

Massachusetts Child Fatality Review

Annual Report

FY22

About the Child Fatality Review Program

The Massachusetts Child Fatality Review (CFR) program convenes a multidisciplinary group of state agency representatives, health care experts, and law enforcement officers who analyze birth and death records, medical records, social service case files, autopsy reports, and police records. The program comprises 11 local teams—one in each of the Commonwealth’s judicial districts—and the State Team with 16 seats. The local teams conduct individual case review of child fatalities that aim to understand the circumstances and causes of child deaths. For team membership, see Appendix C: FY22 State/Local Team membership, page 20. When a review identifies an opportunity to improve policy or practice, the local team issues a recommendation to the State Team. The State Team reviews these recommendations and gathers evidence from outside experts. The State Team then works with its members to change policies and practices under their purview when appropriate, and issues recommendations for consideration by the Governor and state legislature.

Preface

The loss of a child is devastating to families and can have a profound impact on communities. Since 2001, the Massachusetts Child Fatality Review (CFR) program has worked to learn from such deaths and find ways to protect the future health and safety of children. To accomplish this goal, the CFR program convenes multidisciplinary teams of health and social service practitioners, as well as government officials to conduct comprehensive reviews of the circumstances surrounding child deaths. Those reviews help identify changes in policy and practice that can prevent similar deaths. This Fiscal Year 2022 (FY22) Annual Report of the State CFR Team describes program findings and activities from July 1, 2021 through June 30, 2022 and is released in compliance with the program's authorizing statute ([M.G.L. Chapter 38 § 2A](#)).

This report and the activities of the State CFR Team would not be possible without financial support from the Office of the Child Advocate to the Department of Public Health. With their contributions and input, the CFR program is developing more timely reports with deeper explorations of the causes and prevention of child fatalities.

The State Team is also immensely grateful to the local teams who carry out the psychologically taxing review of individual child fatalities. Child fatality review is not an easy task; without exception, local teams conduct professional, thorough, and thoughtful reviews that are foundational to the State Team's work.

Finally, the State Team would like to thank the many partners who helped gather data and inform discussions about child fatality, including the Massachusetts Department of Public Health's Injury Surveillance Program, Mass in Motion program, Occupational Health Surveillance Program, and Office of Health Equity; Boston Medical Center's Children's HealthWatch and MassPIER projects; the Boston University School of Public Health; ChangeLab Solutions; Gardener Pilot Academy; the Massachusetts Department of Elementary and Secondary Education's Office for Food and Nutrition Programs; Massachusetts Project Bread; the Pioneer Valley Planning Commission; and Tohn Environmental Strategies.

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Executive Summary

Massachusetts (MA) is a national leader in safeguarding the health and wellbeing of children, as demonstrated by declining child fatality rates and low infant mortality rates. Deaths among Massachusetts children—birth to age 17—have seen a steady downward trend since 2000. Although child deaths increased slightly to 397 in 2021 from 390 in 2020, the number is well below the 648 child deaths that occurred in 2000 and the 501 in 2010. In 2021, the child fatality rate in Massachusetts was 29.1 per 100,000 population. The leading causes of death for children in 2021 remained consistent with previous years: congenital malformations, unintentional injuries, and cancer.

Despite the low rate of infant and child fatalities in Massachusetts, substantial inequities exist. Boys, children of color, and children and infants living in urban centers are all at higher risk of fatality. The scale of inequities in child deaths is particularly marked for infants. These inequities are not rooted in biological or genetic differences between races and ethnicities, nor are they inherent to other aspects of a child's or infant's race or ethnicity. Rather, they are linked to [social determinants of health](#), including factors like socioeconomic status and access to health care.

To understand and address those inequities, the State Team conducted an in-depth examination of social determinants of health through the lens of infant and child fatalities, reviewing broad issues around health equity and dedicating meetings to the intersection of employment, housing, the built environment, and education, with fatalities.

During this examination, the State Team determined that understanding and addressing the root causes of inequities in infant fatalities, which are nearly 60% of child fatalities in Massachusetts, requires a system specifically designed for infants and fetuses. [Fetal and Infant Mortality Reviews \(FIMR\)](#) offers a promising approach to meeting this demand. FIMR programs engage a broad range of partners with specific pre-natal, peri-natal, and post-natal expertise. **Therefore, the State Team recommends that the Commonwealth should create a statewide Fetal and Infant Mortality Review program.**

Housing

Upon examination of how housing affects infant and child fatalities, two areas of focus emerged: household injuries and pest management.

Household injuries include falls from windows and stairs, burns and scalds in kitchens and bathrooms, drownings in bathtubs and pools, and poisonings from household cleaners and other substances. In 2021, unintentional injuries from drowning, poisoning, and suffocation led to 24 of that year's 397 child fatalities.^{1,2} Although such injuries cause relatively few child fatalities, they result in a large number of pediatric hospitalizations and emergency department visits—nearly a third of all such encounters.^{3,4} Strong evidence points to installation of safety equipment, such as smoke alarms, stair gates, window guards and cabinet locks, for the prevention of household injuries.⁵ Currently there is no statewide program that supports residents in identifying, accessing and installing necessary safety equipment. **The State Team recommends that the Commonwealth should study the feasibility of a program that pairs home safety assessments with subsidized home modifications to mitigate injury risk among children and infants.**

Poor housing conditions, particularly related to pest infestations, are detrimental to mental and physical health. The presence of pests increase sensitivity to allergens and can trigger asthma-related symptoms.^{6,7} Integrated pest management (IPM) is an evidence based approach to mitigate the effects of pest infestations. **The State Team recommends that the Commonwealth should require the use of integrated pest management as standard practice by pesticide applicators and subsidize the provision of such services to residents in environmental justice communities.**

Built Environment

When exploring the built environment, the state team learned that in the next 50 years, climate change is anticipated to increase the average number of days with a temperature over 90°F from 5 to 27 in Massachusetts.⁸ Heat events are associated with increased rates of heat exhaustion, heat stroke, drowning, mental illness, preterm birth, illness related to cardiovascular disease, illness due to renal failure, and interpersonal violence.⁹⁻¹² Adequate cooling for homes, schools, and business is necessary to prevent negative heat-related health outcomes. **The State Team recommends that the Commonwealth should expand programs that support the deployment of active and passive cooling technologies—including in residences, rental properties, and schools—with an emphasis on growing heat pump use in environmental justice communities.**

Education

The examination of education as a Social Determinant of Health challenged the team to thinking beyond the obvious life-long benefits of strong educational foundations to the immediate role schools often play in addressing the needs of children and their families.

Schools are increasingly expected to support not only academic growth, but also social, emotional, and physical wellbeing. This is especially challenging in resource-poor, high needs communities.¹³ In response to the growing demands and expectations placed on school, some have embraced a “community school” model. Community schools engage community agencies, families, advocates, and other stakeholders in close partnership to create a one-stop shop for family resources and services. Community schools have shown marked improvement in educational outcomes.¹⁴ **As such, the State Team recommends that the Commonwealth should develop guidance to support municipalities and communities in the establishment of community schools and expansion of school-based health centers.**

The following report provides additional context, data, and justifications about these recommendations. Implementing these recommendations will accelerate declines in child fatalities, saving lives and protecting families and communities from unnecessary trauma and grief.

The State of Child Fatalities in Massachusetts

Massachusetts continues to experience low rates of infant and child fatalities compared to other U.S. States, which is a testament to the strong institutions in the Commonwealth, though rates vary substantially across geographic regions and identities. The overall child death rate in 2021 was 29.1/100,000 population^a, reflecting 397 deaths of children ages 0-17. There were 7 more fatalities in 2021 compared to 2020, which interrupts a more than 20-year decline in the count of child fatalities. In 2021, Berkshire, Hampden, Suffolk, and Bristol districts^b all experienced higher than state average child fatality death rate. By contrast, Northwest, Middlesex, Norfolk, and the Cape and Islands had lower child death rates than the state average. Plymouth, Essex, and Worcester had child death rates similar to the state.

Table 1: Top Five Leading Causes of Death Among Massachusetts Children by Age Group, 2021

Rank	Infants (<1 year)	1-4 Years	5-9 Years	10-14 Years	15-17 Years	1-17 years	0-17 Years (Total)
1	Congenital malformation (n=42)	Unintentional injuries (n=6)	Cancer (n=7)	Cancer (n=12)	Unintentional injuries (n=17)	Unintentional injuries (n=34)	Congenital malformation (n=51)
2	Short gestation/low birth weight (n=30)	Ill-defined conditions- signs and symptoms (n=4)	Chronic lower respiratory disease (n=2)	Unintentional injuries (n=10)	Suicide (n=14)	Cancer (n=31)	Unintentional injuries (n=35)
3	Sudden Infant Death Syndrome (SIDS) (n=26)	Cancer (n=3)	Congenital malformations (n=2)	Suicide (n=4)	Cancer (n=9)	Suicide (n=18)	Cancer (n=31)
4	Complications of placenta (n=15); Pregnancy complications (n=15)	Congenital malformations (n=3)	Injuries of undetermined intent (n=1); Unintentional injuries (n=1)	Heart disease (n=3)	Homicide (n=4)	Congenital malformations (n=9)	Short gestation/low birth weight (n=30)
5	Intrauterine hypoxia (n=8)	Heart disease (n=3)	Influenza & pneumonia (n=1); Other Infections (n=1)	Congenital malformations (n=2); Homicide (n=2); In situ neoplasms (n=2)	Chronic lower respiratory disease (n=2); Congenital malformations (n=2); Diabetes (n=2)	Heart disease (n=7); Homicide (n=7)	Sudden Infant Death Syndrome (SIDS) (n=26)
Total # by Age Group	230	32	26	50	59	167	397

Data Source: Massachusetts (MA) Department of Public Health, Registry of Vital Records and Statistics, 2021.

^a Unless otherwise noted, rate refers to rate per 100,000 population

^b Districts refers to the Local Child Fatality Review Team districts, which are coordinated through each District Attorney's office in Massachusetts. For additional information, visit: <https://www.mass.gov/directory-of-district-attorney-offices>

Table 1 shows the leading causes of death by age group and total child deaths. The leading causes of death for 0-17 year olds in 2021 were congenital malformations (n=51), unintentional injuries^c (n=35), and cancer (n=31). The increase in the child deaths in 2021 was driven by deaths among 1-17 year olds; fatalities among 1-17 year olds increased from 127 in 2020 to 167 in 2021, with an increase in the child fatality rate from 9.7 in 2020 to 12.9 in 2021. The highest increase was noted in the 10-14 year age group. This increase in the child fatality rate is not isolated to Massachusetts; it is reported nationally as well.¹⁵ The top three causes of death among children ages 1-17 years were unintentional injuries (n=34), cancer (n=31), and suicide (n=18). Cancer and unintentional injuries are the top two causes of death that contributed to the increase in child fatality rates in the 10-14 year age group.

Inequity among the sexes is deeper in the 1-4 year age group, where the death rate for male children was 1.8 times as high when compared to females. The death rate among Black, non-Hispanic/Latinx children was 2.8 times and Hispanic/Latinx children 1.6 times as high compared to White, non-Hispanic/Latinx children. Asian, non-Hispanic/Latinx children had a slightly higher death rate (1.1 times as high) compared to White, non-Hispanic/Latinx children.

Infant (<1 year old) fatalities decreased from 263 in 2020 to 230 in 2021, which reflects a rate decrease from 378.5^d in 2020 to 331.0 in 2021. Still, infant deaths accounted for 58% of all child deaths in Massachusetts. The top three causes of death among infants were congenital malformations (n=42), short gestation/low birth weight (n=30), and sudden infant death syndrome (n=26), which is similar to 2020.

Even though Massachusetts has one of the lowest infant mortality rates in the US, there are deep inequities in persons who experience fatality.¹⁶ Infants identified as male at birth died at a rate that was 1.3 times as high compared to female infants. At a rate of 941.6, the infant death rate among Black, non-Hispanic/Latinx infants was 3.7 times and Hispanic/Latinx children 1.4 times as high compared to White, non-Hispanic/Latinx infants. Asian, non-Hispanic/Latinx infants had a slightly higher death rate (1.1 times as high) compared to White, non-Hispanic/Latinx infants.

The death rate among Asian/Pacific Islander, non-Hispanic/Latinx infants was also higher than the rate among White, non-Hispanic/Latinx infants (289.3 and 255.3, respectively). These inequities can in part

COVID-19-Related Infant and Child Fatalities

Seven children died from COVID-19 in 2021, with four deaths in the 10-14 year age group and one death each in 1-4, 5-9, and 15-17 year age groups.

COVID-19 deaths were higher among children of color, similar to the trend across the nation.¹⁴ Five of the seven deaths in Massachusetts were among children of color (four Hispanic/Latinx children and one, Black, non-Hispanic/Latinx child), one, another race, non-Hispanic/Latinx child and one, White non-Hispanic/Latinx child.

^c Unintentional injuries such as motor-vehicle crashes, drowning, poisoning, and falls

^d Rate differs slightly from the FY21 report as the death counts and population estimates (for denominators) are updated with the latest data available.

be attributed to lack of access to quality health care, socioeconomic disparities, and structural racism; they are not inherent to an infant's race or ethnicity.¹⁷

The scale of inequities in infant deaths, volume of cases, and complexity of the causes underlying those inequities merits a dedicated review system, guided by perinatal subject matter experts.

Like Child Fatality Review, Fetal and Infant Mortality Review (FIMR)¹⁸ programs use multidisciplinary, community-based, action-oriented teams and processes to improve services, systems, and resources with the aim of reducing fetal and infant deaths. What differentiates FIMR from CFR is the subject matter expertise of the multidisciplinary team. While the Massachusetts CFR Teams consist primarily of District Attorney's Offices, Law Enforcement, Emergency Responders and Social Workers, FIMR teams center obstetricians, gynecologists, midwives, geneticists, and other experts in maternal-fetal medicine. As of the writing of this report, there is no state-wide FIMR program in Massachusetts. A FIMR program would permit more specialized in-depth analysis of individual fetal and infant deaths and generation of relevant recommendations. The creation of such a program would not prevent local CFR teams from examining infant deaths.

The State Team recommends that the Commonwealth create a statewide Fetal and Infant Mortality Review program to examine the circumstances surrounding individual fetal and infant deaths and to make recommendations that would prevent similar deaths in the future.

Child Fatalities & Social Determinants of Health

To better understand the underlying causes of child fatalities and related inequities, the State Team turned to a long-standing public health model: Social Determinants of Health. Social Determinants of Health (SDoH) are the social, economic, behavioral, and physical factors that we experience where we work, live, and play. They make up the vast majority of what impacts our health.¹⁹ The Massachusetts Department of Public Health focuses on six broad categories of SDoHs: the built environment, education, employment, housing, the social environment, and violence.²⁰

To better understand how these factors affect child deaths in Massachusetts, and how they can be equitably improved in Massachusetts, the State Team called on experts in the areas of housing, the built environment, education, and employment. The following is a summary of those discussions, key findings, and resulting recommendations.

Housing

When housing is accessible, affordable, stable, and safe, people are more likely to have better physical and mental health outcomes. Housing is considered one of the most important social determinants of health. It plays a critical role in reducing an individual's risk of many poor health outcomes, from asthma to depression to injuries.^{21,22} While many aspects of housing affect a child's wellbeing, discussion with subject matter experts elevated two key housing-related issues that are contributing to child fatalities in Massachusetts: household injuries and pest management.

Housing refers to the permanent or temporary dwelling where people live or reside.

Household Injuries

Household injuries include falls from windows and stairs, burns and scalds in kitchens and bathrooms, drownings in bathtubs and pools, and poisonings from household cleaners and other substances. In 2021, unintentional household injuries from drowning, poisoning, and suffocation led to 24 of that year's 397 child fatalities.^{1,2} Although such injuries cause relatively few child fatalities, they result in a large number of pediatric hospitalizations and emergency department visits—nearly a third of all such encounters. In 2021, unintentional injuries in Massachusetts due to drowning, burns, falls, poisoning, and suffocation led to around 37% (1227 of 3273) of total hospitalizations and 38% (31642 of 87,835) of total ED visits among children.^{3,4} The risk and burden of these outcomes is not distributed equitably. There is some evidence that indicates an association between lower socio-economic status and higher household injury risk.²³ Such risk may be particularly pronounced in Massachusetts given the relatively old age of housing stock and short supply of housing.^{24,25}

Home modifications can reduce the risk of household injuries. Strong evidence supports interventions including installation of smoke alarms, stair gates, window guards, as well as education around setting safe hot water temperatures and safe storage of medications and other potentially toxic substances.⁵ In Massachusetts, some minimal modifications can be accomplished in some communities through interventions like the Community Emergency Medical Services program, or hospital-based injury prevention programs.^{26,27} However, there is no statewide program that can support residents in identifying and addressing injury risks in the home.

In the energy conservation space, the MassSAVE program offers a promising model of a similar intervention. Through contractors, MassSAVE provides homeowners and landlords with no-cost home energy assessments. Homeowners are provided with simple energy-saving modifications during the assessment; they also receive education on energy saving practices and become eligible to receive certain no-cost energy-saving products, rebates towards the purchase of energy-efficient appliances, and loans towards more expensive energy-saving home modifications, like window replacements.

A comparable program aimed at addressing in-home injury risks could greatly reduce the impact of childhood household injuries by removing hazards. The program would engage trained specialists around assessments for home modifications, coordinate and subsidize construction or installation services by third-party contractors, and follow up with residents to ensure that modifications were performed correctly.²⁸ Such a program would aim to prevent injuries prospectively when possible, and also support the implementation of home modifications after an injury, when caregivers may be more inclined to pursue such an intervention.²⁹ Various small-scale pilot programs that have provided home renovation, weatherization, modification have found a range of improvements in health outcomes: improved sleep and mental health, fewer falls, lower health care usage and costs.

The State Team recommends that the Commonwealth study the feasibility of a program that pairs home safety assessments with subsidized home modifications to mitigate injury risk among children.

Asthma and Integrated Pest Management

Poor housing conditions, particularly resulting from the presence of pests, can be detrimental to a family's overall mental health and physical health. Increased presence of pests like cockroaches and mice can trigger asthma-related symptoms and increase risks of becoming more sensitive to allergens.^{6,7} Severe childhood asthma disproportionately impacts children of color and those living in areas of concentrated poverty, and is associated with poor housing quality.³⁰ In Massachusetts, populations at risk overlap substantially with environmental justice communities, which are neighborhoods that meet certain criteria around the share of residents who have low incomes, are minorities, or identify as speaking English less than "very well."³¹

In addition, a cross-sectional study in Boston public housing found that individuals in homes with current cockroach infestations were experiencing depressive symptoms with odds 3 times as high as those without at the time of the study, and infestation by both cockroaches and mice 5 times as high as those without infestation.²¹ Additionally, overall poor housing quality in itself—with presence of pests being included in this measure—was consistently associated with greater emotional and behavioral problems, as well as worse school performance for adolescents.²²

Historically, to address pest management, landlords and tenants have used fumigation with pesticides and various sprays, but these require coordination lest the pests simply flee to a neighboring unfumigated apartment. As an alternative, integrated pest management (IPM) involves several interventions, including educating and assisting residents with sanitation; clutter control; deep cleaning

with a vacuum equipped with a HEPA filter; monitoring for pests; sealing holes and cracks to prevent pests from entering the home; and use of gel baits and boric acid.³²

From 2000 to 2009, the Boston Housing Authority partnered with a number of public health and academic experts in a series of projects to deploy IPM interventions in Boston public housing developments. These projects led to impressive results, with residents reporting little to no pest activity in 100% of units and 100% of common areas after treatment, up from 77% and 0% respectively prior to treatment. Residents who had IPM methods applied to their units saw lower allergen loads and significant reductions in asthma symptoms among children.³³

The State Team recommends that the Commonwealth require the use of integrated pest management as standard practice by licensed pesticide applicators and subsidize the provision of such services to residents in environmental justice communities.

The Built Environment

Well designed, well maintained environments that center people and community contribute to physical, social and mental well-being. The built environment is a reflection of investment; varying levels of investment driven by land use, zoning, licensing, permitting, redlining and other historic policies have led to inequitable access to well designed and maintained environments, which contributes to health inequities.

Built environments are the physical spaces where someone works, learns, plays, and worships.

One way that the built environment contributes to or detracts from positive health outcomes is through the creation or mitigation of heat islands, which are particularly prevalent in urban areas. In the next 50 years, climate change is anticipated to have profound impacts on Massachusetts residents. Projections indicate that the average number of days with a high temperature over 90°F will go from 5 to 27.⁸ Residents' growing exposure to hotter weather is expected to result in a range of public health consequences. Heat events are associated with increased rates of heat exhaustion, heat stroke, drowning, mental illness, preterm birth, illness related to cardiovascular disease, illness due to renal failure, and interpersonal violence.⁹⁻¹² At particular risk are children under 5 years old, children with respiratory conditions, children with disabilities, children of color, and children in low-income households.³⁴

Strategies for providing residents with comfortable living and working spaces are key components of the array of interventions necessary to address the effects of climate change. Having adequate cooling for homes, schools, and businesses can help mitigate the risk of heat-associated health outcomes. To that end in recent years, both the state and federal governments have subsidized the installation of heat pumps, which provide buildings with hyper-efficient heating and cooling.^{35,36} Such efforts should be expanded in the coming years, with attention to equitable access to such active cooling technologies—like heat pumps—and passive ones—like improved insulation and

The Pioneer Valley Planning Commission developed its "[Healthy Community Design Toolkit: Leveraging Positive Change](#)" to help municipalities and stakeholders in healthy community design efforts. The toolkit offers a range of strategies to help communities address various public health priorities, including injuries from motor vehicle crashes, reducing stormwater pollution, and making the built environment safer for older adults.

weatherization, to ensure that Massachusetts residents are able to cope with these impending challenges.^{37,38}

The State Team recommends that the Commonwealth expand programs that support the deployment of active and passive cooling technologies—including in residences, rental properties, and schools—with an emphasis on growing heat pump use in environmental justice communities.

Education

Strong educational foundations allow people to make informed decisions, secure higher paying jobs, and afford quality and stable housing, all of which ultimately impact health. Reaping the health benefits of education requires that an individual access quality education. Not everyone has equal access to quality education as a result of historical redlining, segregation, school funding formulas, and non-academic barriers that can pull a youth away from education, such as food insecurity or violence. Schools are required to address not only the academic growth of young people, but also their social, emotional, and physical well-being.

Education is the process of teaching and learning which can happen in both traditional and non-traditional settings.

Schools can have a major impact on a child’s life and are increasingly called upon to link students to other community resources and provide a holistic set of services that support students’ academic success, and address out-of-school issues that affect learning.¹³ In the short term, schools play a critical role in meeting students’ mental health needs, and addressing risk of suicidality.⁴⁰ Thus, access to high-quality schools and school-based health services can improve the immediate health for current students and can lay the groundwork for those students to grow into healthy adults.

For some communities, particularly some low-income communities and communities of color, structural forces have severely constrained access to such wraparound services. As a response, some communities have embraced a community schools model. Community schools are designed to have schools engage community agencies and stakeholders in close partnership, leading to an “integrated focus on academics, health and social services, youth and community development, and community engagement.”¹³ By improving access to community services, including health care and mental health services, community schools have shown marked improvement in educational outcomes.¹⁴ Massachusetts should explore ways to support municipalities in creating community schools and deepening linkages between school and community services, and expanding the availability of school-based health centers.

The School Wellness Initiative for Thriving Community Health (SWITCH) issued a report highlighting the ways that schools across the Commonwealth can support students’ wellness—and in turn, their overall health: [2019 Massachusetts School Wellness Needs Assessment](#)

The State Team recommends that the Commonwealth develop guidance to support municipalities and communities in the establishment of community schools and expansion of the availability of and resources for school-based health centers.

Employment

Employment is broadly defined as paid work. Ideally, employment should be accessible, safe, stable, and well compensated for all people. However, policies, programs, and systemic discrimination sometimes compromise a person's access to and quality of employment. A wealth of research has shown that when a person is employed and has a stable job, they are more likely to have better physical and mental health than a person who is unemployed or in a poor-quality job. Being employed in a high-quality job maintains a person's physical and mental health and improves a person's financial ability to support their basic needs, a healthy lifestyle, and access to medical care. It also has several psychological benefits such as improving a person's stress levels, self-worth, self-esteem, and social capital—their connections and networks with others. At the same time, it is also well recognized that poor working conditions can adversely affect health, resulting in substantial human suffering and cost to workers, employers, and society at large. In turn, the effects of employment on parents' job quality, childcare arrangements, parents' resources and investments, and parent's health and family dynamics can have a profound effect on child health and development. Linkages between parent employment status and child fatality are not yet well established. The Child Fatality Review program will continue to monitor the literature in this area and formulate additional recommendations as evidence emerges.⁴¹

Conclusion and Recommendations

The yearlong exploration of child fatalities using a social determinants of health lens merely scratched the surface of the myriad ways Massachusetts can further reduce child fatalities and close the gap in inequities. It also exposed the need to provide the local CFR teams with technical assistance on the SDoH framework so that they might develop stronger recommendations for consideration by the state team. As a result, the state team issues the following recommendations, and, in FY23, will increase efforts to support local teams in applying SDoH and racial equity frameworks to their review practices.

- Create a statewide Fetal and Infant Mortality Review program to examine the circumstances surrounding individual fetal and infant deaths and to make recommendations that would prevent similar deaths in the future
- Study the feasibility of a program that pairs home safety assessments with subsidized home modifications to mitigate injury risk among children.
- Require the use of integrated pest management as standard practice by licensed pesticide applicators and subsidize the provision of such services to residents in environmental justice communities.
- Expand programs that support the deployment of active and passive cooling technologies—including in residences, rental properties, and schools—with an emphasis on growing heat pump use in environmental justice communities.
- Develop guidance to support municipalities and communities in the establishment of community schools and expansion of availability of and resources for school-based health centers.

Appendix A: Previous Recommendations

For additional context on the below recommendations, please see the corresponding annual report.

Issued in the FY2021 Annual Report:

- Massachusetts policymakers petition the FDA to reconsider the inclusion of corn masa in their fortification requirements, and work to create incentives for corn masa manufacturers to fortify their products, for food manufacturers to use fortified corn masa in their products, and for retailers to stock products that contain fortified corn masa.
- Massachusetts policymakers implement an ethical and equitable primary seat belt law, alongside updated, linguistically appropriate, culturally responsive, and accessible education campaigns about the importance of seat belt use geared towards audiences with the lowest seat belt use rates and highest unbelted crash rates, and improved access to car seats and installation services.

Issued in the FY2020 Annual Report

- The State Team continues its support for legislation moving the responsibility for administering the CFR program from OCME to OCA, with OCA and DPH representatives becoming designated co-chairs of the State Team.
- The Commonwealth should study the feasibility of requiring that public and semi-public swimming pools have emergency service activation systems or call boxes within the pool's fence perimeter and in a form that complies with ADA accessibility guidelines.
- The Commonwealth should work with providers to increase cell phone coverage in underserved areas, particularly along roadways.
- In order to practice, licensed mental health clinicians and social workers should be required to have continued education/training on suicidality, screening for suicide risk, and suicide prevention strategies.
- Commonwealth executive branch agencies should collect gender identity in their data sets.
- In order to better coordinate care for children across state providers, all EOHHS agencies should use a standard confidential information sharing mechanism for client case records.
- Adults operating a motorboat or other motorized personal watercraft in Massachusetts should be required to take a boating safety course.

Appendix B: CFR program activities

State Team Activities

In FY22, the State Team held six meetings—starting in July 2021 and meeting every two months thereafter. In light of the effects of the COVID-19 pandemic, the State Team opted to hold these meetings virtually.

The State Team focuses most of its meetings on specific issues related to child fatalities, typically using one or two meetings to examine a particular cause or manner of death by exploring public health data and related local team recommendations. In a departure from this approach, the State Team organized its FY22 meetings around equity and social determinants of health.

The operation and activities of the State Team and local teams are supported by the work of staff at OCME and DPH. Agency staff who are assigned to the program provide administrative support, conduct research, and gather data to assist teams in their deliberations, evaluate program performance, and streamline program operations.

In a continuing effort to address a backlog of recommendations provided by the local teams, program staff provided guidelines to State Team members to review 193 outstanding recommendations. State Team members closed 22 recommendations; the State Team closed 3. Forty-four of those recommendations are now marked as pending, while 134 remain open and 66 received comments. If local teams are seeking information about the status of a specific recommendation, please contact Max Rasbold-Gabbard at max.rasbold-gabbard@mass.gov.

Local Team Activities

The 11 local teams collectively held 23 meetings, reviewed 96 fatalities, and issued 17 recommendations, many of which were issued to multiple agencies. The distribution of meetings, cases, and recommendations by district is summarized below. Local teams issued 6 recommendations to the State Team, 12 to DPH, 6 to the Massachusetts chapter of the American Academy of Pediatrics, 3 to the Department of Children and Families, 3 to the Massachusetts Center for Unexpected Infant and Child Death, 2 to the Office of the Attorney General, 2 to the Department of Elementary and Secondary Education, 2 to the Department of Mental Health, 2 to the Juvenile division of the Trial Court, 2 to the Massachusetts District Attorneys Association, 2 to the Massachusetts State Police, 1 to the Department of Developmental Services, and 1 to the Office of the Chief Medical Examiner.

Local teams found innovative approaches to holding case reviews online that convened stakeholders while safeguarding case data. Many teams held modified virtual meetings where cases were discussed through a secure videoconference. In all, seven local teams held at least one virtual meeting during the reporting period; most resumed their regular quarterly meeting schedules using teleconferencing platforms.

Table 1: Number of meetings, cases reviewed, and recommendations issued, by local team			
Local Team	Meetings	Cases	Recommendations
Berkshires	0	0	0
Bristol	0	0	0
Cape and Islands	2	25	0
Essex	3	8	0
Hampden	0	0	0
Middlesex	4	13	12
Norfolk	4	19	0
Northwestern	3	12	0
Plymouth	2	4	0
Suffolk	2	2	5
Worcester	3	13	0

Administrative Changes and Activities of the CFR program

In January 2022, DPH retained consultants from John Snow, Inc. (JSI) to develop and implement a community of practice with local CFR teams. The community of practice aims to help local teams standardize practices, identify, and help resolve challenges local teams are facing in their reviews, and inform the drafting of local team operational guidelines.

The CFR team at DPH continued its revision and maintenance of the program’s database. Major updates in FY22 included:

- restructuring the database to capture reviews of fatalities over multiple team meetings,
- expanding which actions on recommendations are recorded to include changes made by CFR staff to recommendation assignment and status based on agency feedback.

Appendix C: FY22 State/Local Team membership

State Team Membership

Dr. Mindy Hull

Chief Medical Examiner, Co-Chair

Bekah Thomas

Designee of the Commissioner of the Department of Public Health, Co-Chair

Jeff Bourgeois

Designee of the Attorney General

Karla Canniff

Designee of the Commissioner of the Department of Children and Families

Margie Gilberti

Designee of the Commissioner of the Department of Early Education and Care

Katharine Folger

Representative of the Massachusetts District Attorneys Association

Janet George

Designee of the Commissioner of the Department of Developmental Services

Anne Gilligan

Designee of the Commissioner of the Department of Elementary and Secondary Education

Shari King

Director of the Massachusetts Center for Unexpected Infant and Child Death

Karine Martirosyan

Designee of the Commissioner of the Department of Youth Services

Capt. Mario Monzon

Designee of the Colonel of the Massachusetts State Police

Maria Mossaides

Director of the Office of the Child Advocate

Dr. Nandini Talwar

Designee of the Commissioner of the Department of Mental Health

Chief John Paciorek, Jr.

Designee of the Massachusetts Chiefs of Police Association

Dr. Celeste Wilson

Representative of the Massachusetts chapter of the American Academy of Pediatrics with experience in child abuse and neglect

Leigh Youmans

Representative of the Massachusetts Health & Hospital Association

The team position for Chief Justice of the Juvenile Division of the Trial Court or designee is vacant. The CFR statute also allows for attendance to State Team meetings by other individuals with information relevant to cases under review.

Local Team Leadership

Berkshires

Andrea Harrington, District Attorney
Team Leader: Stephanie Ilberg,
Assistant District Attorney

Bristol

Thomas Quinn, District Attorney
Team Leaders: Andrea Baldwin,
Assistant District Attorney;
Dennis Collins,
Assistant District Attorney

Cape and Islands

Michael O'Keefe, District Attorney
Team Leader: Sharon Thibeault,
Assistant District Attorney

Essex

Jonathan Blodgett, District Attorney
Team Leader: Kate MacDougall,
Assistant District Attorney

Hampden

Anthony Gulluni, District Attorney
Team Leader: Eileen Sears,
Assistant District Attorney

Middlesex

Marian Ryan, District Attorney
Team Leader: Katharine Folger,
Assistant District Attorney

Norfolk

Michael Morrissey, District Attorney
Team Leader: Lisa Beatty,
Assistant District Attorney

Northwestern

David Sullivan, District Attorney
Team Leader: Lori Odierna,
Assistant District Attorney

Plymouth

Timothy Cruz, District Attorney
Team Leader: Elizabeth Mello,
Assistant District Attorney

Suffolk

Kevin Hayden, District Attorney
Team Leader: Susan Goldfarb,
Executive Director,
Children's Advocacy Center of Suffolk County

Worcester

Joseph Early, District Attorney
Team Leader: Courtney Sans,
Assistant District Attorney

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