

Youth Suicides in Massachusetts: A Cohort Perspective in National Context

A Report of the Office of the Child Advocate

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EXECUTIVE SUMMARY

In the United States, a youth dies by suicide every six hours. Youth suicides are on the rise nationally; after a stable period from 2000 to 2007, suicide rates for youth aged 10–24 increased between 2007 and 2017 (Curtin, 2019). As a leading cause of premature death to children and youth, suicide is an important, yet preventable, public health concern.

The findings and recommendations in this report are the result of the Office of the Child Advocate’s (OCA) research to understand youth suicidality in Massachusetts. This report summarizes research and data from national studies and databases, state agency reports, state and national analyses of Youth Health and Risk Behavior Surveys, as well as state and federal commission reports.

The report ends with the Office of the Child Advocate’s recommendations for future initiatives and research on youth suicidality in the Commonwealth and next steps the OCA will be taking to advance the recommendations.

KEY FINDINGS

Massachusetts in National Context

- In line with the rest of the nation, suicide is a leading cause of death among youth in the Commonwealth.
- In the United States, between 2007 and 2017, there has been a 178% increase in suicides of children aged 10-14.
- Between 2008 and 2012, suicide was the second leading cause of death for youth aged 15-19 and the third leading cause of death for youth 10-14 and 20-24 nationally.
- Massachusetts falls behind national suicide rate averages but saw a rise in suicides of children and youth during the height of the opioid epidemic (between 2013-2017).

Youth Suicides by Cohorts

Age

- In the United States, 91% of youth who die by suicide are 15-24, though very young children and pre-teens also experience suicidality and their numbers are on the rise. On average, one child under 13 dies of suicide every five days (Hanna, 2017).
- In Massachusetts, most suicide victims are 18-24.
- The Massachusetts Youth Risk Behavior Survey, conducted every two years, suggests suicidality among children in middle school is on the rise and demonstrates that children in 7th, 8th, and 9th grades are particularly vulnerable to suicide ideations.

Gender

- Nationally, victims of youth suicide are overwhelmingly male and the suicide rate for boys 15-19 has increased significantly in past decades.
- Historically, boys die by suicide at a higher rate than girls, but since 2007 the gap has greatly narrowed. Girls aged 10 to 14 experience the largest percentage increase in suicide rates compared with other age groups.
- In Massachusetts, almost three quarters of youth who died by suicide between 2011 and 2015 were boys.
- In contrast with national trends, the rate of girls and young women (15-24) who die by suicide has decreased between 2013 and 2017.

Race and Ethnicity

- In the United States, youth suicides disproportionately affect Native Americans and Alaska Natives.
- White youth are the third most-affected racial/ethnic group, with suicide rates far above Asian/Pacific Islander, Hispanic, and Black youth.
- Important racial differences emerge when looking at particular age groups, which point to concerning trends among preadolescent Black children.
- In Massachusetts, the gaps among rates of suicidality of different racial/ethnic groups are narrower than nationally.

Immigration

- There are no national statistics on youth suicides by immigration status.
- In Massachusetts, 13% of youth who died by suicide between 2011 and 2015 were born outside of the United States and its territories.
- Immigration status seems to be playing an especially important role in suicides of Hispanic and Asian youth.

Sexual Orientation and Gender Identity

- Nationally, LGBTQ youth are at an increased risk for suicide.
- Both nationally and in Massachusetts, LGBTQ youth of color are particularly affected by suicidality, especially Native American LGBTQ youth.
- In Massachusetts, LGBTQ students are 3.9 times more likely to have attempted suicide in the previous year than their non-LGBTQ peers.

Socioeconomic Status

- In the United States, children and youth experiencing food and/or housing insecurity are at higher risk of dying by suicide. One study found that the rate of suicides in children and youth is 37% higher in counties with the highest levels of poverty compared with suicide rates in counties with the lowest levels of poverty.

- In Massachusetts, we do not currently understand the role low socioeconomic status plays in suicidality.

State Agencies: Child Welfare and Juvenile Justice

- Suicide attempts are more than three times as likely in children and youth under the care of child protective services.
- Suicide is three times as prevalent in juvenile justice residential placements compared to the general population. Additionally, suicides account for more than a third of the deaths of juveniles in confinement.
- In Massachusetts, there are no published analyses of suicidality among children and youth in contact with the child protection or the juvenile justice systems.

RECOMMENDATIONS

To better understand how suicidality affects children and youth in the Commonwealth, the causes of suicidality among youth, as well as to increase the state's ability to target specific groups in suicide prevention initiatives, the OCA recommends the state:

1. Understand how suicidality affects different cohorts of youth in the Commonwealth and develop appropriate prevention strategies.
2. Understand the landscape of Massachusetts' suicide prevention initiatives, both at the local and state level.
3. Increase the age breakdown in data gathered and align it with age categories most commonly used in research.
4. Adopt an intersectional lens in research and prevention initiatives.
5. Engage families and caregivers in youth suicide prevention.
6. Focus on very young children and tweens.

NEXT STEPS

This research report is the Office of the Child Advocate's first step toward understanding youth suicide in Massachusetts. As a result of these findings, the OCA will be collaborating with the Department of Public Health (DPH) to advance our recommendations and understand the landscape of Massachusetts' suicide prevention initiatives, both at the local and state level.

INTRODUCTION

In the United States, a youth dies by suicide every six hours. Youth suicides are on the rise nationally; after a stable period from 2000 to 2007, suicide rates for youth aged 10–24 increased between 2007 and 2017 (Curtin, 2019). As a leading cause of premature death to children and youth, suicide is an important, yet preventable, public health concern.

It is important to research suicides of youth among different cohort groups in order to develop effective suicide prevention efforts. Childhood, adolescence, and young adulthood are developmental periods requiring specific attention and, as such, suicide prevention efforts for youth vary from those aimed at adults.

While universal strategies for suicide prevention among children and youth have demonstrated effectiveness, experts also point to the importance of selective strategies that target subsets of our young population that have “a greater probability of becoming suicidal” (Institute of Medicine (US) Committee on Pathophysiology and Prevention of Adolescent and Adult Suicide, 2002).

This report presents a cohort perspective of youth suicidality in Massachusetts in a national context. The following findings are the results of the Office of the Child Advocate’s research using analyses and data from national studies and databases, state agency reports, state and national analyses of Youth Health and Risk Behavior Surveys as well as state and federal commission reports. The report ends with the Office of the Child Advocate’s recommendations for future initiatives and research on youth suicidality in the Commonwealth and next steps the Office of the Child Advocate will be taking to advance the recommendations.

KEY TERMS

Children & youth: For the purposes of this report, the term *children* refers to any individual between birth to 18, while *youth* refers to any individual between the age of 15-24. For clarity, this report at times uses the term *youth* to encompass children as well, such as in the term *youth suicide*.

Prevention: Working with individual people or groups of people to diminish their future risk of suicide. Generally, presupposes that a person is not actively in a suicide crisis.

Suicidality: A term that encompasses suicidal thoughts, ideation, plans, suicide attempts, and completed suicide.

Suicide ideation: Thoughts about suicide, whether accompanied by intention to die or not. Suicide ideation does not always lead to a desire to die, and a desire to die does not always translate into an attempt.

Suicide attempt: A suicide attempt is when someone harms themselves with the intent to end their life, but they do not die as a result of their actions.

Youth suicide: A child or youth’s fatal self-injurious act with some evidence of intent to die.

FINDINGS

MASSACHUSETTS IN NATIONAL CONTEXT

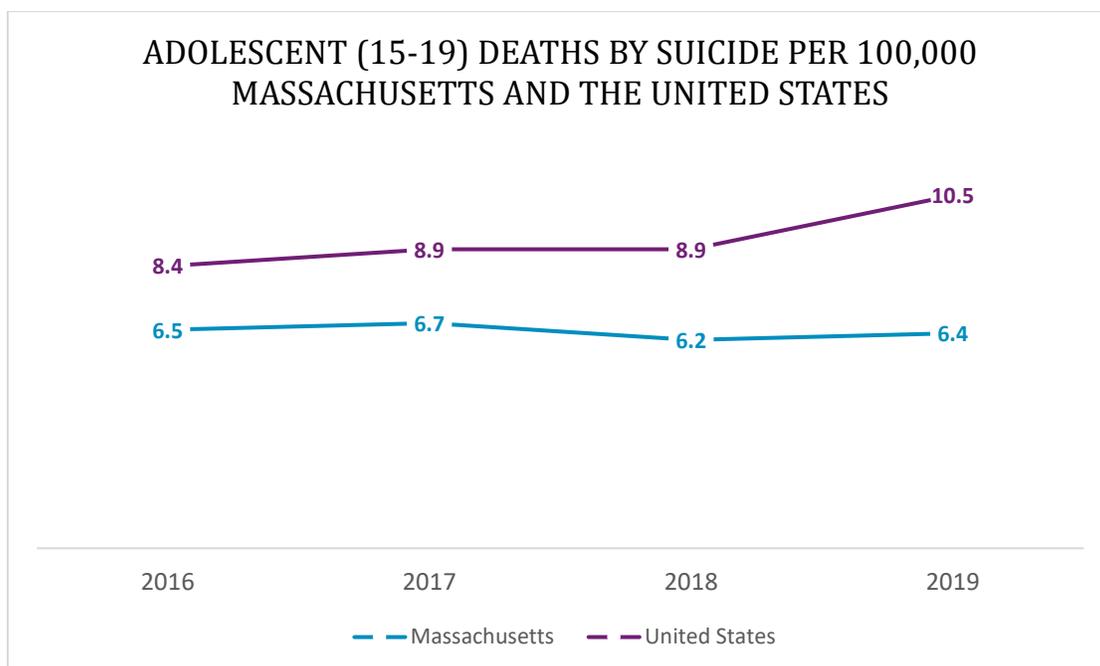
United States

Youth suicide rates are on the rise in the United States. The Center for Disease Control and Prevention (CDC) reports that after a stable period from 2000 to 2007, suicide rates for youth ages 10-24 have increased 56% between 2007 and 2017—with an increased pace at the height of the opioid crisis (between 2013 and 2017). In 2017, suicide was the second leading cause of death for youth aged 10–14, 15–19, and 20–24 (Curtin, 2019). **The suicide rate for children ages 10-14 has nearly tripled since 2007.**

Massachusetts

Adolescent suicide rates in Massachusetts are lower than the national average (see chart below).

According to the Department of Public Health *Data Brief: A Closer Look – Youth Suicide (Ages 10–24 Years), 2011-2015* [hereafter referred to as DPH Data Brief], the average annual rate of youth suicide in Massachusetts between 2011 and 2015 was 5.9 deaths per 100,000 persons. This was lower than the average annual United States youth suicide rate during the same period, which was 8.4 deaths per 100,000 persons (DPH Data Brief).

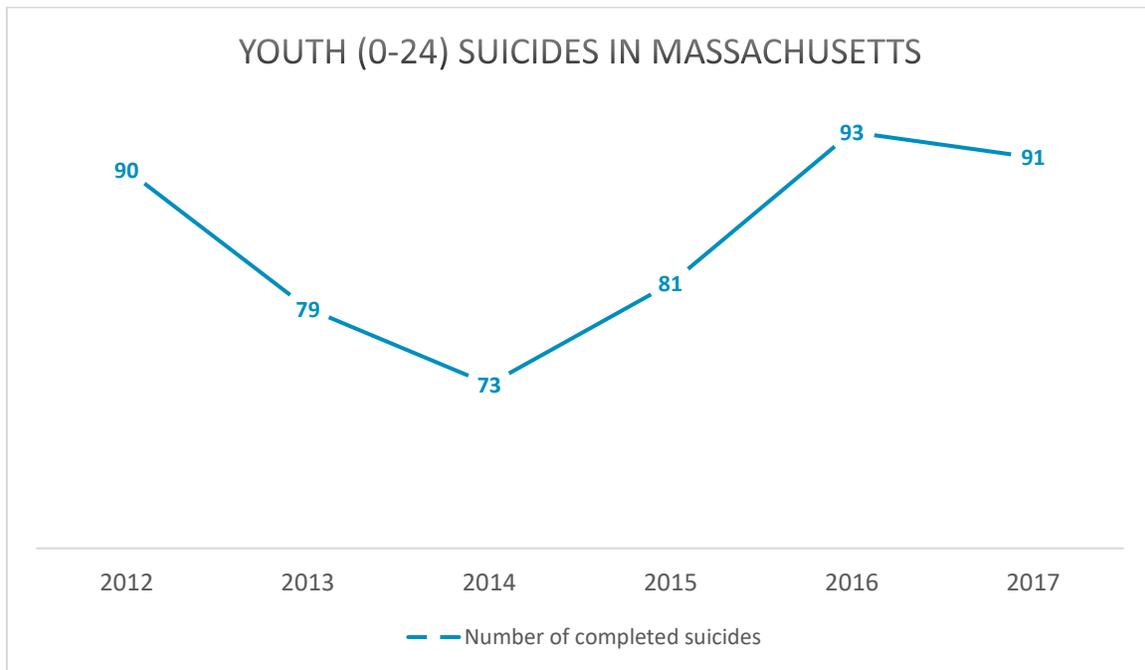


Teen Suicides in Massachusetts, [America's Health Rankings](#)

Massachusetts falls behind national averages. Yet, as the chart below demonstrates, there was a **rise in suicides of children and youth at the height of the opioid epidemic**. Between 2008 and 2012, suicide was the second leading cause of death for youth aged 15-19 and the third leading cause of death for youth 10-14 and 20-24 in the Commonwealth (Children’s Safety Network, 2015).

Finally, while reports of suicide ideations and attempts among high school students remain behind averages, the percentage of high school students who seriously considered suicide or attempted suicide is on the rise (Massachusetts Youth Risk Behavior Survey, 2017 & 2019)¹:

- 12.4% of high school students in Massachusetts reported seriously considering suicide in 2017 (compared to 17.4% nationally) and the percentage has risen to 17.5% in 2019 (compared to 18.8% nationally).
- 5.4% of high school students in the Commonwealth reported attempting suicide in 2017 (compared to 7.4% nationally) and the percentage has risen to 7.3% (compared to 8.9% nationally).



Suicide and Self-inflicted Injury Data, Massachusetts Department of Public Health

¹ Every two years, state, tribal, and territorial education and health agencies conduct a Youth Behavioral Health Survey among middle and high school students. The survey monitors six categories of health-related behaviors that contribute to the leading causes of death and disability among youth and young adults, including behaviors that contribute to unintentional injuries and violence. The results of these surveys are compiled by individual agencies but also aggregated and analyzed by the Centers for Disease Control and Prevention. As such, Massachusetts data and analyses of these surveys can be found on the [CDC website](#) as well as the Massachusetts [Department of Education](#) and [Office of Data Management and Outcomes Assessment](#) websites.

YOUTH SUICIDES BY COHORTS

AGE

United States

Suicidality mostly concerns older youth. In the United States, 91% of youth suicide victims in 2018 were 15-24 years old (Suicide Prevention Resource Center, 2018).

Suicides of preadolescents have also been on the rise. **Between 2007 and 2017, there has been a 178% increase in suicides of children aged 10-14** (Franki, 2019).

Though most youth suicide victims are older, very young children experience suicidality too. Research shows that nationally:

- On average, one child under 13 dies of suicide every five days (Hanna, 2017).
- On average, 33 children aged 5 to 11 years old die of suicide every year (Jobes, 2016).
- 12% of children between the ages 6 and 12 have suicidal thoughts (Suicide and Teens, n.d.).

Massachusetts

In Massachusetts, suicide victims are also mostly older youth; 77% of youth suicide victims between 2011 and 2015 were between the ages of 18 and 24 years (DPH Data Brief). Additionally, despite a slight rise in the number of suicides of youth 10-14 and 15-19 between 2012 and 2017, suicide victims aged 20-24 have consistently represented between 52% and 66% of overall youth suicide victims.

While the numbers of suicides of Massachusetts youth 10-14 have not risen dramatically, the Massachusetts Youth Risk Behavior Survey [hereafter cited as Massachusetts YRBS], conducted every two years, suggests suicidality among children in middle school is on the rise:

- The percentage of students in 6th and 7th grades who reported seriously considering suicide rose between 2015 and 2017 from 5% to 6.9% for 6th graders and 8.1% to 9.3% for 7th graders.
- Similarly, the percentage of students in 6th grade who reported attempting suicide rose from 2.4% to 3.7% between 2015 and 2017.

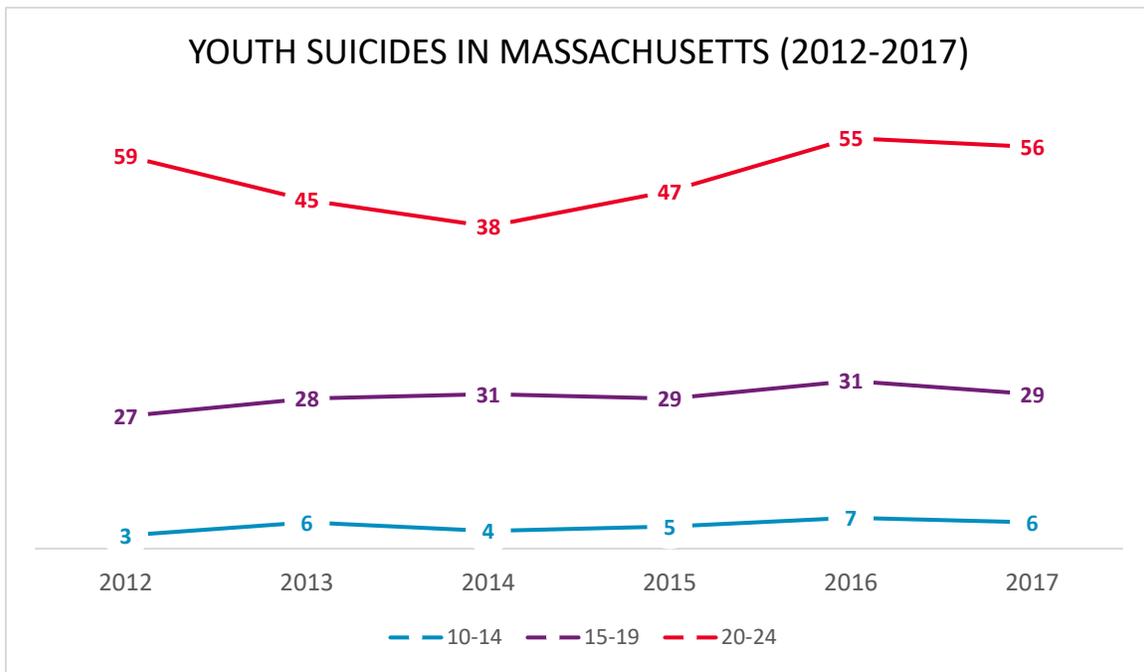
The 2017 Massachusetts YRBS also demonstrates that children in 7th, 8th, and 9th grades are particularly vulnerable to suicide ideations:

- In middle school, more children in 7th and 8th grade reported seriously considering suicide in the past year (9.3% and 9.7% respectively) than in 6th grade (6.9%).
- In high school, 14.4% of 9th graders seriously considered committing suicide in the past year, while that was the case for 11.4 to 12.2% in the next three grades.

Although the reasons are unclear, this data suggests that children in 7th, 8th and 9th grades would benefit from targeted prevention efforts.

While suicides of very young children have been on the rise nationally, this does not seem to be the case in Massachusetts. Between 2012 and 2017, only one suicide of youth 5-9 was recorded (in 2012).²

The rise of suicides among young children is coupled with a lack of research regarding its causes as well as effective treatment. To date, there are virtually no evidence-based treatments for suicidal risk among children under 12 years old (Jobs, 2016).



Massachusetts Department of Public Health

² This unpublished data was made available to the OCA by the Department of Public Health.

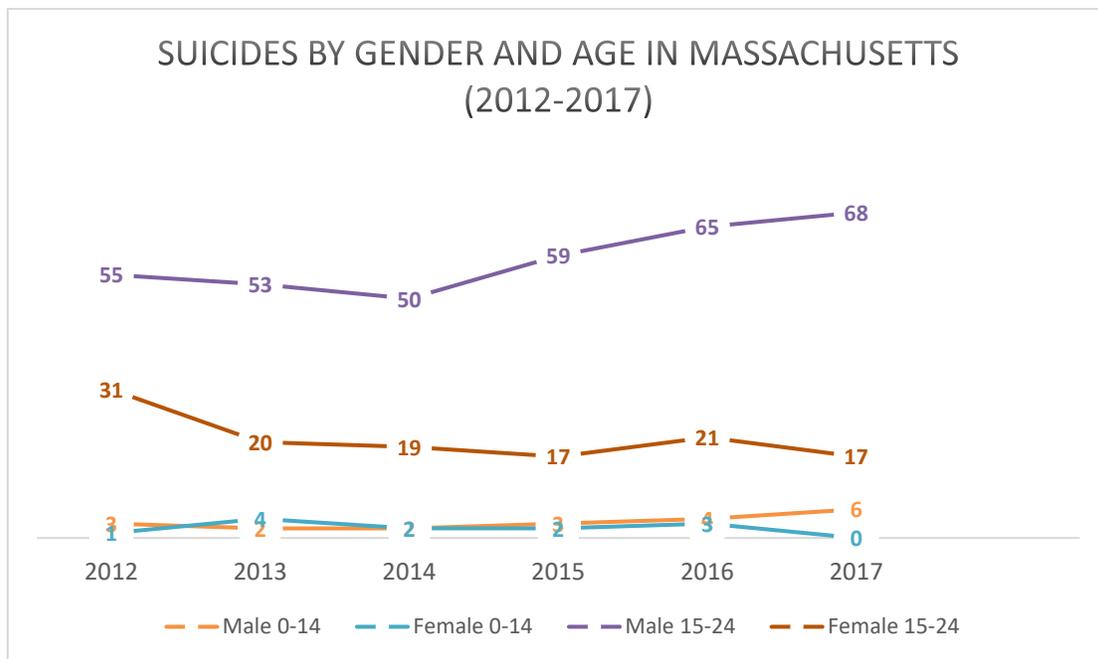
GENDER

United States

Nationally, victims of youth suicide are overwhelmingly male and the suicide rate for boys has increased significantly in the past decades. While boys 15-19 died by suicide at a rate of 13 per 100,000 in 2000, by 2017 the rate was 17.9 per 100,000. Researchers note that “not since 1980 — when the HIV/AIDS epidemic touched off widespread despair among young gay males across the United States — has the suicide rate for this group been so high (it was 18 per 100,000 that year)” (Healy, 2019).

While, historically, suicide rates have been higher for boys than girls, since 2007 the gap has narrowed throughout the country. Recent CDC reports found that, nationally, female youth are experiencing a greater increase in suicide rates compared to males (Ruch, 2019).

Recent findings show that girls aged 10 to 14 experienced the largest percentage increase in suicide rates compared with other age groups, tripling from 0.5 per 100,000 in 1999 to 1.5 per 100,000 in 2014 (Ruch, 2019).



Suicide and Self-inflicted Injury Data, Massachusetts Department of Public Health

Massachusetts

In the Commonwealth, 71% of youth suicide victims between 2011 and 2015 were boys (DPH Data Brief).

In contrast with national trends, the rate of girls and young women (15-24) victims of suicide has in fact decreased between 2013 and 2017. The rate decreased from 4.3 per 100,000 in 2013 to 3.6 per 100,000 in 2017.

While suicides are more common among adolescent males, **adolescent females in the Commonwealth are more likely to engage in suicidal and self-injurious behaviors.**

This is reflected in data from the 2019 Massachusetts YRBS:

- 19.2% of girls in high school reported considering suicide, compared to 15.4% of boys.
- 7.8% of girls reported attempting suicide in 2018, compared to 6.5% of boys.

Additionally, girls think about suicide and act upon suicidal ideations at a much younger age than boys; 6.2% of middle school girls reported attempting suicide in 2017 (the same percentage as in high school), while only 2.5% of boys (Massachusetts YRBS, 2017). While this might suggest boys report suicidal ideations less often than girls, the data can also suggest girls are more susceptible to having suicidal ideations at a younger age.

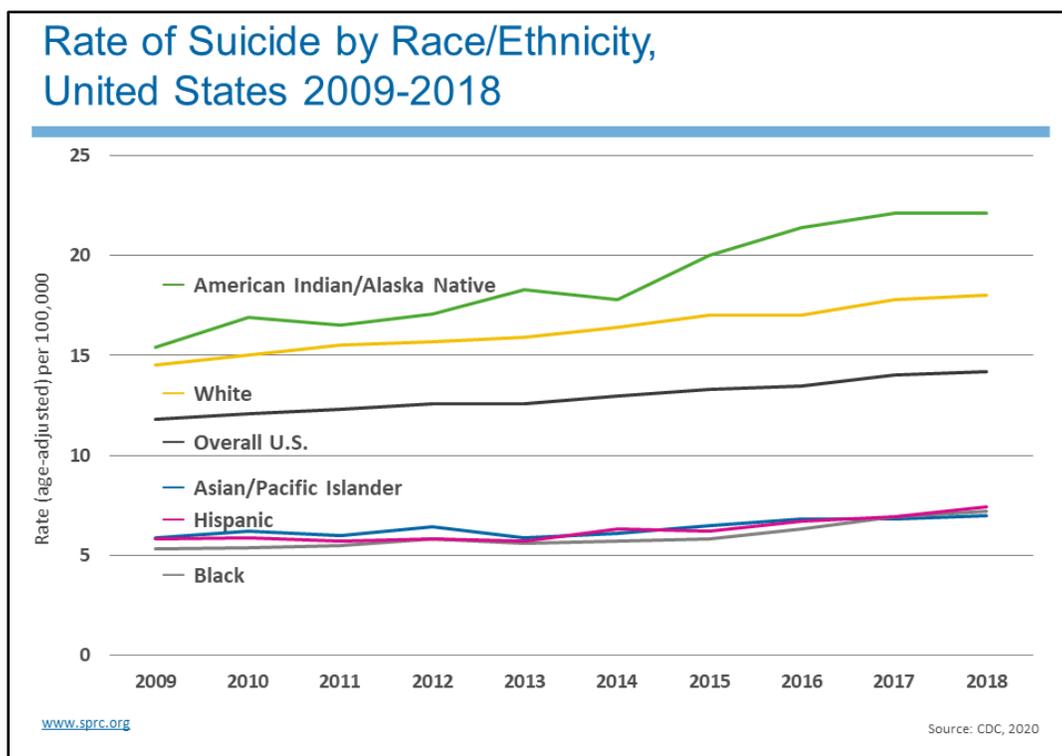
This trend is particularly concerning as researchers have found that, nationally, girls are increasingly using hanging and suffocation as a means of suicide. Given that “most youth suicide decedents actually die on their first attempt, with the likelihood of death on first attempt being associated with lethality of method,” the increased use of hanging and suffocation (highly lethal methods) could lead to even more suicides in girls (Ruch, 2019).

RACE AND ETHNICITY

United States

Youth suicide in the United States disproportionately affects Native American and Alaska Natives. In 2018, the suicide rate of indigenous youth was presumed to be 22.1 per 100,000—much higher than the national average of 14.2 per 100,000.

The second racial/ethnic group most affected by youth suicide is White youth, with a rate of 18 per 100,000 (Suicide Prevention Resource Center, 2018). The chart below demonstrates the large gap between suicide rates of Native American, Alaska Native, and White youth compared to Hispanic, Asian/Pacific Islander, and Black youth.



Moreover, **important racial differences emerge when breaking the data down by age groups:**

- In the United States, suicide rates among Black children aged 5 to 11 years almost doubled between 1993-1997 and 2008-2012 (from 1.36 to 2.54 per million) and decreased among White children of the same age (from 1.14 to 0.77 per million) (Bridge, 2015).
- Among children aged 5 to 12 years, the suicide rate of Black children is almost twice as high as that of White children. On the other hand, the suicide rate for children 13 to 17 years old was approximately 50% lower among Black youths than among White youths (Bridge, 2018).

Massachusetts

In Massachusetts, the highest average annual youth suicide rate overall was among White, non-Hispanic youths (6.4 per 100,000), followed closely by Asian, non-Hispanic youth (5.5 per 100,000) (DPH Data Brief).

Although the rate of suicide of Hispanic youth was the lowest of all recorded racial/ethnic groups (3.5 per 100,000 between 2011-2015), more recent data points to an alarming increase. **The number of suicides of Hispanic youth tripled between 2016 and 2017, while other racial/ethnic group saw no change or a decrease in numbers** (DPH, 2020).

The number of Native American youth who died by suicide in the state between 2011 and 2015 was too low ($n < 6$) to calculate a suicide rate. While this could suggest that suicide among Native American youth is not as prominent a problem in the Commonwealth as it is in other regions of the United States, it should be noted that the small population of Native American youths (2,472 in 2018³) means even fewer than six suicides can have a great impact on the state's Native American community. Moreover, researchers warn us that Native Americans are often incorrectly classified as another race (usually White) in health data systems which can lead to important undercounting of youth suicides (Northwest Portland Area Indian Health Board, 2015).

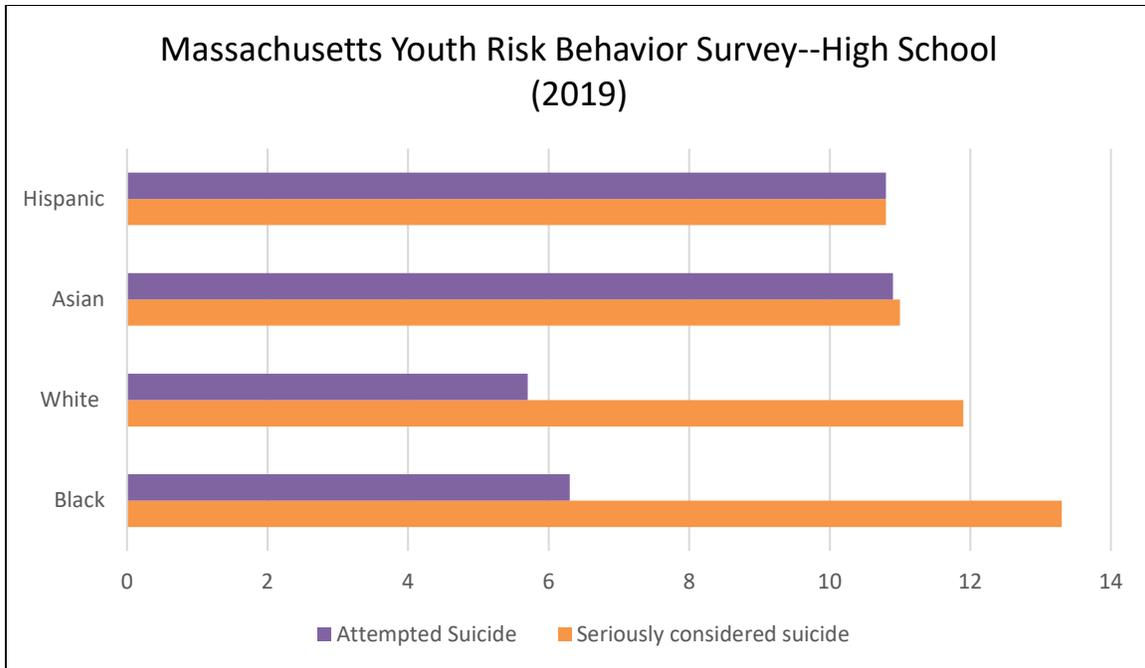
Available data on the role race and ethnicity play on suicidality in Massachusetts is complex and at times contradictory. Although the highest average youth suicide rate overall is among White, non-Hispanic youths, data from the Massachusetts Youth Risk Behavior Surveys administered in high schools demonstrate that youth who identify as Hispanic, Black non-Hispanic, and Asian report attempting suicide at much higher rates than White youth.

As the chart below shows, rates of suicide attempts are particularly high for Hispanic and Asian youth. Comparing the 2017 and 2019 surveys highlights trends that should be closely monitored:

- The percentage of Black students who reported seriously considering suicide has increased from 10.8% in 2017 to 13.3% in 2019.
- The percentage of White students who reported attempting suicide has increased from 3.8% in 2017 to 5.7% in 2019.
- The gap between suicide ideations and attempts have narrowed, especially for Hispanic and White students.

³ Kids Count Data Center. (n.d.) Child population by race in Massachusetts.

<https://datacenter.kidscount.org/data/tables/103-child-population-by-race#detailed/2/23/false/37,871,870,573,869,36,868,867,133,38/68,69,67,12,70,66,71,72/423,424>



How race affects suicide rates of youth of different ages in Massachusetts is currently unknown. In light of the protests for racial equity and against police brutality, as well as the disproportionate impact of the Covid-19 pandemic on communities of color, it is necessary for the Commonwealth to understand how race affects children, adolescents, and young adults of different racial/ethnic backgrounds and develop appropriate suicide prevention strategies.

Nota Bene: Racial and ethnic categories gloss over important cultural and contextual differences; each have their own unique culture, history, economic status, politics, and immigration contexts that need to be considered in order to make research, intervention and treatment culturally relevant for each racial or ethnic subgroup. For instance, a 2008 study on suicidal behavior with Latinx youth found that Mexican American youth had the highest rates, while Central American and Cuban Americans had lower representations than expected (Duarté-Vélez and Bernal, 2008).

IMMIGRATION

To add to the complexity of breaking down youth suicidality by race and ethnicity, research demonstrates that **youth's immigration status plays an important role in suicide attempts**. The impact of migration and acculturation on children's mental health has not been studied extensively, but the existing literature demonstrates there is a need to better understand the stressors that lead immigrant youth to think about suicide in order to develop effective suicide prevention efforts.

Possible stressors that put immigrant youth at increased risk of suicide include:

- The influence of generation status on suicidal behavior. For instance, one study demonstrates that second generation Latinx youth are more than twice as likely to attempt suicide and engage in alcohol and drug use than first-generation (foreign-born) youth (Lipsicas, 2010).
- Studies highlight that parent-child conflicts, such as those arising from conflicting cultural values, are a major risk factor to suicidality in immigrant youth (Lipsicas, 2010).
- Experiences of discrimination and xenophobia, as well as fear of deportation (Henderson, 2018).

Massachusetts

In Massachusetts, 13% of youth who died by suicide were born outside of the U.S. and its territories. This is especially an issue for Hispanic and Asian youth victims, of which respectively 32% and 50% were born outside of the United States (DPH Data Brief).

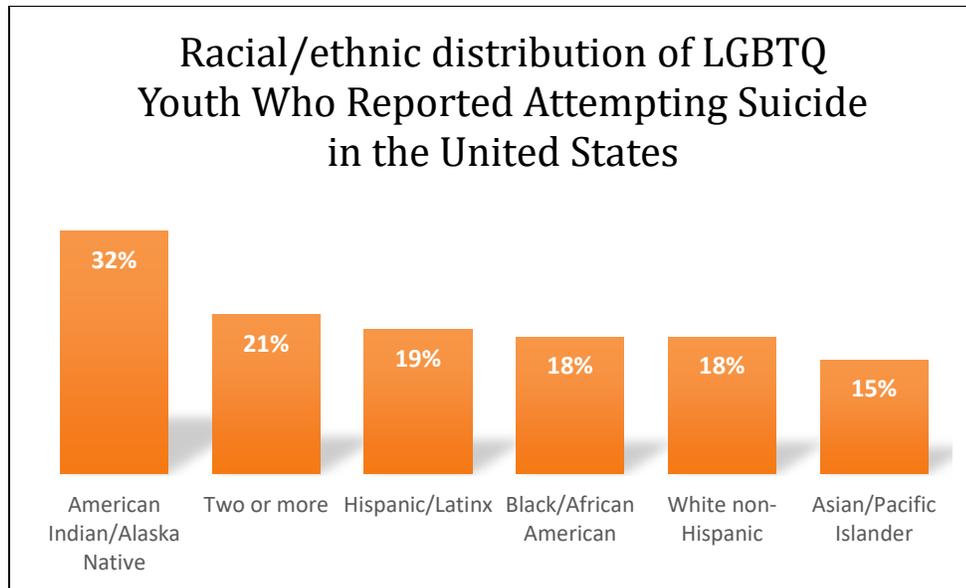
The alarming increase in the number of suicides among Hispanic youth (discussed above) highlights a need to understand if/how the current national political climate around immigration issues affects youth in the Commonwealth.

SEXUAL ORIENTATION AND GENDER IDENTITY

United States

LGBTQ youth are at a particularly increased risk of suicidality throughout the United States because of lack of acceptance from peers, bullying, discrimination, and family rejection (Aranmolate, 2017). Research shows that:

- Gay, lesbian and bisexual youth seriously contemplate suicide at almost three times the rate of heterosexual youth (CDC, 2016).
- 23% of lesbian, gay, or bisexual high school students attempted suicide in 2017, compared to 5.4% of heterosexual youth (YRBS, 2017.)
- 40% of transgender adults reported having made a suicide attempt and 92% of these individuals had attempted suicide before 25 (James, 2016).



Source: Trevor Project

LGBTQ youth of color are at an increased risk of suicidality. Using targeted ads on social media, the Trevor Project surveyed 34,808 LGBTQ youth online and found that the proportion of LGBTQ youth reporting a suicide attempt in the past year was higher among youth of color (21%) than White non-Hispanic youth (18%). Rates were highest among American Indian/Alaskan Native LGBTQ youth (32%) and lowest among Asian/Pacific Islander LGBTQ youth (15%) (The Trevor Project, 2019).

Massachusetts

The *FY2021 Report and Recommendations* of the Massachusetts Commission on Lesbian, Gay, Bisexual, Transgender, Queer, and Questioning Youth shows real disparities in suicide rates among children of different sexual orientations and gender identities in the Commonwealth:

- LGBTQ students are 3.9 times more likely than their non-LGBTQ peers to have attempted suicide in the previous year.
- Almost four in ten transgender students (38.2%) reported seriously considering suicide within the past year, more than three times the rate of non-LGBTQ students (10.7%) and also higher than other LGBTQ peers (34.2%).
- Transgender students are 1.6 times more likely to attempt suicide when compared to other LGBTQ youth and 5.8 times more likely compared to non-LGBTQ youth.

The *Massachusetts Commission on LGBTQ Youth* report highlights the effectiveness of training of the Safe Schools Program for LGBTQ students conducted for educators and school district personnel in 127 districts:

- The training was well-received by its recipients (half said training was “excellent,” the other half said it was “very good” or “good.”).
- 96% of the participants reported learning to better understand the experiences of LGBTQ students and families, and 89% said they would change their practices or policies based on what they learned.

Adopting an intersectional lens reveals that **LGBTQ youth of color are at an even more increased risk of suicidality in Massachusetts**. While 35.6% of all gay, lesbian or bisexual students reported “seriously considered attempting suicide,” the rate was highest among the “Multiple Race” (55%) and Black (42.8%) compared with White students (32.5%) and Hispanic (38%) (Massachusetts YRSB, 2017).

SOCIOECONOMIC STATUS

Although a correlation is often implied, there has been limited research conducted on understanding the effects of socioeconomic status on youth suicidality.

However, recent research from Boston Children’s Hospital shows a link between poverty and suicide in children and teens nationwide. The study found that the rate of suicides in children and adolescents is 37% higher in counties with the highest levels of poverty compared with suicide rates in counties with the lowest levels of poverty (Hoffman, J. A., 2020).

The study also demonstrates increased suicide rate from firearms in the more impoverished counties compared to the least (see table below). However, suicide risk did not appear to increase for the methods of suffocation or poisoning (Hoffman, J. A., 2020).

Poverty Concentration, %	Suicide aIRR (95% CI) ^a			
	All Methods	Suffocation	Firearm	Poisoning
0-4.9	1 [Reference]	1 [Reference]	1 [Reference]	1 [Reference]
5.0-9.9	1.12 (0.95-1.32)	1.00 (0.80-1.25)	1.37 (1.05-1.79)	1.09 (0.65-1.82)
10.0-14.9	1.25 (1.06-1.47)	1.12 (0.89-1.40)	1.65 (1.26-2.16)	1.00 (0.59-1.68)
15.0-19.9	1.30 (1.10-1.54)	1.15 (0.91-1.45)	1.85 (1.41-2.44)	0.89 (0.52-1.52)
≥20.0	1.37 (1.15-1.64)	1.25 (0.98-1.60)	1.87 (1.41-2.49)	0.86 (0.49-1.52)

Abbreviation: aIRR, adjusted incidence rate ratio.
^a Models control for year, individual demographics, county urbanicity, and county youth demographic composition.

STATE AGENCIES

Every year in the United States, millions of children are in contact with child welfare and juvenile justice systems. Research demonstrates that youth who are a part of the child welfare and juvenile justice systems are at higher risk for attempting or dying from suicide (McIntosh, 2012).

In Massachusetts, over 48,000 children and young adults were served by the Department of Children and Families and there were 1,421 reported custodial arrests⁴ in FY2019.⁵ Given such large numbers, it is critical to understand how contact with child protective services or the juvenile justice system affects youth's suicidality in the Commonwealth.

To date, **there are no published studies on suicides of Massachusetts youth involved in the child welfare and/or juvenile justice systems.**

Child Welfare

A 2017 meta-analysis of research on suicides of youth in the child welfare system showed that suicide attempts are more than three times as likely in children and young people placed in care compared to non-care populations (Rhiannon, 2017).

The type of out-of-home placement also appears to have an impact on youth's suicidality. In particular, youth living in group homes were seven times more likely to have suicidal ideations than youth living in kinship care and five times more likely to consider suicide than youth placed in foster care (Anderson, 2011).

Researchers have attempted to understand how youth in the custody of a child protection agency from particular age, gender, or racial/ethnic cohorts or by type of maltreatment are at an increased risk of suicide ideations and attempts:

- Females in the custody of a child protection agency are reported as being more likely to attempt suicide (Bronsard, 2011; Cousins, 2010) and are at increased risk of suicide (Kalland, 2001).
- Over a quarter of preadolescent children (9-11 years old) in foster care had a history of suicidality (Taussig, 2014).
- Children (9-11 years old) in foster care who have been physically or sexually abused have higher rates of suicidal ideation compared to children who have suffered other forms of maltreatment. The study noted no gender differences for this age group (Taussig, 2014).

⁴ Custodial arrests are categorized as "on-view" and "taken into custody" in the NIBRS reporting system. Many police departments will issue youth a summons to court rather than making a custodial arrest for less serious offenses.

⁵ Department of Children and Families. (2019). *Annual Report*. <https://www.mass.gov/doc/dcf-annual-reportfy2019/download>; Office of the Child Advocate. (2019, November). *Early Impacts of "An Act Relative to Criminal Justice Reform."* <https://www.mass.gov/doc/early-impacts-of-an-act-relative-to-criminal-justice-reform-november-2019/download>

- Importantly, “two thirds of the caregivers of the most high-risk children (i.e., those imminently suicidal) were not aware of their children’s risk” (Taussig, 2014). In order to lower the risk of suicidality among youth in contact with child welfare agencies, it is necessary to include parents and caregivers in suicide prevention initiatives.

Juvenile Justice

United States

Gallagher et al. (2006) found that suicide is three times as prevalent in juvenile justice residential placements compared to the general population. Additionally, suicides account for more than a third (35 %) of the deaths of juveniles in confinement (Hockenberry et al., 2015).

In line with studies of children under the care of child protection services, one study found that sexual abuse, but not physical abuse, emerged as a direct, independent predictor of both suicidal ideation and behavior in incarcerated youth (Esposito, 2002).

While these studies examined youth *currently* in juvenile justice residential placements, there is little research on the impact of youth’s contact with the juvenile justice system on suicidality. A notable exception is a study from Utah conducted between 1996 and 1999 to understand the relationship between youth who have completed suicide and their history of contact with state agencies (Gray, 2002). The first phase of this research found that:

- 63% of youths who died by suicide in Utah had contact with the juvenile justice system.
- There is a direct correlation between the number of referrals to the state’s juvenile justice system and suicide; youth with seven or more referrals were 4.9 times more likely to die by suicide.
- 27% of suicide victims had an individual or family member referral to child protective services.

The Utah study concluded that prevention should be focused on well-defined populations and suicide prevention efforts should be aimed at institutions, not individuals. This is an area for further discussion.

Massachusetts

Though research could not be found regarding suicides of youth involved in the juvenile justice system in Massachusetts, this report wishes to highlight the development of the *Massachusetts Youth Screening Instrument –Version 2* (MAYSI-2), which was designed as a screening tool to be administered to all youth (12-17 years) at the time of intake in juvenile probation offices, juvenile pretrial detention centers, and juvenile corrections facilities.

The MAYSI tool was originally developed in the late 1990s by the University of Massachusetts Medical School in collaboration with the Massachusetts Department of

Youth Services (DYS). The tool was refined over time and MAYSI-2 was released for use in 2000. Research and technical assistance for MAYSI-2 is operated by the National Youth Screening and Assessment Project (NYSAP) at UMass Medical School. Currently, this instrument is the most widely used juvenile justice mental health screening tool in the U.S. Indeed, the MAYSI-2 is now registered for use in 47 states (Grisso, 2012).

RECOMMENDATIONS

To better understand how suicidality affects youth in the Commonwealth, the causes of suicidality among youth, as well as to increase the state's ability to target specific groups in suicide prevention initiatives, the OCA recommends the state:

1. Understand how suicidality affects different cohorts of youth in the Commonwealth and develop appropriate prevention strategies.

To target suicide prevention efforts effectively, the OCA recommends that the state systematically examine how suicidality affects youth of different cohorts, including, but not limited to, the categories discussed in this report.

While previous research into youth suicides throughout Massachusetts is highly informative, we still lack a good understanding of suicidality among:

- Very young children, particularly whether it disproportionately affects children of color
- Youth in contact with state agencies
- Youth of lower socioeconomic status

While this report explores suicidality in cohorts of youth most commonly examined in local and national research, the OCA notes that there are other areas that could be investigated. In particular, the OCA highlights the following topics for further investigation:

- **Adverse Childhood Experiences (ACEs):** The ACEs Study found that for every unit increase in ACE score, the risk of suicide attempt increased by 60% (Dube et al., 2001).
- **Children with special needs:** Exploration of suicidality in children and youth with special needs should include (but not limited to) those with autism and other neurodevelopmental disorders, behavioral health, mental health and physical conditions. Chronic physical conditions are associated with a slightly elevated risk for self-harm, suicidal thinking, and attempted suicide; chronic mental conditions are associated with an increased risk for all 3 outcomes (Barnes, 2010).
- **Urban/rural variations:** A study of suicides of youth aged 10 to 24 years between 1996 and 2010 found that suicide rates for both males and females in rural counties was double that of urban counties. The study also found widening rural-urban disparities over time (Fontanella, 2015).

2. Understand the landscape of Massachusetts' suicide prevention initiatives, both at the local and state level.

The OCA recommends the state research and track local and state-wide youth suicide prevention efforts.

Additionally, based on the findings of this report, the OCA recommends that the state investigates initiating and/or increasing (if necessary) suicide prevention efforts for:

- Students in 7th, 8th, and 9th grades
- LGBTQ youth, especially from communities of color
- Immigrant youth

Finally, the OCA recommends **more research be conducted on effective, evidence-based, cohort-specific, youth suicide prevention efforts**. In particular, the OCA recommends looking beyond national initiatives and examine youth suicide prevention efforts that have been effective in other countries, such as Australia, where prevention efforts have been demonstrated to be successful.

3. Increase the age breakdown in data gathered and align it with age categories most commonly used in research.

Given the increase in suicides among young children and preadolescents nationally, as well as the need for age-appropriate suicide prevention initiatives, the OCA recommends the state align age categories with those used by the Centers for Disease Control and Prevention. These are: 5-9, 10-14, 15-19, and 20-24.

4. Adopt an intersectional lens in research and prevention initiatives.

In order to deepen our understanding of how suicide affects children in different demographic and geographic cohorts as well as target suicide awareness and prevention efforts towards specific groups of youth, the OCA recommends adopting an intersectional lens when conducting research and developing prevention initiatives.

This is especially important in thinking about the specific needs and challenges of youth from communities of color made vulnerable by systemic racism. In light of the protests for racial equity and against police brutality, as well as the disproportionate effects of Covid-19 on communities of color, it is necessary for the Commonwealth to understand how race affects children, adolescents, and young adults of different racial/ethnic backgrounds and develop appropriate suicide prevention strategies.

5. Engage families and caregivers in youth suicide prevention.

The OCA recommends that the state investigates initiating and/or increasing youth suicide prevention efforts towards parents and caregivers—especially those whose children are in contact with state agencies. Of note, the report highlights foster parents' needs for training and support to meet the mental health needs and suicide risks of the youth in their care.

6. Focus on very young children and tweens.

Given our lack of understanding of suicidality among very young children and pre-teens in Massachusetts, the recent rise of suicides of children under fourteen throughout the nation, as well as the lack of evidence-based treatment for children under twelve, the OCA recommends the state explore developing a screening tool and an evidence-based treatment for suicidal children under twelve.

NEXT STEPS

This research report is the Office of the Child Advocate's first step towards understanding youth suicide in Massachusetts. As a result of these findings, the OCA will be collaborating with the Department of Public Health (DPH) to understand the landscape of Massachusetts' suicide prevention initiatives, both at the local and state level.

Through this collaboration, the Office of the Child Advocate will:

- Research the various prevention efforts underway in the state and see how they align with data on suicidality by cohort groups.
- Conduct a statewide survey of state agencies, schools, community organizations, care providers and health professionals to understand their prevention initiatives, gaps and/or needs, as well as barriers to developing effective youth suicide prevention efforts.
- Interview state and local leaders in youth suicide prevention.
- Create a database to track and update youth suicide prevention initiatives at the local and state level to identify gaps and measure effectiveness.

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