-disciplinary approach to the prevention of child deaths in Massachusetts;
- Provides the epidemiology of Massachusetts child deaths in 2011 and 2012, the two most recent years for which death data is available;
- Summarizes the State and Local Child Fatality Review Team activities from 2013-2014;
- Identifies challenges to the child fatality review process;
- Describes recommendations made by State and Local CFR Teams to reduce the numbers of deaths among leading preventable causes of death among Massachusetts children; and
- Provides the reader with further information on CFR structure and recommendations, as well as detailed data tables in the Appendices.

---

<sup>5</sup> The National Center for the Review & Prevention of Child Deaths, Michigan Public Health Institute. Retrieved on July 16, 2015 from: <https://www.childdeathreview.org/cdr-process/cdr-principles/>

## A Multi-Disciplinary Approach to the Prevention of Child Deaths

A child's death is a sentinel event that should urge communities to identify other children at risk for illness or injury.<sup>6</sup> To be most effective, a child death review requires multidisciplinary participation from the community.<sup>7</sup> In Massachusetts, both State and Local CFR Teams are structured by statute to use a multidisciplinary, multi-agency approach in determining the factors and circumstances involved in a child's death. This method allows for a range of perspectives to assist in identifying relevant social, medical, economic, familial, and agency factors that may have played a role in a child's death,<sup>8</sup> including a wider focus of what it means to protect all children. As a result of this approach, Massachusetts State and Local CFR Teams have developed practical recommendations for policy and system change and raised awareness of prevention methods to communities, child-caring agencies, and government. Local multidisciplinary review teams in Massachusetts include representatives from:

- The medical community (doctors, mental health care providers, nurses, etc.), including a representative from the Massachusetts Chapter of the American Academy of Pediatrics
- The Department of Public Health
- The Department of Mental Health
- The Department of Children and Families
- The Department of Youth Services

---

<sup>6</sup> Ibid.

<sup>7</sup> Ibid.

<sup>8</sup> Elster, N. and Alcalde, M.G. (2003) Child Fatality Review: Recommendations for State Coordination and Cooperation, *The Journal Of Law, Medicine and Ethics*, 31 (2), 303-307.

- District Attorneys' Offices
- Educators
- The MA Hospital Association
- The MA State Police and MA Chiefs of Police Association
- The Massachusetts Sudden Infant Death (SIDS) Center
- The Office of the Child Advocate

## **The Child Fatality Review Process in Massachusetts**

The Massachusetts Child Fatality Review law establishes a State Team, under the direction of the Chief Medical Examiner, and 11 Local Teams, each directed by a District Attorney.<sup>9</sup> The State Team has been co-chaired by the Department of Public Health since 2008. By law, Local Teams are required to hold a minimum of four meetings per year. There is no meeting requirement for the State Team, but in practice the team meets bimonthly.

The Massachusetts Child Fatality Review State Team has two primary objectives established by law:

- It develops an understanding of how and why children die based on Local Team reviews;
- It advises the Governor, the Legislature and the public on changes in law, policy and practice that will prevent child deaths.

A principal responsibility of the State Team is to review recommendations submitted by the Local Teams, provide additional input where necessary, and advance the final recommendations to the Governor, Legislature, appropriate agencies and organizations, and the public. A second

responsibility is to provide ongoing advice and support for the 11 Local Teams through training and the dissemination of information pertinent to the protection of children. In 2012, a part-time State Child Fatality Review coordinator was hired by the MA Department of Public Health. Her role is to coordinate all of the State Team meetings, serve as point person for Local Team coordinators, and follow up with State Team members on action steps identified at meetings.

The Local Teams have four objectives established by law:

- Collect information on individual child deaths;
- Discuss case information in team meetings and develop an understanding of the incidence and preventable causes of child deaths;
- Through the review process, promote collaboration among the agencies that respond to child deaths and provide services to family members; and
- Advise the State Team by making recommendations for changes in law, policy and practice that will prevent child deaths.

In practice, the CFR process may vary depending on local protocols and the needs of the community. An example of how a review may occur is as follows:

---

<sup>9</sup> A list of Local Teams and coordinators can be found in Appendix A.

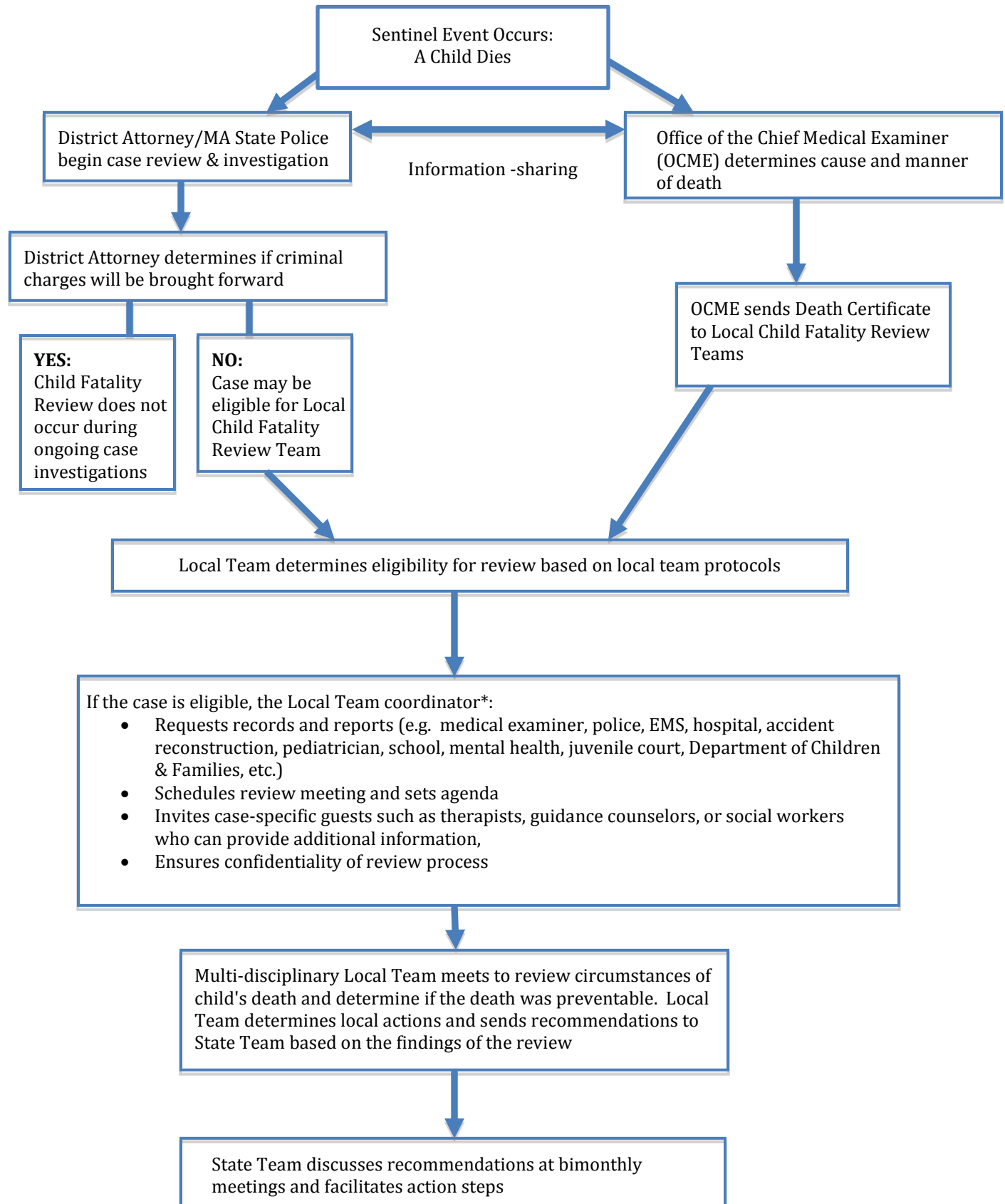
### **Example Review of a Sudden Unexpected Infant Death\***

The Local Child Fatality Review (CFR) Team met to review the circumstances of the death of an 8 week-old girl who died unexpectedly during sleep. The team reviewed records that were gathered by the Local Team coordinator from the responding police department, the State Police, the paramedics, and the Office of the Chief Medical Examiner. During the review, the team identified risk factors for sudden unexpected infant death, such as prematurity, sleeping in an adult bed with another person, and a positive methadone screening at birth. During the review, multidisciplinary team members provided key information: the state trooper discussed the scene investigation; the medical examiner discussed the results of the autopsy; the pediatrician reviewed medical records and provided information on prenatal care, labor, and birth; the representative from the Department of Children and Families discussed family history; and the representative from the Massachusetts Sudden Infant Death (SIDS) Center provided specific information about the family and consultation on Sudden Unexpected Infant Death research and risk factors. The Local Team recommended to the State Team that: 1) education on safe infant sleep practices be universally implemented at all birthing hospitals in the state using a standard of care developed by the MA Department of Public Health; and 2) methadone clinics provide information on safe infant sleep to clinic users who are pregnant.

*\*While the case details described may resemble those of actual cases, the case described is fictitious.*

**Figure 1 on page 5 describes the State and Local Child Fatality Review processes in detail.**

**Figure 1: The Child Fatality Review Process in Massachusetts**



## Methods

This report uses data from multiple sources. Massachusetts mortality data, inclusive of counts of deaths and demographics of decedents among Massachusetts residents, is from the Massachusetts Department of Public Health's (MDPH) Registry of Vital Records and Statistics and the Massachusetts Violent Death Reporting System (Figure 4 only).

Categories of deaths were defined using groupings of International Classification of Disease Tenth Revision (ICD-10) codes. A description of the ICD-10 based definition for the categories of deaths presented in Figure 2 and injury deaths presented in Figure 3, and in the accompanying text, can be found in the Massachusetts Deaths 2012: Data Brief. (*Massachusetts Deaths 2012: Data Brief*. Boston, MA: Office of Data Management and Outcomes Assessment, Massachusetts Department of Public Health. January 2015 <http://www.mass.gov/eohhs/docs/dph/research-epi/death-data/death-databrief-2012.pdf>) The 2012 death file used for this report was prepared by the Registry of Vital Records and Statistics in September 2014; counts and rates from this file may differ from data presented in the Massachusetts 2012 Death Report, which used a death file prepared at an earlier date. The definition of sudden unexpected infant death (SUID) in this report refers to deaths of infants under 12 months of age with the following ICD-10 codes: R95, R99 (manner not pending), W75, and W84.

National death rates are sourced from the Centers for Disease Control and Prevention's National Center for Health Statistics. Data on circumstances of death are from the MDPH Registry of Vital Records and the Massachusetts Violent Death Reporting System. The majority of epidemiological data presented is for the 2-year time period of 2011-2012, which represents the latest two years of death data available in Massachusetts. Five and ten year counts and average annual rates are presented where numbers are too small to provide meaningful information.

Rates were calculated using population estimates from the Missouri Census Data Center online query tool ([http://mcdc.missouri.edu/websas/estimates\\_by\\_age.shtml](http://mcdc.missouri.edu/websas/estimates_by_age.shtml)). The Missouri Census Data Center uses intercensal estimates for years 2000 to 2009 as released by National Center for Health Statistics 10-26-12. The estimates for 2010 and later are the latest 2010 post-censal figures; the population tables used were downloaded on March 10, 2015. Rates based on counts less than twenty are considered unstable. Rates are not presented on counts less than five.

Ninety-five percent (95%) confidence intervals were calculated for all death rates to determine statistical significance. The methodology used is the same as the methodology described in National Vital Statistics Reports, Vol. 52, No. 10, December 17, 2003. Rates are described as "higher" or "lower" than other rates only if the differences are statistically significant.

All data presented refers to children aged 0-17 years unless otherwise specified.

## Epidemiology of Child Fatalities in Massachusetts<sup>10</sup>

### Child Deaths in Massachusetts (2011-2012)

In 2011-2012, a total of 948 (487 in 2011 and 461 in 2012) Massachusetts children from birth through 17 years of age died. The average annual death rate was 33.8 per 100,000 MA children, compared with 51.2 per 100,000 among U.S. children.<sup>11</sup> The MA child death rate declined from 42.1 to 32.9 per 100,000 children from 2003 to 2012. Four hundred and eighty-four (484, or 51%) of all child deaths during this period were due to congenital malformations and perinatal conditions; 331 (35%) were due to other medical causes; and 133 (14%) were from injuries. (Appendix 7)

The rates of death and the leading causes of these events are not constant throughout childhood; children experience different risks for illness, injury, and death at different ages. Infants are extremely vulnerable to perinatal conditions and congenital malformations, particularly during the first month of life. Perinatal conditions are defined as conditions originating during the perinatal period, which begins at 22 weeks completed gestation and ends 7 days after birth.<sup>12</sup> Infants are also vulnerable to Sudden Unexpected Infant Death (SUID), a category of death which includes Sudden Infant Death Syndrome or SIDS, unintentional suffocation in bed and undetermined/unknown cause of death. Youth between 15-17 years of age experience the greatest risk for injury death as they begin to drive and potentially experience conflicts that may lead to youth violence or suicide.

Figure 2 shows the leading causes of death among MA children by age group. During 2011-2012, Massachusetts infants less than one year of age and youth aged 15-17 years had the highest overall death rates among Massachusetts children; children 5-9 years and youth 10-14 years had the lowest rates.

Death rates are similarly not equal across demographic subgroupings such as gender and race/ethnicity. The 2011-2012 death rate among males 0-17 years was higher than the rate among females (37.8 and 29.4 per 100,000 persons respectively). The rate among Black non-Hispanic children (58.0 per 100,000 persons) was twice the rate of White non-Hispanic children and 1.8 times the rate of Asian non-Hispanic children. The Hispanic child death rate (49.6 per 100,000 persons) was 1.8 times the rate of White non-Hispanic and 1.5 times the rate of Asian non-Hispanic children.

---

<sup>10</sup> All MA data in this chapter is from the MA Registry of Vital Records and Statistics, MDPH

<sup>11</sup> Centers for Disease Control and Prevention, National Center for Health Statistics. Underlying Cause of Death 1999-2013 on CDC WONDER Online Database, released 2015. Data are from the Multiple Cause of Death Files, 1999-2013, as compiled from data provided by the 57 vital statistics jurisdictions through the Vital Statistics Cooperative Program. Accessed at <http://wonder.cdc.gov/ucd-icd10.html> on Mar 16, 2015 2:46:26 PM

<sup>12</sup> World Health Organization. Maternal, perinatal, child, and adolescent health. Retrieved from: [http://www.who.int/maternal\\_child\\_adolescent/topics/maternal/maternal\\_perinatal/en/](http://www.who.int/maternal_child_adolescent/topics/maternal/maternal_perinatal/en/)

During 2011-2012 the MA infant mortality rate was 4.3 deaths per 1,000 live births compared with 6.0 deaths per 1,000 live births among U.S. children<sup>13</sup>. Disparities by race/ethnicity exist in infant mortality as well. The 2011-2012 Black non-Hispanic infant mortality rate (7.9 deaths per 1,000 live births) was more than two times greater than White non-Hispanic and Asian non-Hispanic infant mortality rates (3.5 and 3.1 deaths per 1,000 live births respectively). The Hispanic infant mortality rate (5.6 deaths per 1,000 live births) was more than 1.5 times greater than the White non-Hispanic and Asian non-Hispanic rates. (Appendix 8)

---

<sup>13</sup> Centers for Disease Control and Prevention, National Center for Health Statistics. Underlying Cause of Death 1999-2013 on CDC WONDER Online Database, released 2015. Data are from the Multiple Cause of Death Files, 1999-2013, as compiled from data provided by the 57 vital statistics jurisdictions through the Vital Statistics Cooperative Program. Accessed at <http://wonder.cdc.gov/ucd-icd10.html> on Mar 16, 2015 2:46:26 PM

**Figure 2: Leading Causes of Death among MA Children 0-17 Years, By Age Group, Two Year Totals for 2011-2012**

Rank	<1 year	1-4 years	5-9 years	10-14 years	15-17 years	All Children 0-17 years
1	Short gestation / LBW (N=134)	Cancer (N=17)	Cancer and in situ neoplasms (N=23)	Cancer and in situ neoplasms (N=17)	Unintentional injuries (N=32)	Perinatal conditions (N=352)
2	Congenital malformations (N=115)	Unintentional injuries (n=15)	Unintentional injuries (N=8)	Unintentional injuries (N=8)	Suicide (N=27)	Congenital malformations (N=132)
3	Pregnancy Complications (N=50)	Congenital malformations (N=9)	Congenital malformations (N=3)	Suicide (N=8)	Cancer (N=14)	Cancer and in situ neoplasms (N=75)
4	SIDS* (N=39)	Homicide (N=4)	Homicide (N=3)	Heart Disease (N=6)	Homicide (N=12)	Unintentional injuries (N=70)
5	Complications of placenta (N=31)	Heart Disease (N=3)	Heart Disease (N=3)	Congenital malformations (N=4)	Heart Disease (N=3)	SIDS* (N=39)
6	Bacterial sepsis of newborn (N=14)	Injuries of undetermined intent (N=1)	Influenza and Pneumonia (N=3)	Chronic lower respiratory disease (N=2)	Other infections (N=3)	Suicide (N=35)
7	Neonatal hemorrhage (N=12)	Anemias (N=1)	Other infections (N=2)	Influenza and pneumonia (N=2)	Influenza and pneumonia (N=1)	Homicide (N=22)
8	Necrotizing enterocolitis (N=10)	Perinatal conditions (N=1)	Anemias (N=2)	Perinatal conditions (N=1)	HIV/AIDS (N=1)	Heart Disease (N=20)
9	Respiratory distress (N=9)	Chronic lower respiratory disease (N=1)	Perinatal conditions (N=1)	Certain infections (N=1)	Injuries of Undetermined intent (N=1)	Other infections (N=11)
10	Unintentional injuries (N=7)	Meningitis (N=1)	Injuries of undetermined intent (N=1)	Pneumonitis (N=1)	Chronic lower respiratory disease (N=1)	Influenza and pneumonia (N=7)
Two Year Total deaths all causes	619	83	68	62	116	948
Average Annual Death rate per 100,000 children	423.4	14.2	8.9	7.7	22.8	33.8

Source: Registry of Vital Records and Statistics, MDPH

\*SIDS or Sudden Infant Death Syndrome may include deaths classified by the Medical Examiner as “sudden unexpected infant death” (SUID).



## Child Injury Deaths in Massachusetts (2011-2012)

Injuries are thought to be the most preventable of all child deaths and many local Child Fatality Review teams focus their case reviews on injury deaths. Sudden Unexpected Infant Death (SUID) is also described in this section.

In 2011-2012, a total of 133 Massachusetts children (71 in 2011 and 62 in 2012) from birth to 17 years died due to injury. The average annual injury death rate was 4.7 per 100,000 MA children 0-17 years, compared with 11.9 per 100,000 U.S. children.<sup>14</sup> The MA child injury death rate declined from 7.8 per 100,000 in 2003 to 4.4 per 100,000 in 2012. Suicide (N=35), motor vehicle occupant deaths (N=24), and homicide (N=22) were the leading causes of injury death among the overall 0-17 year old population in 2011-2012 (see Figure 3).

The average annual injury death rate during 2011-2012 among Massachusetts male children was twice the rate of females (6.3 compared to 3.1 per 100,000 persons, respectively). By age subgroup, injury death rates among youth 15-17 years and infants less than 1 year were comparable, statistically, and higher than rates among other age subgroups. There were no statistically significant differences in injury death rates by race/ethnicity.

In addition to the injury deaths presented in Figure 3, during the period 2011 through

2012, 64 infants (31 in 2011 and 33 in 2012) died due to Sudden Unexpected Infant Death (SUID), a 2-year average annual death rate of 52.6 per 100,000 MA infants. SUID here is defined as deaths among infants less than one year of age due to Sudden Infant Death Syndrome (SIDS); suffocation in bed; and undetermined causes.<sup>15</sup> While not all sudden unexpected infant deaths are classified as injury deaths, many SUID cases have been identified by child fatality review teams as being associated with unsafe sleep positions or environments and thus potentially preventable through injury prevention methods.

Five-year average annual SUID rates by race/ethnicity indicate significant disparities exist: the 2008-2012 average annual SUID rate among Black non-Hispanic infants (110.7 per 100,000 persons) was 2.6 times higher than the rate among White non-Hispanic infants and 4.9 times that of Asian non-Hispanic infants. See Appendix 8 for more information on disparities in child injury deaths and SUID.

### Success Story:

#### Motor Vehicle Occupant Deaths

During the 10-year period 2003-2012, the motor vehicle occupant (including motorcyclists) death rate among children aged 0-17 years decreased by an average of 13.1% per year (from 2.3 per 100,000 persons in 2003 to 0.7 per 100,000 persons in 2012). Some Massachusetts laws and policies that may have contributed to this decline include a strong graduated driver's license law (<http://www.massrmv.com/rmv/jol/index.htm>); a comprehensive child passenger safety law that includes booster seats up to age 8 or until the child is 57 inches in height; and a recent law that prohibits teenagers from using cell phones at all while driving.

<sup>14</sup> Centers for Disease Control and Prevention, National Center for Health Statistics. Underlying Cause of Death 1999-2013 on CDC WONDER Online Database, released 2015. Data are from the Multiple Cause of Death Files, 1999-2013, as compiled from data provided by the 57 vital statistics jurisdictions through the Vital Statistics Cooperative Program. Accessed at <http://wonder.cdc.gov/ucd-icd10.html> on Mar 16, 2015 2:46:26 PM

<sup>15</sup> These causes of death correspond to the following ICD-10 codes: R95, R99 (manner not pending), W75, W84

**Figure 3: Leading Types of Injury Deaths by Age Group,  
MA Children 0-17 Years, Two Year Totals for 2011 and 2012**

Rank	<1 year	1-4 years	5-9 years	10-14 years	15-17 years	All Children 0-17 years
1	Injuries of undetermined intent (N=3)	Unintentional drowning (N=7)	Homicide (N=3)	Suicide (N=8)	Suicide (N=27)	Suicide (N=35)
2	Unintentional suffocation† (N=3)	Homicide (N=4)	Unintentional drowning (N=3)	Unintentional drowning (N=3)	Unintentional MV Occupant* (N=18)	Unintentional MV Occupant* (N=24)
3	Homicide (N=3)	Unintentional suffocation (N=2)	Unintentional MV Occupant* (N=3)	Unintentional MV Occupant* (N=1)	Homicide (N=12)	Homicide (N=22)
4	Unintentional poisoning (N=1)	Unintentional MV Occupant* (N=2)	Unintentional pedestrian (N=2)	Unintentional suffocation (N=1)	Unintentional pedestrian (N=5)	Unintentional drowning (N=16)
5	Unintentional struck by/against (N=1)	Unintentional pedestrian (N=1)	Injuries of undetermined intent* (N=1)	Unintentional poisoning (N=1)	Unintentional fall (N=3)	Unintentional pedestrian (N=9)
6	Unintentional drowning (N=1)	Unintentional fall (N=1)		Unintentional pedestrian (N=1)	Unintentional drowning (N=2)	Unintentional suffocation† (N=7)
7	Natural / environmental (N=1)	Natural / environmental (N=1)		Unintentional other land transport (N=1)	Unintentional poisoning (N=1)	Injuries of undetermined intent* (N=6)
8		Injuries of undetermined intent* (N=1)			Unintentional suffocation (N=1)	Unintentional fall (N=4)
9		Unintentional injury of unspecified intent N=1)			Unintentional land transport (N=1)	Unintentional poisoning (N=3)
10					Injuries of undetermined intent* (N=1)	Unintentional other land transport (N=2)
All Other	0	0	0	0	1	5
Two Year Total	13	20	12	16	72	133
Average Annual Death rate per 100,000 children	8.9	3.4	1.6	2.0	14.1	4.7

Source: Registry of Vital Records and Statistics, MDPH, 2011 & 2012

Injuries of undetermined intent included poisoning, drowning, suffocation, unclassifiable & unspecified causes.

† Unintentional suffocation in bed is one category of death that makes up “Sudden Unexpected Infant Death “(other categories include SIDS and Unknown Cause of Death which are not presented in this table).

\* MV occupant deaths include occupants of cars, trucks, or motorcycles.

## Special Focus: Youth Suicide

### *Youth Suicide Epidemiology*

Suicide was the leading cause of injury death among Massachusetts children and youth 0-17 years in 2011-2012 (N= 35 suicides). The average annual suicide rate in MA was 2.7 per 100,000 children ages 0-17 compared to 3.4 per 100,000 among U.S. youth in the same age range.<sup>16</sup> Similar to trend increases in suicide which occurred among adults aged 35-69 years in Massachusetts, during the 10-year period 2003-2012, the suicide rate among MA youth 10-17 years increased by an average of 3.96% per year (not statistically significant)<sup>17</sup>.

Average annual Massachusetts youth suicide rates for 2003-2012 differed by sex, with males having a higher rate (2.4 per 100,000 persons) than females (1.2 per 100,000 persons). Rates by race/ethnicity were statistically similar: the rate among Asian non-Hispanic youth was 2.4 per 100,000 persons compared to 1.8 deaths per 100,000 White non-Hispanic youth, 1.7 per 100,000 Hispanic youth, and 1.4 per 100,000 Black non-Hispanic youth (see Appendix 8).

### *Circumstances of Youth Suicide*

The MA Violent Death Reporting System (MAVDRS) is a surveillance system, which contains information on all suicides and homicides occurring in Massachusetts. Basic demographics and circumstances of youth suicide for the 5-year period of 2008-2012 are listed in Figure 4. Circumstances are not mutually exclusive; percentages will not add up to 100%. Definitions for each circumstance are listed in Figure 5.

<b>Figure 4: Suicides, Ages 0-17, MA Occurrent, 2008-2012</b>		
	N	%
<b>Total</b>	74	100%
<b>Sex</b>		
Male	46	62%
Female	28	38%
<b>Age Group (Years)</b>		
0-14	19	26%
15-17	55	74%
<b>Weapon</b>		
Firearm	8	11%
Hanging	56	76%
Poisoning	2	3%
Other	8	11%
<b>Select Circumstances</b>		
Current Mental Health Problem	34	46%
Intimate Partner Problem	17	23%
Other relationship problem	20	27%
Crisis	16	22%
Treatment of mental health	26	35%
Disclosed Intent	21	28%
School Problem	14	19%

<sup>16</sup> Centers for Disease Control and Prevention, National Center for Health Statistics. Underlying Cause of Death 1999-2013 on CDC WONDER Online Database, released 2015. Data are from the Multiple Cause of Death Files, 1999-2013, as compiled from data provided by the 57 vital statistics jurisdictions through the Vital Statistics Cooperative Program. Accessed at <http://wonder.cdc.gov/ucd-icd10.html> on Apr 2, 2015 3:41:21 PM

<sup>17</sup> Joinpoint analysis

<b>Figure 5: Definitions of Circumstances of MA Occurrent Suicides, MVDRS</b>	
Current mental health problem	Identification of a current mental health problem including disorders and syndromes listed in the Diagnostic and Statistical Manual of Mental Disorders with the exception of alcohol and substance dependence. Inclusive of current treatment for a mental health disorder, even if the nature of the problem is unclear.
Intimate partner problem	Problems with a current or former intimate partner that appear to have contributed to the death. A problem may include a divorce, break-up, argument, jealousy, conflict, or discord.
Other relationship problem	Interpersonal problems with a family member, friend, or associate (other than an intimate partner) that appear to have contributed to the death.
Crisis in past 2 weeks	Victim experienced a crisis within 2 weeks of the incident, or a crisis was imminent within 2 weeks of the incident. Identifies those cases in which a very current crisis or acute precipitating event appears to have contributed to the death. Crisis is interpreted from the eyes of the victim.
Current treatment for mental health problem	Had a current prescription for psychiatric medication or saw a mental health professional within the past 2 months. Treatment includes seeing a psychiatrist, psychologist, MD, therapist, or other counselor for MH or substance abuse problem; receiving a prescription for psychiatric medicine; attending anger management classes; and residing in an inpatient, group home, or other residential facility for mental health problems.
Disclosed their intent	Disclosed to another person the intention to commit suicide. Previously expressed suicidal feelings to another person, either explicitly or indirectly.
School problem	Problems at or related to school that appear to have contributed to the death. A problem at school may be poor grades, difficulty with a teacher, bullying, social exclusion at school, or performance pressures, and this appears to have contributed to the death.

### ***Youth Suicide Prevention***

Youth suicide is painful, impacting peers, families and entire communities. Suicide can be prevented: there are known warning signs that a youth may be at risk for suicide and known protective factors that can decrease the risk of suicide. Multidisciplinary suicide prevention methods include mental health screening and services, policies mandating training of youth-serving professionals, environmental modifications such as limiting access to guns in the home, educational tools to foster healthy relationships, and crisis management after a suicide.

Key suicide prevention strategies directed at youth include:

- Teaching youth serving professionals and community members to recognize and refer youth exhibiting suicidal behavior to mental health professionals, primary care doctors, school psychologists if in a school, or a crisis hotline such as the Samaritans Statewide Hotline.
- Establishing protocols in schools, community organizations, and medical settings to ensure safety and appropriate management of identified youth.

- Implementing a planned response to a suicide within a community and especially within a school system to reduce the likelihood of additional deaths.

### ***Youth Suicide Prevention in Massachusetts***

The Massachusetts Coalition for Suicide Prevention (MCSP) supports nine Regional Coalitions throughout the state and multiple community coalitions. These coalitions provide local support to communities, conduct trainings and workshops, mobilize organizations, work with media outlets, and overall raise awareness of suicide and the available methods for prevention.

M.G.L., Chapter 284 of the Acts of 2014 titled, An Act Relative to the Reduction of Gun Violence, was signed by Governor Deval Patrick in August, 2014 and includes seven components that relate to suicide prevention, including one specifically for schools. It is now required that all licensed school personnel receive two hours of suicide prevention training every three years. The MDPH is working with the Department of Elementary and Secondary Education (DESE) to provide Best Practices for schools to use to meet the requirements of the law. In addition, the MDPH Suicide Prevention Program is producing an online training that will be made available to all licensed school personnel and will meet these requirements at no cost to schools.

Federal and state funding for suicide prevention programming allows MDPH to allocate funding to community programs working with youth and those at risk for suicide. These programs include training Bullying Intervention Specialists throughout Boston Public Schools and hiring Youth Workers throughout the state to educate and provide support and guidance to youth and those who work directly with youth.

## Local Child Fatality Review Team Activities (2013-2014)

In addition to holding meetings, reviewing deaths, and making recommendations to the State Team, Local Team activities during 2013-2013 included<sup>18</sup>:

### Essex:

- Invited MDPH's Director of Suicide Prevention, Alan Holmlund, to talk about MA teen suicide and prevention programs throughout the state.
- Met with an expert on neonatal deaths in the presence of maternal substance abuse.

### Middlesex:

- In 2013, Middlesex CFRT partnered with "Safe Babies Safe Kids" (SBSK), an initiative launched by District Attorney Marian Ryan to work toward keeping children and families safe. This multidisciplinary group takes a comprehensive approach to child injury/fatality prevention and wellness.
- In 2013/2014, Middlesex CFRT and SBSK created and distributed safe-sleep cards to hospitals, pediatrician offices, and daycare centers. Middlesex CFRT also updated and distributed a safe-sleep poster.
- In December 2014, DA Ryan issued a Public Safety Advisory to increase awareness on the importance of infant safe-sleep practices. Winchester Hospital hosted the event.
- Middlesex CFRT members attended the legislative breakfast as part of October Infant Safe Sleep Awareness Month in 2014.
- In 2013 and 2014, Middlesex CFRT and SBSK distributed posters and brochures on car safety and window safety to various

car dealerships, housing authorities, libraries, YMCAs, Boys & Girls Clubs, and recreation centers. The brochures were also distributed to police departments and placed in courts.

### Norfolk:

- Moved forward on a Safe Sleep initiative for community awareness in partnership with Norfolk Advocates for Children
- Based on recommendations of the Norfolk CFRT, the Norfolk District Attorney's Office and MDPH developed brochures and guides for law enforcement who respond to child suicides. The brochures are being finalized.
- Improved communication with the Office of the Chief Medical Examiner to receive final death certificates in cases that were once pending.
- Reviewed a number of older cases that had not previously been reviewed including SUIDs and suicides.
- Made efforts to conduct more thorough reviews by seeking additional medical and maternal health records, input from the state and local police that responded to incidents, and by reviewing the same cases over several meetings.

### Plymouth:

- Reconvened and became re-acclimated to the CFR process in 2014. Their focus was on conducting several quality reviews and beginning to conduct prevention activities and community outreach as staffing and budget allowed.

### Suffolk:

- Primary accomplishment was to meet despite a lack of staffing. The team has been supported by a very part time graduate student intern and a volunteer.
- Continued to be dedicated and invested in the CFRT process despite a lack of resources.

---

<sup>18</sup> Local team activities listed are representative of teams that submitted a list of their activities via a survey conducted in 2014. The local team activities described do not include activities among those teams that did not complete the survey, and some local team activities may be omitted in this report.

## State Child Fatality Review Team Activities (2013-2014)

During 2013-2014, the State Child Fatality Review team had several key activities and accomplishments as described below.

1. In 2013, the State Team drafted and voted on a **recommendation** that mandated reporters in Massachusetts file a 51A report following the unexplained death of a child. The 51A recommendation will be distributed in 2015 to emergency department staffs, emergency medical service personnel, fire departments, police and others that are responsible for reporting any suspicious neglect or abuse.

2. Statewide Child Fatality Review conferences, held in 2013-2014, provided educational and networking opportunities for State and Local Team members. In 2014, Teri Covington, Director of the National Child Death Review, was the keynote speaker for the conference.

3. After reviewing recommendations from Local Child Fatality Review Teams about children dying in school pools, a multi-agency working group was created in 2014 to develop a best practices document on school pool safety. The document was drafted and reviewed by working group member agencies.<sup>19</sup> It was suggested that future regulatory updates could include more specific requirements for school pools.

4. In 2014, many of the state agencies on the State Team participated in the Secretary of Health and Human Services Interagency Safe Sleep Task Force to educate state agencies, the public, parents/caregivers, medical associations and birthing hospitals about infant safe sleep practices. Additionally, Governor Deval Patrick proclaimed October 2014 to be Infant Safe Sleep Awareness Month. Other key activities consisted of a public education campaign; distribution of the Sleep Baby, Safe and Snug (from Charlie's Kid Organization) to all parents who gave birth in the month of October; and the development of a safe sleep website, [www.mass.gov/safesleep](http://www.mass.gov/safesleep), showcasing resources for the public, healthcare providers and daycare centers.

5. In relation to recommendations received on infant safe sleep policies and practices in Massachusetts birthing hospitals, MDPH conducted a survey in 2013 to determine which hospitals have an infant safe sleep policy. MDPH is currently working with birthing hospitals across the state to develop and implement a model policy.

6. The Department of Children and Families (DCF) convened a statewide safe sleep conference to raise awareness about safe sleep and the prevention of sudden unexpected infant death.

---

<sup>19</sup> In June 2015, a memorandum (<http://www.doe.mass.edu/cnp/resources/SwimmingPools.pdf>) was released by the MA Department of Elementary and Secondary Education that included best practices from the work group and recommendations from the State Child Fatality Review team. The memorandum was distributed to school superintendents, charter schools leaders, and other interested parties.

## Challenges to the Massachusetts Child Fatality Review Process

While the multidisciplinary review process provides a model for preventing child deaths, challenges exist in the implementation of the law in Massachusetts.

### *Staffing and Resources*

At both the state and local level, Child Fatality Review continues to be an unfunded mandate. Local Team coordinators, based at the District Attorney's offices, have multiple work responsibilities and limited time for coordinating local team meetings, gathering records for the review, and submitting data to the State Team. Provision of resources (in the form of staff, funding, materials, or other support) for Local Teams would allow them to conduct more effective and efficient reviews and provide the State Team with improved data to inform prevention. A more thorough process based on detailed evidence will be more effective and will do justice to the child's death under review.

Although a part-time State Child Fatality Review coordinator has been hired through MDPH, a dedicated full-time position for this work would substantially improve the efficiency and effectiveness of the program.

**State Team action:** During 2015-2016, the State Team will conduct an assessment of Local and State Child Fatality Review Teams to determine staffing and funding levels needed to support robust Child Fatality Review programming. This assessment will explore resources available and include information on how Child Fatality Review operates in other states. Findings will be reported to policymakers and other relevant stakeholders.

### *Broader Issues*

Other challenges include delays in reviewing deaths due to "pending" causes of death and the review of near fatalities. Since Local Teams rely on the cause of death to structure and conduct their reviews, a cause of death listed as "pending" investigation by the Office of the Chief Medical Examiner may result in substantial delays between when deaths occur and when they are reviewed.

In 2008, the Child Fatality Review legislation was broadened to enable multidisciplinary reviews of "near fatalities" of children. A "near fatality" was defined as "an act that, as certified by a physician, places a child in serious or critical condition." In reviews of fatalities, cases are identified through death certificates generated by the Medical Examiner's office. To identify near fatalities systematically would require participation of physicians and a central repository where near fatalities are reported. Currently, no such central repository exists.

The State Team believes that given current resources, supporting local teams to conduct higher quality fatality reviews has priority over setting up a structure to review near fatalities. The State Team will work with Local Teams to improve the quality of fatality reviews before working on near fatality.

**State Team action:** The State team discussed best practices among local Child Fatality Review Teams for conducting quality reviews and submitting effective recommendations. Best practices, as described by the Middlesex local Child Fatality Review Team, are described on the following page.



## ***Middlesex Child Fatality Review Team: Best Practices***

The Middlesex Child Fatality Review (CFR) Team has developed practices for conducting successful child fatality reviews and providing constructive recommendations to the State Child Fatality Review Team. Preliminary case selection is based on the Team's determination that they can make recommendations to prevent similar deaths in the future. The team also looks for common themes across cases and conducts reviews in similarly themed groups so they have multiple sources of data, can compare situations, and make more informed recommendations.

After case selection, the process of records collection begins. When requesting records, the Middlesex CFR team usually begins with requesting police reports and the State Police SUID investigation form if applicable. Through police reports, the team is often able to identify medical providers for the child. The team then requests all pertinent medical records (i.e., hospital records, pediatric records, ambulance records, counseling records, school records, etc.) The team also requests the complete OCME file as well as any DCF reports. As records arrive, they are reviewed and any additional records identified through this review that may be useful are requested. Portions of the records that may be pertinent to the review are flagged. Depending on the type of case, the team also may try to gather information from social media or other outside sources. Each records request is accompanied by an explanation of the CFRT statute, the purpose of the team, and confidentiality of the process.

Following a thorough review of all records received, Local Team coordinators plan how to best present the information. This could mean creating a timeline of events for a child that died by suicide, requesting educational materials from the birthing hospital where an infant was born, or requesting pool safety inspection reports for a child who drowned. To increase the effectiveness of the review, the team checks to see who, outside of the regular team members, they may be able to invite to add a useful perspective or provide additional information to assist the review. For example, in past suicide reviews, they have invited therapists of the children, who provided invaluable information.

When conducting reviews, Local Team coordinators pass out a synopsis to attendees and create a PowerPoint presentation. With the PowerPoint presentation, the team coordinators are able to display important information about the case, scene photos, records, and even notes/drawings from the child.

The Local Team reviews the circumstances surrounding the death, potential risk and protective factors, family history, and other pertinent information to determine if the death could have been prevented. The team then formulates recommendations about preventing similar deaths in the future. When developing recommendations, the team tries to ensure that the recommendations are actionable, meaning each recommendation identifies a key player in implementing the recommendation and a clear strategy. Recommendations are developed in collaboration with all Local Team members and forwarded to the State Team.

## **Challenges of the Local Teams (2013-2014)**

Local Teams reported on the following challenges, summarized below:

### **Essex:**

- Reported not having dedicated staff to coordinate the team and collect the records necessary to do thorough case reviews.
- Continued to struggle with the timeliness of death certificates with final cause of death (i.e. many death certificates are received with cause of death as “pending”).

### **Middlesex:**

- Reported that being an unfunded program is the biggest challenge.

### **Norfolk:**

- Continued to struggle with limited administrative support and resources; they also reported that funding for trainings for the community and medical professionals would greatly benefit Norfolk residents.

### **Suffolk:**

- Reported that staffing (part-time intern and volunteer) was not adequate to carry out all of the CFRT activities that the team would like. This level of staffing has slowed down record collection and the frequency of CFRT meetings.
- In the past, the team met once per month. Recently, the team has met every other month, when possible. Limited staffing has also negatively impacted timely development of recommendations, utilization of the national CFRT database, data analysis and the ability to conduct outreach or prevention activities.

## **Appendix 1:**

### **Child Fatality Review Legislation – Reflecting Amendment in 2008**

Chapter 38: Section 2A. State and local multidisciplinary child fatality review teams

Section 2A. (a) As used in this section, the following words shall have the following meanings:-

"Child", a person under the age of 18.

"Fatality", any death of a child.

"Local team", a local child fatality review team established pursuant to subsection (c).

"Near fatality", an act that, as certified by a physician, places a child in serious or critical condition.

"State team", the state fatality review team established by subsection (b).

"Team", the state or a local team.

(b) There shall be a state child fatality review team within the office of the chief medical examiner. Notwithstanding section 172 of chapter 6, members of the state team shall be subject to criminal offender record checks to be conducted by the colonel of the state police, on behalf of the chief medical examiner. All members shall serve without compensation for their duties associated with membership on the state team.

The state team shall consist of at least the following members:- the chief medical examiner, who shall chair the state team; the attorney general or a designee; the commissioner of children and families or a designee; the commissioner of public health or a designee; the commissioner of elementary and secondary education or a designee; a representative selected by the Massachusetts District Attorneys Association; the colonel of the state police or a designee; the commissioner of mental health or a designee; the commissioner of developmental services or a designee; the director of the Massachusetts center for sudden infant death syndrome, located at the Boston Medical Center, or a designee; the commissioner of youth services or a designee; a representative selected by the Massachusetts chapter of the American Academy of Pediatrics who has experience in diagnosing or treating child abuse and neglect; a representative selected by the Massachusetts Hospital Association; the chief justice of the juvenile division of the trial court or a designee; the president of the Massachusetts Chiefs of Police Association Incorporated or a designee; the child advocate appointed under section 3 of chapter 18C or a designee; and any other person, selected by the chair or by majority vote of the members of the state team, with expertise or information relevant to an individual case.

The purpose of the state team shall be to decrease the incidence of preventable child fatalities and near fatalities by: (i) developing an understanding of the causes and incidence of child fatalities and near fatalities; and (ii) advising the governor, the general court and the public by

recommending changes in law, policy and practice that will prevent child fatalities and near fatalities.

To achieve its purpose, the state team shall:

- (i) develop model investigative and data collection protocols for local teams;
- (ii) provide information to local teams and law enforcement agencies for the purpose of the protection of children;
- (iii) provide training and written materials to local teams to assist them in carrying out their duties;
- (iv) review reports from local teams;
- (v) study the incidence and causes of child fatalities and near fatalities in the commonwealth;
- (vi) analyze community, public and private agency involvement with the children and their families prior to and subsequent to fatalities or near fatalities;
- (vii) develop a protocol for the collection of data regarding fatalities and near fatalities and provide training to local teams on the protocol;
- (viii) develop and implement rules and procedures necessary for its own operation; and
- (ix) provide the governor, the general court and the public with annual written reports, subject to confidentiality restrictions, which shall include, but not be limited to, the state team's findings and recommendations.

(c) There shall be a local child fatality review team in each of the 11 districts headed by a district attorney. Notwithstanding section 172 of chapter 6, members of a local team shall be subject to criminal offender record checks to be conducted by the district attorney. All members shall serve without compensation for their duties associated with membership on a local team.

Each local team shall be comprised of at least the following members: the district attorney of the county, who shall chair the local team; the chief medical examiner or a designee; the commissioner of children and families or a designee; a pediatrician with experience in diagnosing or treating child abuse and neglect, appointed by the state team; a local police officer from the municipality where the child fatality or near fatality occurred, appointed by the chief of police of that municipality; a state law enforcement officer, appointed by the colonel of state police; the chief justice of the juvenile division of the trial court or a designee; the director of the Massachusetts center for sudden infant death syndrome, located at the Boston Medical Center, or a designee; the commissioner of public health or a designee; and any other person with expertise or information relevant to an individual case who may attend meetings, on an ad hoc basis, by agreement of the permanent members of each local team. Those other persons may include, but shall not be limited to, local or state law enforcement officers, hospital representatives, medical specialists or

subspecialists, or designees of the commissioners of developmental services, mental health, youth services and education.

The purpose of each local team shall be to decrease the incidence of preventable child fatalities and near fatalities by: (i) coordinating the collection of information on fatalities and near fatalities; (ii) promoting cooperation and coordination between agencies responding to fatalities and near fatalities and in providing services to family members; (iii) developing an understanding of the causes and incidence of child fatalities and near fatalities in the county; and (iv) advising the state team on changes in law, policy or practice which may affect child fatalities and near fatalities.

To achieve its purpose, each local team shall:

- (i) review, establish and implement model protocols from the state team;
- (ii) review, subject to the approval of the local district attorney, all individual fatalities and near fatalities in accordance with the established protocol;
- (iii) meet periodically, but at least 4 times per calendar year, to review the status of fatality and near fatality cases and recommend methods of improving coordination of services between member agencies;
- (iv) collect, maintain and provide confidential data as required by the state team; and
- (v) provide law enforcement or other agencies with information for the purposes of the protection of children.

At the request of the local district attorney, the local team shall be immediately provided with:

- (i) information and records relevant to the cause of the fatality or near fatality maintained by providers of medical or other care, treatment or services, including dental and mental health care;
- (ii) information and records relevant to the cause of the fatality or near fatality maintained by any state, county or local government agency including, but not limited to, birth certificates, medical examiner investigative data, parole and probation information records, and law enforcement data post-disposition, except that certain law enforcement records may be exempted by the local district attorney;
- (iii) information and records of any provider of social services, including the state department of children and families, relevant to the child or the child's family, that the local team deems relevant to the review; and
- (iv) demographic information relevant to the child and the child's immediate family, including but not limited to, address, age, race, gender, and economic status. The district attorney may enforce this paragraph by seeking an order of the superior court.

(d) Any privilege or restriction on disclosure established pursuant to chapter 66A, section 70 of chapter 111, section 11 of chapter 111B, section 18 of 111E, chapters 112, 123, or sections 20B, 20J or 20K of chapter 233 or any other law relating to confidential communications shall not prohibit the disclosure of this information to the chair of the state team or a local team. Any information considered to be confidential pursuant to the aforementioned statutes may be submitted for a team's review upon the determination of that team's chair that the review of this information is necessary. The chair shall ensure that no information submitted for a team's review is disseminated to parties outside the team. Under no circumstances shall any member of a team violate the confidentiality provisions set forth in the aforementioned statutes.

Except as necessary to carry out a team's purpose and duties, members of a team and persons attending a team meeting may not disclose any information relating to the team's business.

Team meetings shall be closed to the public. Information and records acquired by the state team or by a local team pursuant to this chapter shall be confidential, exempt from disclosure under chapter 66, and may only be disclosed as necessary to carry out a team's duties and purposes.

Statistical compilations of data which do not contain any information that would permit the identification of any person may be disclosed to the public.

(e) Members of a team, persons attending a team meeting and persons who present information to a team may not be questioned in any civil or criminal proceeding regarding information presented in or opinions formed as a result of a team meeting.

(f) Information, documents and records of the state team or of a local team shall not be subject to subpoena, discovery or introduction into evidence in any civil or criminal proceeding; provided, however, that information, documents and records otherwise available from any other source shall not be immune from subpoena, discovery or introduction into evidence through these sources solely because they were presented during proceedings of a team or are maintained by a team.

(g) Nothing in this section shall limit the powers and duties of the chief medical examiner or district attorneys.

## **Appendix 2: Massachusetts State Child Fatality Review Team Members**

Chief Medical Examiner (**Co-Chair**)

Commissioner of Dept. of Public Health or designee (**Co-Chair**)

### **Mandated State Child Fatality Review Team**

- Attorney General
- Commissioner of Dept. of Elementary and Secondary Education
- Commissioner of Dept. of Mental Health
- Commissioner of Dept. of Developmental Services
- Commissioner of Dept. of Children and Families
- Commissioner of Dept. of Youth Services
- Representative of Mass. District Attorney's Association
- Colonel of State Police
- Director of Mass. Center for Sudden Infant Death Syndrome (SIDS)
- Representative of the Mass. Chapter of the American Academy of Pediatrics with experience in child abuse and neglect
- Representative of the Mass. Hospital Association
- Chief Justice of the juvenile division of the trial court
- President of Mass. Chiefs of Police Association
- Office of the Child Advocate
- Anyone else with information relevant to cases under review

### **Mandated Local Child Fatality Review Team Members**

- Chief Justice of the juvenile division of the trial court, or designee
- Commissioner of Dept. of Public Health, or designee
- Commissioner of Dept. of Children and Families, or designee
- District Attorney of county (**chair**)
- Director of Mass. Center for Sudden Infant Death Syndrome (SIDS), or designee
- Pediatrician with experience in child abuse and neglect
- Local police officer from the community where the fatality occurred
- State law enforcement officer
- Anyone else with information relevant to cases under review

**Appendix 3:**  
**Massachusetts Local Child Fatality Review Team Coordinators**  
*As of June 25, 2015*

***Berkshire County***

Rachael Eramo  
[rachael.erao@state.ma.us](mailto:rachael.erao@state.ma.us)

***Bristol County***

Maryclare Flynn  
[Maryclare.Flynn@state.ma.us](mailto:Maryclare.Flynn@state.ma.us)

***Cape & Islands County***

Brian Glenn  
[brian.glenny@state.ma.us](mailto:brian.glenny@state.ma.us)

***Essex County***

Pat Snyder-Mathews  
[pat.snyder-mathews@state.ma.us](mailto:pat.snyder-mathews@state.ma.us)

***Hampden County***

Virginia Dixon  
[Virginia.Dixon@state.ma.us](mailto:Virginia.Dixon@state.ma.us)

***Middlesex County***

Cristina deAlmeida  
[cristina.deAlmeida@state.ma.us](mailto:cristina.deAlmeida@state.ma.us)

Gregory Lauranzano  
[Gregory.Lauranzano@state.ma.us](mailto:Gregory.Lauranzano@state.ma.us)

***Norfolk County***

Michele Armour  
[michele.armour@state.ma.us](mailto:michele.armour@state.ma.us)

***Northwestern (Hampshire & Franklin) County***

Heather Hubbard  
[heather.hubbard@state.ma.us](mailto:heather.hubbard@state.ma.us)

***Plymouth County***

Vanessa Madge  
[Vanessa.Madge@state.ma.us](mailto:Vanessa.Madge@state.ma.us)

***Suffolk County***

Susan Goldfarb  
[susan.goldfarb@state.ma.us](mailto:susan.goldfarb@state.ma.us)

***Worcester County***

Kimberly Henrickson  
[kimberly.henrickson@state.ma.us](mailto:kimberly.henrickson@state.ma.us)



## Appendix 4: List of Recommendations

Category	Local Team Recommendations
<b>Berkshire</b>	
Sudden Unexpected Infant Death (SUID)	Ensure there's a plan in place at hospitals, following the birth of child, to go over the proper manner of placing the child to sleep
	Ensure that someone from the hospital (perhaps a visiting nurse) does a wellness check at home 7-10 days after the child goes home. If DCF is involved with a family, ensure they follow up: Is there a crib? Assembled correctly? Do the parents know proper way to sleep child?
	It is this team's understanding that there are no requirements for DCF (no legal mandate) that they do follow-up. The team feels very strongly that such a legal mandate is required.
Suicide	Better training across entire spectrum of people who come in contact with youth (school personnel, therapists, clinicians, social workers, coaches, volunteers) about suicide, its root causes, warning signs, and prevention. There are so many people that come in contact with our children and each of them could be in position to intervene and help.
	Make mental health services more readily available to youth – the waiting list is too long for youth wanting to see a therapist.
	Better communication between the psychiatrist prescribing medication and the therapist/clinician seeing a child on a regular basis.
	Better communication (task force?) to address this issue in each community so that there is a unified approach
<b>Essex</b>	
Natural	Require methadone and suboxone clinics to reach out to OBGYNs and OBGYN clinics to work collaboratively to help substance dependent women make healthy choices for themselves and their unborn children (i.e. stop using and stay off substances during pregnancy)
	Provide better access to wrap-around services for addicted clients who are pregnant (i.e. OBGYN, mental health, social services, as well as substance abuse services)
	There is a need for a more regular, accessible procedure for getting rid of prescription drugs that people no longer need (to get them out of medicine cabinets where they are easily accessible by youth).
	The state team should gather info from other counties in MA regarding issues of court referral of marijuana users to treatment, especially as this authority relates to the age threshold for doing so. Information gathered could be used to inform recommendations for statutory change.
Sudden Unexpected Infant Death (SUID)	Reinforce the portion of safe sleep messaging regarding not bed-sharing in hospital discharge messaging (use page 5 of "Safe Sleep for your Baby" from HHS brochure).
	Consider creating a statewide media campaign to get the word out.
	The MA perinatal team is assessing what hospitals are doing currently. They could be asked to develop a hospital guidelines template for providing safe sleep guidance to all new parents.
Suicide	Ask the suicide coalition to provide training to foster parents and group home staff to prepare them to know the signs and symptoms of suicidality and know where to obtain specialized services for prevention.

<b>Hampden</b>	
Transportation	Campaign that makes the public aware MA is at the bottom of the seatbelt compliance list and the need for a primary seatbelt law.
<b>Middlesex</b>	
Drowning	Lock all doors to public/high school pools when not in use and install an audible door alarm if it is opened at an unauthorized time.
	Install security cameras at public school pools.
	Have the Department of Secondary and Elementary Education (DESE) compile a database of pools so they can make sure safety standards are met by tracking inspection reports done by the municipalities.
	Have municipalities review their pool safety standards regarding school pools.
	Implement a mandatory swim class that covers swim safety and drowning dangers.
	The State Team should form an advisory group to create best practices guidelines for school and community pools.
	A master list of school and community pools is needed to communicate guidelines. DESE should create this.
	The MA Association of School Superintendents should be in meetings to create pool safety guidelines.
	Recommendations for the content of the guidelines from Middlesex and a local school include: a) PE staff should be required to take attendance before and after swim class; b) Consider having a lifeguard present during swim class; c) Include education for students about signs of drowning; d) Use a buddy system; e) Staff should do full perimeter walk of pool at the end of class; f) Require students to wear color coded wrist bands to identify swim level; g) Use floats to segment pool during class.
	Revise 105 CMR 435 to focus on safety.
	Yearly pool inspections
Natural	Teach parents about the symptoms of diabetes (weight loss, thirst, excessive urine output).
	Ask the Department of Early Education and Care (EEC) to ensure that day care providers are required to inform parents about developmental milestones reached while at daycare so that they can be prepared to respond appropriately, if needed.
Sudden Unexpected Infant Death (SUID)	Region III of EEC has an in-person, interactive training for daycare providers who have had safe sleep citations. (In contrast, most trainings are computer-based). They also have a PSA on safe sleep in development. Licensed daycare providers are required to provide families with safe sleep literature when their children begin daycare. Explore having DPH partner with EEC to expand availability of in-person training statewide and at each licensing and/or license renewal.
	Special messaging for parents whose children are just starting daycare should be developed. Information should emphasize the importance of safe sleep practices by any and all caretakers, including daycare providers. This information should be included in packets given to parents in hospitals.
	Messaging about the importance of choosing licensed daycare options (whether family or center) is needed.
	Stricter consequences are needed for licensure violations and for providing

	unlicensed care (currently misdemeanor).
	Have DCF review their internal policies regarding how unlicensed daycare injuries and deaths are investigated to ensure consistency, appropriate level of expertise on the part of staff conducting such investigations, and proper awareness of purpose of the investigation.
	The Middlesex CFRT suggests that the State Child Fatality Review Team send notice through the Academy of Pediatricians and other professional organizations reminding physicians about the confidentiality of Child Fatality Review and the potential to re-traumatize parents by notifying them of the request for medical records.
Suicide	Increase funding to schools so that they can hire mental health staff and/or train their staff on suicide and mental health issues.
	Implement mandatory suicide prevention training for teachers and students in schools.
	Improved record sharing across systems to coordinate services/continuity of service.
	Ask MDPH to create cyber-intervention resource for professionals who work with children to consult about taking problematic webpages/content on common sites - include resources about how to access companies that erase internet content.
	Promote QPR and SOS or similar program training in school systems across state.
	Promote social-emotional health programming.
	DESE should provide information on the portion of the gun law that requires suicide screening and prevention every 3 years.
	DESE should provide information on SPRC.org website for best practice school-based programs.
	Be certain there are counselors in schools trained in suicide prevention and intervention.
	Require suicide training for mental health counselor licensure in MA.
	Screen youth every 2 years for suicide risks starting in 8th grade.
	Have psycho-pharmacologist present if possible when the State Child Fatality Review Team discusses these cases.
	Have DPH do an analysis of the medication profiles of child/adolescent suicide cases to look for patterns/commonalities.
	Require autopsy with toxicology screenings for all child/adolescent suicides to look for level of medication and mixing with illegal drugs or OTC meds.
	Find a way to provide incentives for or fund training of mental health practitioners specializing in child/adolescent mental health (including psychologists, LICSW) to address lack of trained clinicians.
	Increase insurance coverage for mental health services to children/adolescents to address access issues.
	Ensure mental health specialists have suicide prevention training.
	Set up teams of professionals between schools and the private sector to work together on child/adolescent cases so that children don't lack help during summer and vacations and to address the current lack of communication between schools and mental health professionals in the community.

	PSAs to educate parents about resources for their children (include School of Professional Psychology, MA Psychology Access Project, MA Psychiatric Association).
	Work with behavioral health providers and others to set up special clinical settings for emergency treatment of children and adolescents. Waiting in hospital ERs exposes children to traumatizing events.
	More education sessions to parents about warning signs for suicidality, where to find resources, and social media and its possible role in exacerbating trouble in a teen's life.
	Dialectic behavioral therapy is an evidence-based effective treatment for suicide prevention. Can specialists in this approach train other professionals at child/adolescent facing organizations?
	Ask state legislators to amend the gun law to require evidence-based suicide prevention training for school staff. Ask that this training be funded.
Undetermined	Ask ME's office to note on death certificate when an undetermined cause of death occurs in an unsafe sleep environment.
	Encourage prescribing doctors to have conversations with parents about safe storage of prescription medications, whether a child (even a teen) is ready for the responsibility of self-administration, potential for abuse and overdose. Include medication safety content in all health education classes (e.g. effects of taking too much, taking medications of different names with same types of effects on the body, combining with alcohol, etc.)
Unintentional suffocation	Messaging to remind parents to use all safety features or car seats regardless of where you use your car seats. Reminder to adjust for seasonal clothing may be useful. Is messaging available in multiple languages?
<b>Norfolk</b>	
Natural	The Norfolk team recommends that the state team take a look at cases of diabetic ketoacidosis to determine if there are any patterns, trends or warning signs.
	The Norfolk team recommends expanded training and access to defibrillators in all sports programs including programs at public and private schools, club organizations, town leagues, and youth groups. The team also recommends coaches receive training in the use of defibrillators prior to coaching any team.
	The Norfolk team recommends more frequent checks or monitoring of moms at high risk (potentially C-section moms) for falling asleep while breastfeeding infants.
Sudden Unexpected Infant Death (SUID)	Reinforcement of safe sleep guidelines. Encourage sleeping infants to be put in cribs only. Ensure safe sleep training for in-home infant care providers.
	To encourage OBGYNs, pediatricians, visiting nurses, pre-natal educators, and health teachers to provide specific information regarding the dangers of unsafe sleep environments and the correlation with child deaths.
	To improve the flow of information from DCF to the medical examiner's office to freely provide information to the medical examiner's office so that the medical examiner has full history before determining manner of death.
Suicide	To continue suicide prevention efforts in local communities.
Undetermined	The State Team should look at concerns with parents' use of alcohol, prescription, and non-prescription drugs and safe sleep.

	Recommend a visiting nurse or professional to do home visits where parent presents to medical facility with depression or other psychiatric issues.
	Mental health professionals should provide information on safe sleep when they are aware of a young infant in the home.
<b>Northwest</b>	
Drowning	Life jackets should be put on prior to getting on the dock.
Natural	Recommend state team seek state's report on Michael's Law from DESE.
Suicide	"Lifeline" prevention program - reaching out to locate districts to get this into place. Intervention, prevention, postvention. Supporting legislation - suicide prevention. Educating teachers, staff, bus drivers, parents, students.
	Training for school personnel - lifeline and signs of suicide
	Post suicide services for siblings and classmates
<b>Plymouth</b>	
Natural	We request the State team examine statistics to determine how common death from diabetic ketoacidosis is. We recommend a program to increase awareness for parents of signs of diabetes, possibly including a brochure in doctors' offices, supplied by DPH.
Sudden Unexpected Infant Death (SUID)	Hospital staff should assess what the family's plan is for sleep of baby upon leaving the hospital. Post labor and delivery nursing staff and/or social services personnel should ask specific questions (similar to viewing family's car seat) about where the baby will sleep, whether the family has a crib, pack and play, or other safe sleep area and work with the family to provide such items or other services if needed. We advise that DPH recommend/require that hospitals address such needs.
	We recommend that physicians be educated about the potential hazards of car seat sleep.
	We agree that DPH, DCF, EEC should continue their good efforts toward community saturation with safe sleep awareness, so that primary as well as secondary caregivers recognize the dangers of sleeping in unsafe environments
Suicide	Schools expand the new mandatory training to include training of parents and students. And/or DESE require that training of parents/students is incorporated by schools.
	Recommend that schools in Plymouth County take opportunities presented to have conversations about suicide and warning signs
	Recommend that schools in Plymouth County use programs like South Shore Interface Program, Lifelines and other DPH programs to educate teachers, kids, parents.
	Representative from DA's office and/or CFRT go to regional coalition meetings to help work on county-wide solutions
<b>Suffolk</b>	
Natural	Continue the efforts of annual influenza campaigns to ensure providers and the public have a clear understanding of the risks of influenza, and the benefits of annual influenza vaccination. Educational efforts should use culturally appropriate messages and messengers to reach all communities.
Suicide	Training on culturally competent child mental health services
	Develop culturally-sensitive community programs to promote health and

	foster well-being in immigrant groups
	Disseminate suicide warning signs
	Increasing evidence-based assessment and treatment of suicidality among youth.
Transportation	Disseminate educational materials in order to raise awareness of the importance of child pedestrian safety and provide information to children and caregivers to achieve behavioral change. It may take children with physical or developmental delays longer to acquire pedestrian skills.
	Consider revision of current legislation to lower speed limit in thickly settled areas. Currently speed limit is not posted and default is 30 mph.
	Modify the physical environment to better support pedestrian traffic, including radar signs, speed tables or speed bumps.

## Appendix 5: Tables of Local Team Meetings and Types of Cases Reviewed

The yearly logs in Appendix 5 are based on summary forms submitted to the MA Department of Public Health (DPH) following Local Team meetings. Information from these forms is used to compile basic statistics on the number of meetings Local CFR Teams held; the number and manner of death of cases reviewed; and the number of recommendations submitted to the State CFR Team. The information presented in this report is based only on forms submitted to DPH, and therefore will not reflect meetings held and cases reviewed where a summary form was not completed and/or submitted.

### Massachusetts Local Child Fatality Review -- 2013 Yearly Log\*

Team	Number of Meetings where cases completed	Total Number of Case Review Forms Submitted*	Natural	Accident	Suicide	Homicide	Unde-terminated	Other or Missing Manner	Near Fatality	Total Number of Cases with Recommendations
Berkshire	1	2			1		1			2
Bristol										
Cape and Islands										
Essex	2	4		1	1		1	1		3
Hampden										
Middlesex	4	10	3	2	1		4			9
Norfolk	4	36	29	1	3			3		2
Northwest	2	10	6	1	1		2			2
Plymouth										
Suffolk	3	7	4	1	1		1			7
Worcester										
<b>Total</b>	<b>16</b>	<b>69</b>	<b>42</b>	<b>6</b>	<b>8</b>	<b>0</b>	<b>9</b>	<b>4</b>	<b>0</b>	<b>25</b>

\*Based on forms with a meeting date of 1/1/2013 through 12/31/2013. Forms received with pending recommendations or pending re-review are not included.

**Massachusetts Local Child Fatality Review -- 2014 Yearly Log\***

<b>Team</b>	<b>Number of Meetings where cases completed</b>	<b>Total Number of Case Review Forms Submitted*</b>	<b>Natural</b>	<b>Accident</b>	<b>Suicide</b>	<b>Homicide</b>	<b>Unde-terminated</b>	<b>Other or Missing Manner</b>	<b>Near Fatality</b>	<b>Total Number of Cases with Recommendations</b>
<b>Berkshire</b>										
<b>Bristol</b>										
<b>Cape and Islands</b>										
<b>Essex</b>	<b>2</b>	<b>1</b>						<b>1</b>		<b>1</b>
<b>Hampden</b>	<b>1</b>	<b>2</b>		<b>2</b>						<b>2</b>
<b>Middlesex</b>	<b>4</b>	<b>9</b>	<b>2</b>	<b>1</b>	<b>5</b>		<b>1</b>			<b>9</b>
<b>Norfolk</b>	<b>4</b>	<b>45</b>	<b>39</b>		<b>1</b>			<b>5</b>		<b>6</b>
<b>Northwest</b>	<b>2</b>	<b>7</b>	<b>3</b>	<b>1</b>	<b>2</b>		<b>1</b>			<b>3</b>
<b>Plymouth</b>	<b>3</b>	<b>10</b>	<b>2</b>	<b>1</b>	<b>3</b>		<b>4</b>			<b>9</b>
<b>Suffolk</b>	<b>1</b>	<b>2</b>		<b>1</b>			<b>1</b>			<b>2</b>
<b>Worcester</b>										
<b>Total</b>	<b>17</b>	<b>76</b>	<b>46</b>	<b>6</b>	<b>11</b>	<b>0</b>	<b>7</b>	<b>6</b>	<b>0</b>	<b>32</b>

\*Based on forms with a meeting date of 1/1/2014 through 12/31/2014. Forms received with pending recommendations or pending re-review are not included.



## Appendix 6: Child Deaths by District of Residence

**Table 6.1: Massachusetts Child Deaths by District of Residence, 2011 and 2012**

District	Total Child Deaths (0-17 years)	Average Annual Child Death Rate per 100,000 population (95% Upper and Lower confidence interval)	Child Deaths <1 year	Child Deaths 1-17 years
Berkshire	17	34.6 (20.2, 55.4)	14	3
Bristol	78	32.6 (25.7, 40.7)	46	32
Cape & Islands (includes Barnstable, Dukes, and Nantucket counties)	22	26.7 (16.7, 40.4)	10	12
Essex	107	31.4 (25.5, 37.4)	77	30
Hampden	106	49.1 (39.8, 58.5)	65	41
Middlesex	162	25.2 (21.4, 29.1)	103	59
Norfolk	75	24.8 (19.5, 31.1)	50	25
Northwest (includes Franklin and Hampshire counties)	30	38.1 (25.7, 54.3)	21	9
Plymouth	62	26.5 (20.3, 34.0)	41	21
Suffolk	136	52.9 (44.0, 61.7)	99	37
Worcester	153	41.8 (35.2, 48.4)	93	60
<b>Total MA</b>	<b>948</b>	<b>36.8 (34.5, 39.0)</b>	<b>619</b>	<b>329</b>

*Rates based on counts less than 20 are unstable.*

**Table 6.2: Select Leading Causes/Intents of Injury Deaths by District of Residence,  
MA Children Ages 0-17 years, 2011 & 2012**

<b>District</b>	<b>Unintentional Transport Deaths (occupant, pedestrian, off road, bike, and MV unspecified)</b>	<b>Homicide</b>	<b>Suicide</b>	<b>Unintentional Drowning</b>	<b>Injuries of undetermined intent</b>	<b>Other Injury Deaths</b>	<b>Total Injury Deaths</b>
<b>Berkshire</b>	1	0	0	0	0	0	<b>1</b>
<b>Bristol</b>	7	2	3	2	0	4	<b>18</b>
<b>Cape &amp; Islands</b>	2	1	1	1	0	0	<b>5</b>
<b>Essex</b>	4	1	1	2	0	0	<b>8</b>
<b>Hampden</b>	3	4	5	3	0	1	<b>16</b>
<b>Middlesex</b>	6	2	6	3	2	5	<b>24</b>
<b>Norfolk</b>	3	1	3	0	1	1	<b>9</b>
<b>Northwest</b>	0	0	3	0	0	1	<b>4</b>
<b>Plymouth</b>	3	1	4	1	1	1	<b>11</b>
<b>Suffolk</b>	4	7	3	1	0	1	<b>16</b>
<b>Worcester</b>	2	3	6	3	2	5	<b>21</b>
<b>Total MA</b>	<b>35</b>	<b>22</b>	<b>35</b>	<b>16</b>	<b>6</b>	<b>19</b>	<b>133</b>

## Appendix 7: Comparisons in Massachusetts and U.S. Child Deaths

**Table 7.1: Deaths and Average Annual Death Rates  
Among MA and US Children 0-17 Years: 2011 & 2012**

Location and Year	2-year Total Number	2- year Average Annual Death Rate (per 100,000 persons)	Lower 95% confidence interval	Upper 95% confidence interval
MA 2011-12	948	33.8	31.6	35.9
US 2011-12	75,626	51.2	50.9	51.6

**Table 7.2: Infant Mortality Rates Among MA and US Infants: 2011 & 2012**

Location and Year	2-year Total Number	2- year Average Annual Death Rate (per 1,000 live births)	Lower 95% confidence interval	Upper 95% confidence interval
MA 2011-12	619	4.2	3.9	4.6
US 2011-12	47,614	6.0	5.9	6.1

**Table 7.3: Injury Deaths and Average Annual Injury Death Rates  
Among MA and US Children 0-17 Years: 2011 & 2012**

Location and Year	2-year Total Number	2- year Average Annual Death Rate (per 100,000 persons)	Lower 95% confidence interval	Upper 95% confidence interval
MA 2011-12	133	4.7	3.9	5.5
US 2011-12	17,639	11.9	11.8	12.1

## Appendix 8: Disparities in Massachusetts Child Deaths

**Table 8.1: Deaths and Average Annual Death Rates  
Among MA Children 0-17 Years by Age Group, 2011 & 2012**

Age Group (Years)	2-year Total Number	2- year Average Annual Death Rate (per 100,000 persons)	Lower 95% confidence interval	Upper 95% confidence interval
<1	619	423.4	390.0	510.3
1-4	83	14.2	11.5	17.3
5-9	68	8.9	7.0	11.2
10-14	62	7.7	6.0	9.8
15-17	116	22.8	18.6	26.9
All Ages 0-17	948	33.8	31.6	35.9

**Table 8.2: Deaths and Average Annual Death Rates  
Among MA Children 0-17 Years by Sex, 2011 & 2012**

Sex	2-year Total Number	2- year Average Annual Death Rate (per 100,000 persons)	Lower 95% confidence interval	Upper 95% confidence interval
Male	542	37.8	34.6	41.0
Female	404	29.4	26.6	32.3
All Children	948	33.8	31.6	35.9

**Table 8.3: Deaths and Average Annual Death Rates  
Among MA Children 0-17 Years by Select Race/Ethnicity, 2011 & 2012**

Race/Ethnicity	2-year Total Number	2- year Average Annual Death Rate (per 100,000 persons)	Lower 95% confidence interval	Upper 95% confidence interval
White NH	514	26.6	24.3	28.9
Black NH	145	58.0	48.6	67.4
Hispanic	217	49.6	43.0	56.2
Asian NH	58	32.1	24.4	41.5
Other NH and unknown	14	N/A	N/A	N/A
All Children	948	33.8	31.6	35.9

*Rates based on counts less than 20 are unstable.*

*NH indicates non-Hispanic.*

*N/A indicates rates are not applicable.*

**Table 8.4: Infant Deaths and Mortality Rates by Race/Ethnicity,  
MA Infants <1 year, 2011 & 2012**

<b>Race/Ethnicity</b>	<b>2-year Total Number</b>	<b>2-year Average Annual Death Rate (per 1,000 live births)</b>	<b>Lower 95% confidence interval</b>	<b>Upper 95% confidence interval</b>
White NH	315	3.5	3.1	3.9
Black NH	104	7.9	6.4	9.4
Hispanic	146	5.6	4.7	6.6
Asian NH	39	3.1	2.2	4.2
Other NH & unknown	15	N/A	N/A	N/A
All MA Infants	619	4.2	3.9	4.6

*Rates based on counts less than 20 are unstable.*

*NH indicates non-Hispanic.*

*N/A indicates rates are not applicable.*

**Table 8.5: Sudden Unexpected Infant Deaths (SUID) and SUID Mortality Rates  
by Race/Ethnicity, 2008-2012**

<b>Race/Ethnicity</b>	<b>5-year Total Number</b>	<b>5-year Average Annual Death Rate (per 100,000 persons)</b>	<b>Lower 95% confidence interval</b>	<b>Upper 95% confidence interval</b>
White NH	101	42.9	34.5	51.2
Black NH	40	110.7	79.1	150.7
Hispanic	45	68.5	50.0	91.6
Asian NH	6	22.8	8.4	49.6
Other NH & unknown	0	N/A	N/A	N/A
All MA Infants	192	52.6	45.2	60.1

*Rates based on counts less than 20 are unstable.*

*NH indicates non-Hispanic.*

*N/A indicates rates are not applicable.*

**Table 8.6: Injury Deaths and Average Annual Injury Death Rates  
Among MA Children 0-17 Years by Age Group, 2011 & 2012**

<b>Age Group</b>	<b>2-year Total Number</b>	<b>2- year Average Annual Death Rate (per 100,000 persons)</b>	<b>Lower 95% confidence interval</b>	<b>Upper 95% confidence interval</b>
<1	13	8.9	4.7	15.2
1-4	20	3.4	2.1	5.3
5-9	12	1.6	0.8	2.7
10-14	16	2.0	1.1	3.2
15-17	72	14.1	11.1	17.8
All Ages 0-17	133	4.7	3.9	5.5

*Rates based on counts less than 20 are unstable.*

**Table 8.7: Injury Deaths and Average Annual Injury Death Rates  
Among MA Children 0-17 Years by Sex, 2011 & 2012**

<b>Sex</b>	<b>2-year Total Number</b>	<b>2- year Average Annual Death Rate (per 100,000 persons)</b>	<b>Lower 95% confidence interval</b>	<b>Upper 95% confidence interval</b>
Male	90	6.3	5.0	7.7
Female	43	3.1	2.3	4.2
All Children	133	4.7	3.9	5.5

**Table 8.8: Injury Deaths and Average Annual Injury Death Rates  
among MA Children 0-17 Years by Select Race/Ethnicity, 2011 & 2012**

<b>Race/Ethnicity</b>	<b>2-year Total Number</b>	<b>2- year Average Annual Death Rate (per 100,000 persons)</b>	<b>Lower 95% confidence interval</b>	<b>Upper 95% confidence interval</b>
White NH	78	4.0	3.2	5.0
Black NH	19	7.6	4.6	11.9
Hispanic	31	7.1	4.8	10.1
Asian NH	4	N/A	N/A	N/A
Other NH & Unknown	1	N/A	N/A	N/A
All Children	133	4.7	3.9	5.5

*Rates not presented for counts less than 5.*

*Rates based on counts less than 20 are unstable.*

*NH indicates non-Hispanic.*

*N/A indicates rates are not applicable.*

**Table 8.9: Suicide Deaths and Average Annual Injury Suicide Rates  
Among MA Children 10-17 Years by Sex, 2003-2012**

<b>Sex</b>	<b>10-year Total Number</b>	<b>10- year Average Annual Death Rate (per 100,000 persons)</b>	<b>Lower 95% confidence interval</b>	<b>Upper 95% confidence interval</b>
Male	85	1.2	0.9	1.7
Female	41	2.4	1.9	3.0
All Children	126	1.9	1.5	2.2

**Table 8.10: Suicides and Average Annual Suicide Rates  
Among MA Children 10-17 Years by Select Race/Ethnicity, 2003-2012**

<b>Race/Ethnicity</b>	<b>10-year Total Number</b>	<b>10- year Average Annual Death Rate (per 100,000 persons)</b>	<b>Lower 95% confidence interval</b>	<b>Upper 95% confidence interval</b>
White NH	89	1.8	1.4	2.2
Black NH	10	1.7	0.8	3.2
Hispanic	11	7.1	0.6	2.3
Asian NH	8	2.4	1.0	4.7
Other NH and unknown	8	N/A	N/A	N/A
All Children	126	1.9	1.5	2.2

*Rates based on counts less than 20 are unstable.*

*NH indicates non-Hispanic.*

*N/A indicates rates are not applicable.*

