# A Guide to Alleviating Child Injury Inequities in Your Community:

The Massachusetts Pediatric Injury Equity Review Toolkit



Bloomberg American Health Initiative

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The Massachusetts Pediatric Injury Equity Review Toolkit

Sadiqa Kendi, MD Fatemeh Naghiloo, M. Arch, MPH Max Rasbold-Gabbard, JD, MPH Rebekah Thomas, MPA Samatha Riley, DrPH, MPH, MSc Jonathan Bressler, MSPH Megan Sandel, MD, MPH Shannon Frattaroli, MPH, PhD

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### **Glossary of Terms**

**Disparity:** Measurable differences in health outcomes between individuals, groups, races, regions, states

**Downstream:** Strategies which are focused on providing equitable access to care and services with the goal of reducing the negative impacts of disadvantage on health outcomes<sup>1</sup>

**Health equity:** When everyone has an opportunity to be as healthy as possible, which can be attained by addressing obstacles to good health, such as discrimination, stigma, and poverty<sup>2</sup>

**Injury:** Bodily harm resulting from exposure to an external force or substance (mechanical, thermal, electrical, chemical, or radiant) or a submersion. Injuries can be caused by the intent to do harm (intentional) or without the intent to do harm (unintentional)<sup>3</sup>

**Injury mechanism:** The source of force or substance that causes an injury (fall, crash, substance exposure, downing etc.)

**Intersectionality:** A lens for observing the way social categorizations such as race, class, and gender interact within an inequitable societal context to lead to overlapping and interdependent systems of disadvantage<sup>4,5</sup>

**Modifiable contributing factors:** Behaviors, policies, environments or other\_circumstances that can be changed to increase or decrease injury risk

**Root cause:** The core issue—the highest-level cause—that sets in motion the cause-and-effect reaction that ultimately leads to the problem $(s)^6$ 

**SMART goals:** The desired result of an activity, including the following characteristics<sup>7</sup>:

- Specific: Concrete, detailed, and well defined
- Measurable: The use of numbers and quantities to provide means comparison
- Achievable: Feasible to put into action
- Relevant: Considers constraints such as resources, personnel, cost, and time frame
- Time-Bound: A time frame to set boundaries around the objective

**Social determinants of health:** The social, economic, behavioral, and physical factors that have a substantial impact on our health, and can be experienced where we work, live, and/or play<sup>8</sup>

**Societal factors:** Influences that affect equitable access to quality education, employment, housing, built environments, and other needs. These can include ableism, classism, racism, sexism, transphobia, homophobia, and xenophobia as well as other forms of structural discrimination.

**Structural discrimination:** Upstream conditions such as institutional policies that limit power, resources, and opportunities for well-being of individuals and/or groups based on their social identities, which can include race, ethnicity, gender, sexual orientation, gender identity, ability, socioeconomic status, immigration status, limited English proficiency, and others<sup>9</sup>

**Upstream:** Interventions and strategies focused on improving fundamental social and economic structures in order to decrease barriers and improve supports that allow people to achieve their full health potential.<sup>1</sup>

### Introduction

Injuries are the leading causes of death for U.S. children between 1 and 19 years old, leading to more deaths than heart disease, cancer and influenza combined.<sup>10</sup> Despite many years of targeted educational interventions, advances in legislative policy, and an overall reduction in the prevalence of many child injury mechanisms over the past 40 years, significant inequities persist. Specifically:

- Black children die from injuries at 4.5 times the rate of Asian American children and 2 times the rate of white children.
- American Indian children die from injuries at 3.5 times the rate of Asian American children and 1.4 times the rate of white children.<sup>10</sup>
- Children in rural communities die from injuries at 2 times the rate of urban children, with higher rates from multiple injury mechanisms, including motor vehicle crashes, drowning, fire/burn injuries, and suffocation. <sup>11,12</sup>
- Each of these inequities is further worsened for children living in poverty.<sup>13</sup>

To understand and address the causes of child fatalities, <u>Child Fatality Review</u> (CFR) sometimes called CFR—was established in various U.S. states as much as 40 years ago, and as of 2017 was supported by legislation in 45 U.S. states.<sup>14</sup> CFR is a multidisciplinary review of fatalities in individual children with the goal of understanding the underlying cause of child deaths and identifying tools for the prevention of future fatalities.<sup>15</sup> Previous literature has identified opportunities for improving the CFR process with an injury prevention focus.<sup>16,17</sup> Upstream factors that impact who is injured and by what mechanism can be overlooked in CFR because of their current focus on individual case characteristics.<sup>16</sup> In addition, while the CFR process is an essential aspect of public health, fatalities are a very small portion of the injuries that occur, as displayed in the health effects pyramid below.<sup>18</sup>



### Health Effects Pyramid

In a study done in Massachusetts in 2004, unintentional injury in children led to one death for every 49 hospitalizations and every 1,660 outpatient/emergency department visits.<sup>19</sup> While the ratio has not been updated recently, we have no reason to believe that the scale is any different today. Therefore, the lack of nonfatal injury review is a gap that makes it challenging to identify inequities on the local and state level, and implement equity-focused public health solutions.

In Massachusetts, the Child Fatality Review process is governed by Massachusetts General Laws Chapter 38 §2A. The process includes a review by teams in the states' District Attorneys' Offices, who review child deaths in their locales based on death records, medical records, social service case files, autopsy reports, and police records to formulate recommendations on policy and prevention. Each team determines which cases to review and issues recommendations to the statewide team to inform prevention efforts on the state level.

The State Child Fatality Review Team is chaired by the Office of the Chief Medical Examiner and co-chaired by the Department of Public Health and also includes representatives from other public agencies and non-governmental stakeholders, including the Attorney General's Office, the Department of Children and Families, the Massachusetts State Police, the state chapter of the American Academy of Pediatrics, the state juvenile courts, the Department of Early Education and Care, the Office of the Child Advocate, and the Massachusetts Health and Hospitals Association. This team reviews and consolidates the recommendations received and sends them to the state legislature annually in a report.

To analyze the root cause of inequities in fatal and nonfatal childhood injuries and identify recommendations to address them, we developed the **Massachusetts Pediatric Injury Equity Review (MassPIER)**, a new process for reviewing inequities in injuries. MassPIER was created through an iterative process in partnership with local and state partners in Massachusetts. The MassPIER process was built on the foundation of the longstanding Child Fatality Review process and includes a multidisciplinary systematic team review of fatal and nonfatal injuries. It was created to be sustainable and scalable, with the ability for adaptation by other states and counties to implement in their communities with any type of injury mechanism. This toolkit outlines a step-by-step process for planning and executing a pediatric injury equity review. It maps out the planning process, the review process itself, and the process for identifying and refining recommendations for dissemination and implementation.

### Massachusetts Pediatric Injury Equity Review (MassPIER) Process

#### **PLANNING PROCESS**

**Step 1 Team Identification**: Review the current CFR team members for their types of expertise. Identify potential collaborative partners based on specific injury inequity of focus and any gaps in expertise identified prior to the review. Inviting subject matter experts (for example, a representative from the Department of Transportation when reviewing traffic injury cases, or representative from the Department of Conservation and Recreation when reviewing drowning cases) to the CFR meetings in addition to current CFR team members provides an opportunity for new insights, which helps in facilitating more interdisciplinary discussions and leads to generating more equity-focused recommendations.

A team size between five and 12 members is adequate, to include a variety of opinions but not too large a group for discussion. The process of identifying appropriate guests and getting approval from CFR team leaders to invite them to the meeting can be time consuming, so it should be discussed with the CFR team leader and coordinator in advance; time should be built in to ensure guest availability and coordination.

In Massachusetts, state statute requires the following representatives or their delegates to serve on local teams, with the option for the team chair to invite others as they see necessary.

1. 2.	Chief Medical Examiner Pediatrician with experience in diagnosing or treating child	<ol> <li>Chief Justice, Juvenile Court</li> <li>Commissioner, Department of Children and Families</li> </ol>
	abuse and neglect, appointed by the State Team	<ol> <li>Director, Massachusetts Center for Unexpected Infant and</li> </ol>
З.	Local police officer from the	Child Death
	city or town where the fatality occurred	8. Commissioner, Department of Public Health
4.	State Law Enforcement Officer	

**Step 2 Data Preparation:** Prepare a summary of fatal and nonfatal epidemiologic injury data at the level of interest (county, city, or state) with a focus on inequities. Using epidemiologic data in addition to individual case characteristics could help in identifying upstream factors that impact who is injured and by what means.

For county level data, partner with public health data custodians and other state and local organizations for access to appropriate data. Partners may include state and county health departments, or health information organizations. The small number of cases for some injury mechanisms can make it difficult to evaluate for inequities, so it is beneficial to include publicly available state and national data as well, such as those available through <u>Centers for Disease Control and Prevention Web-based Injury Statistics Query and Reporting System (CDC WISQARS)</u>.<sup>20</sup>

After gathering the appropriate data, the next step is identifying inequities by looking at the rate of injuries by race, ethnicity, nationality, language, gender, and age as well environmental factors such as rurality and neighborhood level factors if there is diversity at that level of interest. If the area of interest has a variety of geographic areas or other differences across the area, such as child opportunity index (COI) or other factors, it can be helpful to present data divided by that factor.<sup>21</sup> Displaying these data in graphs by rate allows for ease of comparison and identification of inequities. An example of nonfatal pediatric pedestrian data by race/ ethnicity, summarized using rate per 100,000 from one Massachusetts county is below:



Also, including spatial analysis and GIS mapping helps in identifying environmental inequities including access to resources (such as location of pools that offer free swim lessons; or well-lit crosswalks) as well as risk factors (such as natural bodies of water without a lifeguard; or large arterial roads).

An example of a GIS map created for a drowning review, with the goal of evaluating the location of free swim lessons and public pools by economic status is below.



Data preparation and curation may be an iterative process, whether because of the restrictions of Data Use Agreements (DUAs), small numbers, or an interest in drilling down further into specific inequities. It is essential to allocate sufficient time to this process if relying on intermediate organizations to retrieve epidemiological data. Establishing a DUAs or other direct arrangement with data custodians can make the process of data collection more efficient.

**Step 3 Literature Review for Injury Equity Matrix:** To address the challenge of better identifying the underlying causes of inequities and develop effective interventions, we have developed the Injury Equity Framework (included in the appendix) to provide a foundation for understanding the source of injury inequities, and the Injury Equity Matrix as a companion working tool to the Injury Equity Framework. The matrix serves as an evidence-based tool, built using the foundation of the Haddon Matrix for identifying observable and predictable factors which impact injury inequities. It includes factors such as environmental factors, education, equipment/safety products, treatment and recovery, each of which are known to impact injury outcomes at various times within the continuum of the pre-injury, injury, and post-injury phase as identified in the Haddon Matrix.<sup>22</sup>

In preparation for the review, begin completing the Injury Equity Matrix. The first step in completing the matrix is identifying modifiable contributing factors within each of the categories which impact injury outcomes in the geographic area and within the injury mechanism of focus. This is done through literature review to identify relevant articles. The goal is to include factors in one location for the group to review and utilize for better understanding of the various multilevel factors which contribute to injury inequities. After factors are entered, intersectional identities impacted can be highlighted. For example, literature indicating an increased number of arterial roads in communities with larger African American, Hispanic, and lower-income populations would lead to highlighting both the class and race intersectional identities for that factor.



#### **REVIEW PROCESS (in the CFR meeting)**

**Step 4 Case Identification and Review**: Cases can be identified after the injury inequity of interest is determined, or if there are recent cases of fatalities that are relevant and timely, a review can be done based on those cases. While the CFR teams that we worked with generally reviewed between one and 5 cases with each case taking about 20 minutes, the ideal number of cases to review was around 2-3 cases, which allowed for adequate time to review each case as well as similarities between cases. If the number of cases is small for the injury mechanisms of focus in the target area, near-fatal cases can be included in the reviews if allowed by CFR regulations. If possible, it is helpful to gather and include information on demographics and social determinants of health for each case, as well as environmental characteristics of the injury scene in terms of safety features (such as traffic calming measures and light conditions for traffic injuries at night) and other contextual information and reports that would usually be collected, as these info provide context when discussing the cases.

For our meetings, the local CFR team leader and coordinator led the review of the individual fatality cases, explaining what happened based on the information collected from death records, medical records, social service case files, autopsy reports, and police records (which is their usual practice). The principal investigator for the project led the rest of the review as well as the discussion of recommendations. A sample agenda for the review meeting is included in the appendix.

**Step 5 Data Review:** The data summaries prepared in Step 2 are reviewed with the team to ensure everyone understands the prevalence of the injury type, the populations which are most impacted, and any inequities noted at the county and/or state level. Data are presented in bar graphs for comparison of rates. The MassPIER principal investigator or team leader should walk through the data to explain, as some team members may be less familiar with reviewing this type of data than others. Any mapping done in advance of the meeting should also be reviewed at this point to provide additional context to inequities identified.

**Step 6 Discussion of Modifiable Factors and Recommendation Development:** During this portion of the meeting, with consent of all team members, it is helpful to record the discussion. This allows for a more natural flowing discussion without the fear of missing information or the barrier of vigorous note taking during the meeting. After obtaining consent and starting the recording, utilize the Injury Equity Matrix (described in Step 3) and proceed to systematically developing recommendations for interventions which address the factors identified.

As shown in the Injury Equity Matrix, interventions fall into four main categories (Built Environment, Equipment and Safety Products, Education, and Treatment and Recovery) and can span various forms, which can be new, adaptations or change in implementation of existing interventions. Interventions can include programs, legislation, advocacy, and/or policy. It is most helpful to review the matrix one or two rows at a time to allow for discussion and input by the group on the evidence-based factor(s) identified and any others that should be discussed.

After discussion of the factor, specific recommendations which may address the identified factor should be discussed. At this stage, recommendations do not need to be formed as SMART (Specific, Measurable, Achievable, Relevant, Time-Bound) goals or otherwise refined, just shared as they came to members of the team. This is to ensure that ideas for recommendations are not limited by the need to form them as SMART goals immediately, with the understanding that recommendation refinement will be performed in a separate step. Time should be reserved at the end for any other recommendations that may not have been captured in the discussion using the Injury Equity Matrix as a guide.

Indentified	Countor	Modifiable		Intersecti			
Injury Inequity Measures		Contributing Factors	Class	Disability	Immigrant Status	Race	Recommendations
		Historical segregation of pools, closure after desegregation					
	Built	Proximity to unsafe natural bodies of water; public pool location					
	Environment	Lack of pools, safe areas to swim <sup>5</sup> ; life guard presence; Official DCR sites					
		Multilingual signage at approved vs unapproved locations					
10k	Equipment & Safety Products	Cost of US Coast Guard approved life jacket (>\$30)					
Disparity in drowning		Ease of use of life jacket, life rings if ESL or low literacy					
for Black and		Accessibility of safety products at sites,					
Hispanic MA children	Education	Swim lessons: Historical lack of access <sup>1</sup> High costs <sup>2</sup> , Less availability of multilingual education; Limited locations					
		Accessibility of CPR education <sup>3</sup>					
		Language barriers to accessing EMS					
	Treatment &	Acute and inpatient trauma care					
	Recovery	Insurance: Cost of treatment (acute and rehab)					
		Family leave policies: Caretaker availability					

An example of the Injury Equity Matrix, with modifiable factors included, used to generate recommendations in a drowning review is included below:

#### **POST-REVIEW PROCESS**

#### Step 7 Recommendation Refinement, Dissemination, and Implementation:

This step can be done with the team who develops recommendations, or separately with an advisory group. It is helpful to include representatives from various stakeholders which would be impacted by recommendations, or a partner (such as a state health department) which has many of those collaborations already in place. At this stage the recommendations are refined, and a plan for implementation and dissemination is developed. It is helpful to take stock of recommendations for those that overlap and/or may be related, to ensure each recommendation is evidence based, and to identify those that need additional detail to be actionable. Using SMART criteria, recommendations may need to be refined at this stage to be specific, measurable, achievable, relevant, and time-bound.<sup>7</sup>

Work with county or state level public health partners to identify the highest value equity focused recommendations by giving an equity score based on evidence and expert opinions. We adapted a simple and straightforward equity scoring system<sup>23</sup> to create a system with four categories, including:

- Likely to decrease disparities
- Mixed impact on disparities
- Likely to increase disparities, and
- Inconclusive impact on disparities.

It is important to remember that the equity scoring is based not just on the initial recommendation itself, but by many other factors including how the recommendation may be implemented, in what community or communities, and unanticipated consequences. Because of this, the process of equity scoring may be iterative, and can change based on refinement of the recommendation as a SMART goal.

Next, to facilitate identifying next steps, identify associated legislation, policy, or programming for the recommendation should be identified. Then identify the responsible or governing body for that legislation, policy, or programming. This is to move the theoretical identification of a recommendation to the concrete next step of identifying the individual or group that would be responsible for implementing the recommendation. The process for using the Injury Equity Matrix for recommendation refinement is depicted in the graph.

Indentified	Counter Measures	Modifiable	Recommendations					
Injury Inequity		asures Contributing Factors		Equity Score	Associated legislation, policy, or programming	Governing body, org, or agency responsible		
	Built Environment	From CFR meeting	From CFR meeting	Working group after meeting	Working group after meeting	Working group after meeting		
Identified prior to CFR	Equipment & Safety Products							
Meeting	Education							
	Treatment & Recovery	Ļ	Ļ	Ļ	Ļ			
Types of recommendations to consider: 1. New policy, program, or legislation 2. Change in existing policy, program, or legislation 3. Change in implementation								

The refined recommendations are then shared with the appropriate governing body, program, or process, and a long-term plan is developed for how to implement and monitor the effectiveness of the recommendation. Dissemination and implementation are critical steps that can take a significant amount of time depending on the type of recommendation being implemented, but are key to addressing inequities in the long term. Evaluation of any implemented changes should be rigorous to monitor their impact and ensure inequities are not being paradoxically worsened.

### **Key Resources and Links**

Injury Data: CDC WISQAR https://www.cdc.gov/injury/wisqars/index.html

Haddon Matrix: <u>https://www.npaihb.org/images/epicenter\_docs/injuryprevention/</u> HaddonMatrixBasics.pdf

National Center for Child Fatality Review and Prevention: https://ncfrp.org/

Child Opportunity Index: https://www.diversitydatakids.org/child-opportunity-index

Evidence based practices resources: <u>https://health.gov/healthypeople/objectives-and-data/</u> browse-objectives/injury-prevention/evidence-based-resources

Developing SMART criteria : https://www.mindtools.com/a4wo118/smart-goals

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## Appendices

#### **Appendix A: Injury Equity Framework**



#### **Appendix B: Injury Equity Matrix for Modifiable Factors**

Indentified Injury Inequity	Counter Measures	Modifiable Contributing Factors		Intersectio			
			Class	Disability	Immigrant Status	Race	Recommendations
	Built Environment						
	Equipment & Safety Products						
	Education						
	Treatment & Recovery						

### Appendix C: Injury Equity Matrix for Recommendation Refinement

Indentified	Counter Measures	Modifiable Contributing Factors	Recommendations					
Injury Inequity			Specific change	Equity Score	Associated legislation, policy, or programming	Governing body, org, or agency responsible		
	Built Environment							
	Equipment & Safety Products							
	Education							
	Treatment & Recovery							
Types of recommendations to consider: 1. New policy, program, or legislation 2. Change in existing policy, program, or legislation 3. Change in implementation								

### **Appendix D: Sample Agenda for Meeting**

- Case review (20 minutes)
- Review epidemiologic data summary (10 minutes)
- Review GIS mapping data (10 minutes)
- Review injury equity matrix (15 minutes)
- Identify recommendations (30 minutes)
- Close out meeting (5 minutes)

### Appendix E: MassPIER Process Summary

Steps	Timing	Goal	Activities
Step 1	Pre-review	Team Identification	Identify expertise on Child Fatality Review team and work with CFR leads to invite guests with relevant expertise.
Step 2	Pre-review	Data Preparation	Collect data in partnership with public health and academic partners, including epidemiologic fatal and nonfatal data and GIS mapping data.
Step 3	Pre-review	Literature Review for Injury Equity Matrix	Review literature on injury inequities, based on elements of the Injury Equity Framework and Haddon Matrix, and summarize within modifiable factors section of Injury Equity Matrix.
Step 4	Pre-review & Review	Case Identification and Review	Identify individual cases for review, with social determinants of health and injury scene data as well as usual data sources included. Present cases at beginning of review.
Step 5	Review	Data Review	Review epidemiologic and mapping data with group, including inequities based on race, geographic, and/or socioeconomic variables.
Step 6	Review	Discussion of Modifiable Factors and Recommendation Development	Record discussion after obtaining consent. Discuss the Injury Equity Matrix by row, with discussion of targeted recommendations with each row.
Step 7	Post-review	Recommendation Refinement, Dissemination, and Implementation	Work with multidisciplinary group to refine recommendations into SMART format, assign an equity score, and complete Injury Equity Matrix for recommendation refinement. In partnership with applicable stakeholders identified in the Injury Equity Matrix, develop plan for dissemination and implementation.

#### **Appendix F: CFR Profile Massachusetts**



#### **Resources**

The resources below can help Child Fatality Review teams better understand how social determinants of health in their communities affect child fatality rates. The Child Fatality Review Program epidemiologists can provide you with technical assistance in navigating these and other data sources. Please contact us at <u>mdph-isp@mass.gov</u> for more information.

- PHIT Community Reports
- <u>Child Opportunity Index & Map</u>
- <u>Census Facts</u>

- <u>Metropolitan Area Planning Council Data</u> <u>Common</u>
- Massachusetts Data Hub

I. Population estimates developed by the University of Massachusetts Donahue Institute (UMDI) in partnership with the Massachusetts Department of Public Health, Bureau of Environmental Health.

- II. nH/nL = non-Hispanic/non-Latinx. Hispanic/Latinx refers to the ethnic background of people of Cuban, Mexican, Puerto Rican, or other Spanish or South or Central American culture or origin regardless of race. The terms Hispanic and Latinx are not necessarily interchangeable and include people from many ethnic, national, racial, and linguistic groups. Latinx is a gender-neutral term referring to people of Latin American ancestry.
- III. American Community Survey (ACS), 5-Year Estimates, 2015-2019

IV. Metropolitan Area Planning Council Data Common: https://datacommon.mapc.org/browser/

Massachusetts Department of Public Health | Injury Surveillance Program | Child Fatality Review Program

	Infant Fatalities (2016-2020) <sup>v</sup> All rates are per 100,000 population
Number of	1,348
fatalities	(2016: 277; 2020: 263)
Fatality rate	376.4
Inequities by race/ethnicity	The infant death rate for Black non-Hispanic/non-Latinx (nH/nL) infants was highest, followed by the rates for Hispanic/Latinx, White nH/nL, and Asian/Pacific Islander (API) nH/nL infants.
	The Black nH/nL infant death rate was almost 3 times the White nH/nL infant death rate. The Hispanic/Latinx infant death rate was 1.5 times the White nH/nL infants'.
Inequities by sex	The male infant death rate (407.5) was 1.2 times the female infant death rate (341.9).
Leading causes of death	<ul> <li>Short gestation/low birthweight</li> <li>Congenital malformations</li> <li>Sudden infant death syndrome (SIDS)</li> <li>Pregnancy complications</li> </ul>
	For SIDS, male infants had a death rate (34.5) that was 1.5 times the rate for female infants (22.3).
Leading causes of death by sex and race/ ethnicity	Short gestation/low birthweight was highest among male Black nH/nL and male Hispanic/Latinx infants, whose death rates were 4.4 and 2.3 times the rate for male White nH/nL infants.
	The male Black nH/nL infant SIDS rate was 2.2 times the rate for male White nH/nL infants.
	For congenital malformations, the Black nH/nL female infant death rate was 1.4 times the rate for Black nH/nL male infant deaths.

See next page for data on fatalities among children ages 1-17.

V. Massachusetts Department of Public Health, Registry of Vital Records and Statistics, 2016-2020

Massachusetts Department of Public Health | Injury Surveillance Program | Child Fatality Review Program

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	<b>Child Fatalities, Ages 1-17 (2016-2020)</b> <sup>VI</sup> All rates are per 100, 000 population
Number of	802
fatalities	(2016: 179; 2020: 127)
Fatality rate	12.2
	The death rate for American Indian/Alaska Native nH/nL children was highest, followed by rates for Black nH/nL, API nH/nL, Hispanic, and White nH/nL children.
Inequities by race/ethnicity	The American Indian/Alaska Native nH/nL child death rate was more than 5 times the White nH/nL child death rate.
	The Black nH/nL child death rate was twice the rate for White nH/nL children.
Inequities by sex	The male child death rate (14.4) was 1.5 times the female child death rate (9.9).
Age	The 15-17 age group had the highest death rate (21.3) followed by the 1-4 age group (13.6). Most unintentional injuries, suicides, and homicides occurred among children in the 15-17 age group.
Leading causes of death	<ul> <li>Unintentional injuries</li> <li>Cancer</li> <li>Suicide</li> <li>Homicide</li> <li>Unintentional injuries and cancer were the top causes for children ages 1-14.</li> <li>Unintentional injuries and suicide were the top causes for children ages 15-17.</li> </ul>
	Rates of unintentional injuries were higher among male children for all age groups compared to female children. Suicide and homicide rates were also higher among male children ages 15-17 compared to females.
Leading	Among male children ages 1-17, unintentional injuries were twice as frequent among Black nH/nL children compared to White nH/nL children.
death by sex and race/ ethnicity	Among children ages 15-17, the homicide rate was 17.4 times as high for male Black nH/nL children and 8.3 times as high for male Hispanic/Latinx children compared to male White nH/nL children.
	Cancer and suicide rates among female API nH/nL children were more than 3 times the rate for female White nH/nL children. Cancer and suicide rates among female Hispanic/Latinx children were 1.5 times the rate for female White nH/nL children.

VI. Massachusetts Department of Public Health, Registry of Vital Records and Statistics, 2016-2020

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