Youth and Young Adult Suicide and Self-Harm Emergency Department Visits in California
Data Trends 2018-2021

Office of Suicide Prevention

California Department of Public Health

CDPH

California Department of Public Health

Contents

Introduction

This report examines trends in suicide and self-harm emergency department (ED) visits among youth and young adults (10-24 years old) from 2018 to 2021. Between 2018 – 2021:

- Suicide was the second leading cause of death among youth and young adults, accounting for 19.8% of all deaths in this age range.
- Youth and young adults visited the emergency department for self-harm injuries more than any other age group.
    - In 2021, 57% of visits to EDs to treat self-inflicted injuries were made by youth and young adults, despite this group making up only 21% of the total population in California.

These data are even more troubling when considering the importance of the developmental period that occurs from 10-24 years; this is a time when serious mental health challenges often first emerge and in which outcomes are predictive of an individual's mental and physical health throughout the lifespan.[i]

The suicide and self-harm rates among certain groups of youth and young adults in California are higher than the overall rates of youth and young adults. Social drivers of health such as: low socioeconomic status (SES), exposure to adverse childhood experiences (ACEs), racism, and structural oppression in health care, which are more commonly experienced by racial and ethnic minorities, may be contributing factors impacting certain groups of youth.[ii] Additionally, although data limitations currently prevent us from determining suicide and self-harm rates among California's lesbian, gay, bisexual, and transgender (LGBT) youth and young adults, it is known that youth and young adults who identify as LGBT are at elevated risk of suicide and self-harm.[iii]

See pages 14-17 for information on Youth Suicide Prevention Opportunities and Prevention Resources.

Using data derived from death certificates and ED visit diagnostic codes, findings are organized into four sections to focus attention on specific groups who have been most impacted by suicide and self-harm:

❶ Age Groups

Provides an overview of how suicide and self-harm differs by smaller developmental age groups (i.e., ages 10-14, ages 15-19, and ages 20-24), calling attention to differences by sex within each.

❷ Race and Ethnicity

Examines differences in suicide and self-harm rates among youth by race and ethnicity, to underscore the burden on specific groups.

❸ Method of Injury

Reviews suicide and self-harm incidents by age to highlight how the method used changes across this age range.

❹ Circumstances Surrounding Youth Suicide Deaths

Utilizing expanded data available through the California Violent Death Reporting System (CalVDRS) circumstances surrounding suicide deaths among youth is examined to provide further insights.

After examining the suicide and self-harm data, the report concludes with information on resources and opportunities for prevention.

Why Suicide and Self-Harm ED Visit Rates?

Following the approach used by the Centers for Disease Control and Prevention (CDC), the California Department of Public Health (CDPH) uses suicide deaths and self-harm ED visits as the standard mortality and morbidity indicators used for surveillance related to suicide.

Age Groups

Within the youth and young adult age range of 10 to 24 years old (also called adolescence[iv v]), there are shorter phases of development which generally fit into the ages of: 10-14 Years Old—early and middle adolescence, 15-19 Years Old—late adolescence, 20-24 Years Old—young adulthood. Understanding differences within these developmental phases is important when selecting or developing interventions and supports for youth.

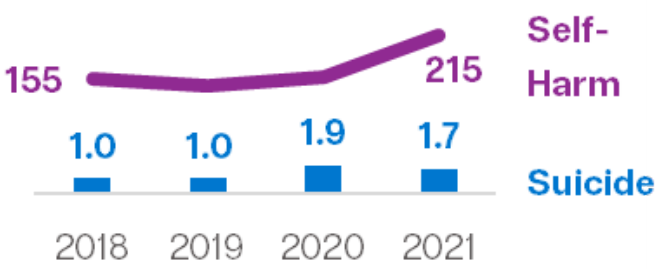
In addition to being a distinct developmental period, the overarching 10-24 age range is a standard age range to examine epidemiologically, and the three age groupings discussed in this report are based on groupings used at the national level when assessing mortality and morbidity. Use of this approach, therefore, allows findings in this report to be compared to national findings for these three age groupings.

Ages 10-14

In 2021, there were 45 suicide deaths among California residents 10-14 years old, and more than 5,500 ED visits for self-harm injuries of youth in this age range.

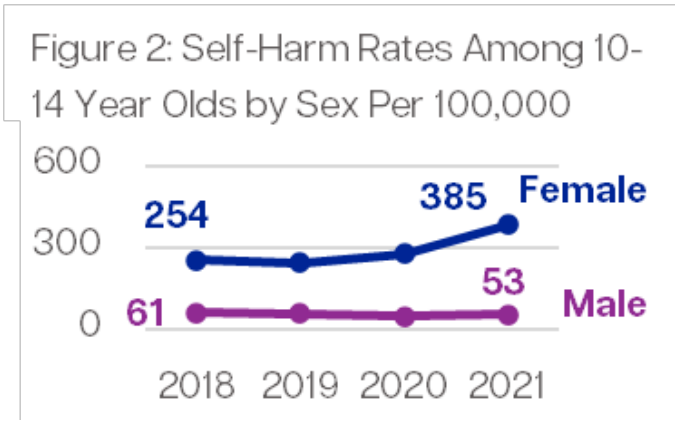
The suicide rate among youth 10-14 years old is the lowest of the three groups, with less than 2 youth per 100,000 in 2018 through 2021, but the rate jumped from one in 2018 and 2019 to almost 2 per 100,000 youth in 2020 and 2021 (Figure 1). Suicide rates between females and males are similar in the 10-14 age range.

Figure 1: 10-14 Year Olds, Suicide and Self-Harm Rates Per 100,000



Although not included in the graphs and analysis presented in this document, there were six youth below the age of 10 who died by suicide in 2020 and 2021. These were the only reported deaths for youth under age 10 in the last decade.

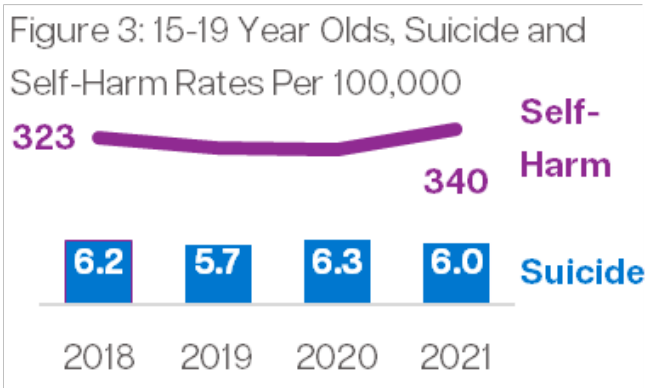
The number of self-harm ED visits has also trended upward in the 10–14-year-old age group between 2018 to 2021 (Figure 1). The increase is attributable to an observed increase among female youth, who had 50% more self-harm related ED visits in 2021 than in 2018 (Figure 2). The self-harm ED visit rates for male youth in this age range has remained fairly stable over time.



Ages 15-19

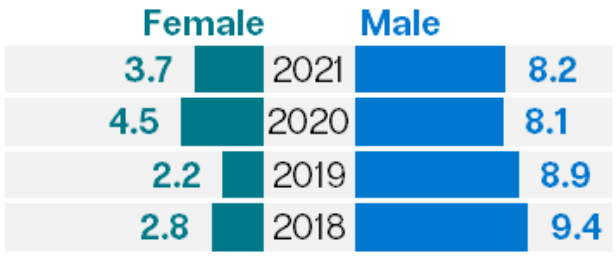
In 2021, there were 167 suicide deaths among California residents 15-19 years old, and more than 9,400 ED visits for self-harm injuries in this age range.

Suicide rates among youth 15-19 years old remained fairly stable across the years from 2018 to 2021 (Figure 3). Rate differences by sex first emerge in this age range. Males had higher rates of suicide than females (Figure 4). However, the rate among females has trended upward between 2018-2021, while the rate for males has declined every year between 2018 and 2020 then leveled out in 2021.



The 15-19 age group had the highest self-harm ED visit rate compared to any other youth age group, with the rates increasing between 2018-2021. When looking at self-harm rates in the 15-19 age group by sex, the rate among females increased every year between 2019 and 2021, while slightly declining among males.

Figure 4: Suicide Rates Among 15-19 Year Olds by Sex Per 100,000

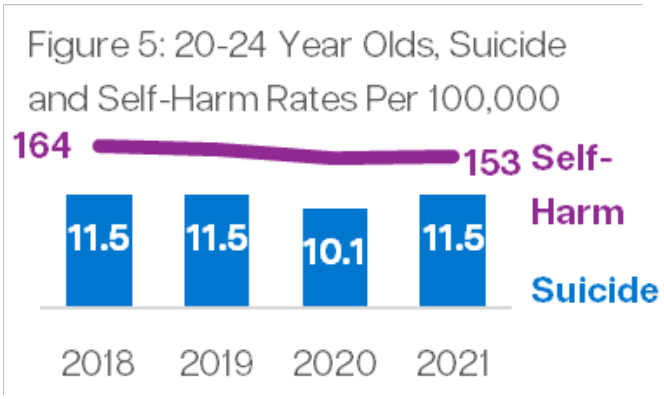


Ages 20-24

In 2021, there were 338 suicide deaths among California residents that were 20-24 years old, and 4,480 self-harm ED visits in this age range.

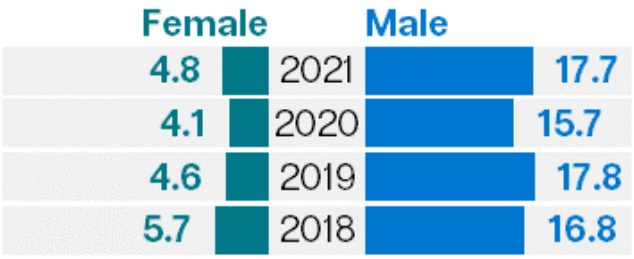
This age range had the highest rate of suicide among all the youth and young adult age ranges. Rates were stable between 2018 and 2021, except for 2020 where there was a decline (Figure 5). In 2021 the rate went back to the level it held in 2018 and 2019.

Figure 5: 20-24 Year Olds, Suicide and Self-Harm Rates Per 100,000



Like the 15-19 age group, suicide rates are higher among males than females and have been similar between 2018 and 2021 (Figure 6). The number of self-harm ED visits has declined between 2018-2021. The rates of self-harm ED visits were higher among females than males, but rates for both groups have been trending downward.

Figure 6: Suicide Rates Among 20-24 Year Olds by Sex Per 100,000



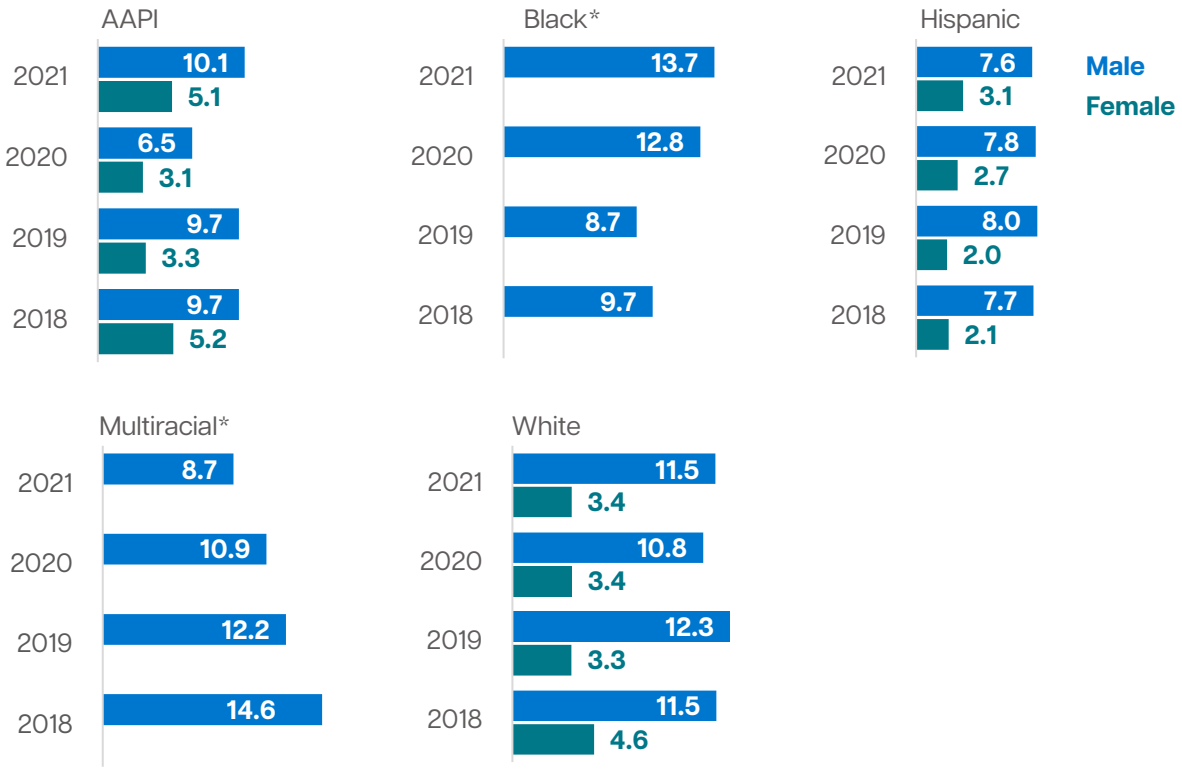
Race and Ethnicity

Suicide and self-harm ED visit rates among youth and young adults vary substantially by race and ethnicity. There are also differences by sex within each race and ethnicity, with more males of all groups dying by suicide and more females treated in the ED due to self-harm.

Suicide

Between 2018-2021, the suicide rates by race and ethnicity and sex varied substantially (Figure 7).

Figure 7: Suicide Rates Youth Ages 10-24 by Race and Ethnicity and Sex, Per 100,000, 2018-2021



* Data for AI/AN youth, Black and Multiracial female youth are not included due to small counts. When aggregated across 2018-2021 the suicide rate for AI/AN was 14.8 per 100,000. Because the aggregated multi-year rates cover more than one year, they should not be compared to the annual rates presented in this report.

While the annual suicide rates of American Indian/Alaska Native (AI/AN) youth and young adults cannot be reported due to small counts and concerns with revealing personally identifiable information, the suicide rate among AI/AN youth rate when aggregated across 2018-2021 was 14.8 per 100,000, which is the highest of all race and ethnicity groups. Black and White youth had the second highest rate when aggregated across 2018-2021, 7.8 per 100,000.

In 2021, the lowest suicide rate was 3.1 for Hispanic females and the highest rate was 13.7 for Black males. The suicide rates among Asian and Pacific Islander (AAPI) youth had been declining between 2018 and 2020 but increased in 2021. Black youth have experienced an increase in suicide rate, which is particularly pronounced among Black male youth, increasing by 41% between 2018 and 2021. While the suicide rate among Hispanic youth was low compared to other groups, they had the highest count of suicides among all race and ethnicity groups between 2018 and 2021, with the rate of suicide among Hispanic females increasing by 48% between 2018 and 2021. Suicide rates among Multiracial youth have steadily declined between 2018 and 2021, with Multiracial male youth having experienced a rate drop. Rates among White youth have been stable between 2018 and 2021.

Self-Harm

The self-harm rate varied widely by race and ethnicity and sex between 2018 and 2021, with female youth and young adults who are AI/AN, Black, Hispanic, or White having rates above the state rate. The rate for both female and male AAPI and Multiracial youth were all below the statewide rate (Figure 8). In 2020, there was a decline in self-harm EDs visits across all groups; this is likely because of a lower number of self-harm injuries treated in EDs between March and June, which was during the initial Covid-19 shelter in place mandate.

Figure 8: Self-Harm ED Rates Youth Ages 10-24 by Race and Ethnicity and Sex, Per 100,000, 2018-2021

*The Multiracial category was first available in 2019, therefore data is not available prior to 2019.

More female youth and young adults, regardless of race and ethnicity, experienced ED visits due to self-harm than males of the same race and ethnicity. In 2021, the highest rates of self-harm were among Black females (488.8) and White females (482.1). Rates among AI/AN females fluctuate from year to year, likely due to small counts, but are also much higher than other race and ethnicity groups.

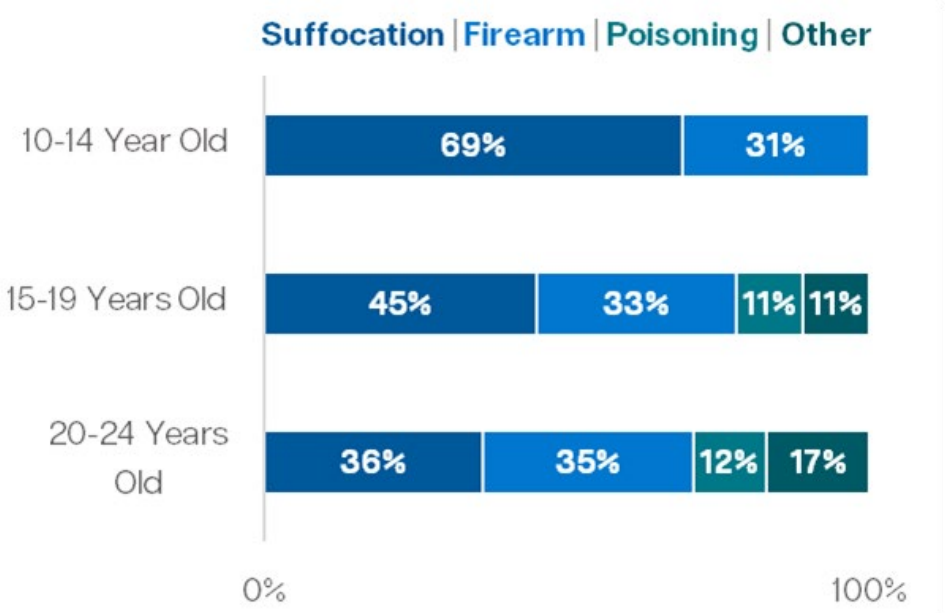
Method of Injury

The percentages of suicide deaths and ED visits due to self-harm injuries by method were stable between 2018-2020; therefore, information in this section is focused on 2021 only. There were differences in the method used in suicides, compared to self-harm injuries, as well as differences in method by age for both suicide deaths and self-harm injuries.

Suicide

Suffocation, including hanging, is the most common method of injury among all youth and young adult suicides. However, the percentage declines in each age group. Nearly 70% of suicide deaths of youth ages 10-14 were caused by suffocation, with a smaller number caused by a firearm, poisoning, or other method in 2021. The percentage of suicides caused by suffocation went down to 45% in youth ages 15-19 compared to their younger peers, and the use of firearms emerged as a major method used in suicides among youth in this age group. The use of firearms as a method for suicide increased slightly among young adults ages 20-24, while the use of suffocation decreased to 36% compared to younger age groups. Suicide deaths among youth who are ages 15-19 and young adults ages 20-24 caused by poisoning (i.e., prescription or over the counter medication, ingestion of harmful substance) occurred more than 10% of the time in 2021 (Figure 9).

Figure 9: Percentage of Suicide Deaths by Method, by Age Group, 2021



For all age groups "other" includes death caused by cutting/piercing. For the 10-14 age range "other" also includes injuries caused by firearm and poisoning. Due to small counts for these methods, the exact percentages cannot be reported.

There are some differences between sexes in the method of injury. Death caused by suffocation and poisoning were most common among female youth of all ages. The most common causes of injury among male youth of all ages were suffocation and firearm.

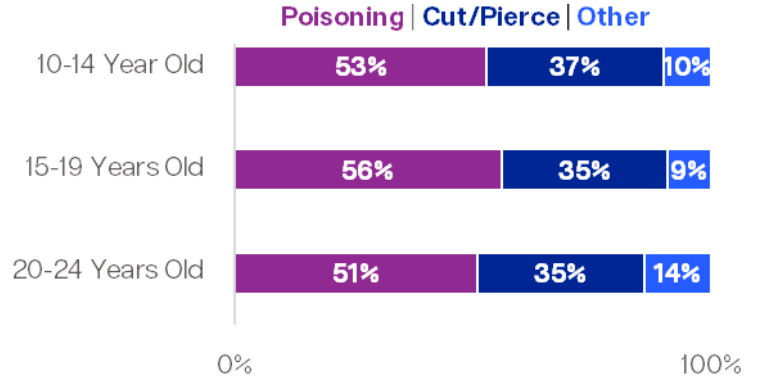
Firearms are a leading method of suicide among male youth.

92% of suicide attempts involving a firearm result in death.[vi] In 2021, 40% of suicide death among male youth and young adults involved a firearm. By contrast, 13% of suicides among female youth involved the use of a firearm. Although suicide deaths among male youth have declined in recent years, the use of firearms as a means of suicide is a factor in keeping suicide rates among males high.

Self-Harm

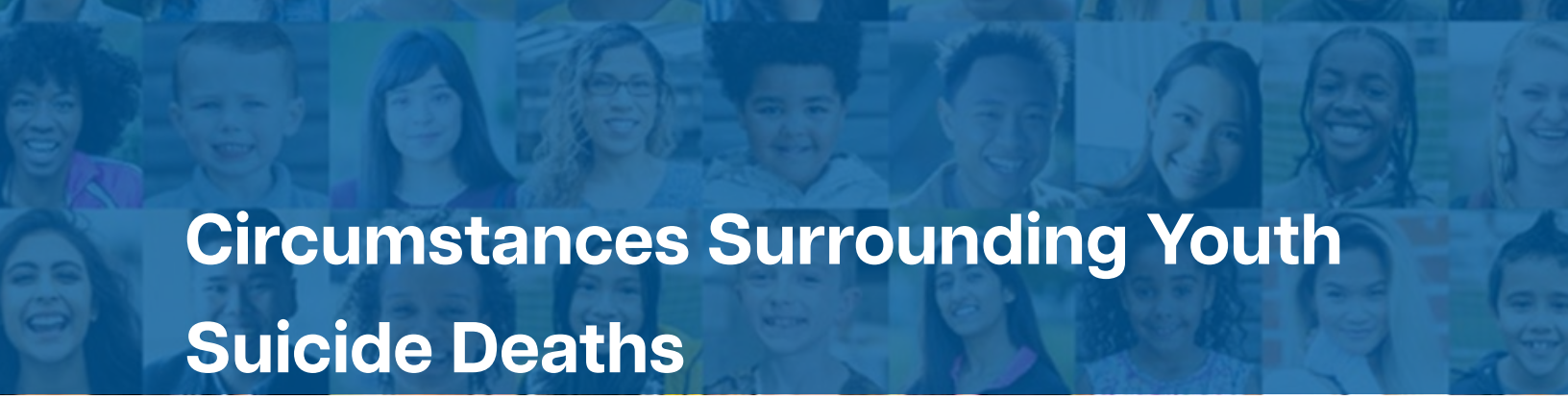
The methods used in self-harm injuries treated in EDs by age group are similar. More than 50% of all self-harm injuries treated in EDs for this age range were for poisoning. The second most common method for self-harm was cutting or piercing the skin (Figure 10).

Figure 10: Percentage of Self-Harm ED Injuries by Method, by Age Group, 2021



Poisoning is a common method of injury in youth suicide and self-harm.

Poisoning which includes consuming over the counter or prescription medications and other substances is the third most common cause of death among youth who die by suicide and is the second leading cause of death among female youth.



Circumstances Surrounding Youth Suicide Deaths

Utilizing supplemental multi-source California Violent Death Reporting System (CalVDRS) data, circumstances surrounding youth suicide deaths were abstracted for 304 of the 550 youth and young adult (age 10-24) suicides in California in 2021. Together, the 31 participating CalVDRS counties represented 55% of the suicides among youth and young adults that occurred in California in 2021 and covered a mix of both urban and rural counties across the state. At least one circumstance was known for 92% (n = 281) of the abstracted youth suicides. Approximately 59% of suicides captured in CalVDRS in this age range occurred at their home. Although the sample size was not large enough to examine the CalVDRS data by developmental age range or race and ethnicity, all circumstance data was examined by sex with a focus on known risk factors for suicide.

Examining circumstances contributing to these deaths can help identify ways to prevent similar deaths from occurring in the future. There were differences by sex in all of the most common circumstances found in youth and young adult suicide deaths in 2021 (Table 1).

Table 1: Circumstances Surrounding Youth Suicide Death with Differences of More than 5% Between Females and Males in CalVDRS counties in 2021

Circumstance	% of Females	% of Males	% of All
Current mental health problem, most commonly depression	60%	45%	49%
History of treatment for a mental health or substance use problem	47%	24%	30%
History of suicidal thoughts or plans	49%	35%	39%
History of suicide attempts	37%	19%	23%
History of non-suicidal self-harm	29%	5%	11%

There were also circumstances among youth and young adults who died by suicide which did not differ among males and females:

- Problems with a current or former intimate partner that contributed to their death (about 19%)
- Disclosed their suicide thoughts or plans to another person prior to their death (about 19%)
- Non-alcohol substance use problem (about 11%)
- Alcohol problem (about 7%)
- Recent death of a family member or friend (about 6%)
- Problem related to school that contributed to their death (about 4%)

Understanding how the prevalence of circumstances among youth and young adult suicide deaths are similar or different by sex is important when designing and implementing prevention strategies to ensure they are meeting the needs of the groups impacted.

The **California Violent Death Reporting System** (CalVDRS) conducts surveillance on violent deaths that occur in a large subset of California counties. CalVDRS combines data from death certificates with medical examiner/coroner, toxicology, and law enforcement reports. In 2021, 31 of 58 counties participated in CalVDRS (see technical notes for a list of participating counties).

Although the in-depth information available through the CalVDRS should not be considered representative of the entire state, it provides important insights into issues contributing to violent deaths.

Summary

Suicide rates among youth and young adults as a group have been fairly stable between 2018 and 2021. However, there are concerning differences by demographic characteristics in suicide and self-harm rates by smaller developmental age groups (i.e., 10-14, 15-19, 20-24), sex, and race and ethnicity, including increases in suicide and self-harm rates among some groups.

Age Groups:

- Although suicide rates for youth 10-14 years old were the lowest of the three groups, there was a 70% increase in suicide deaths in this age group between 2018 and 2021. Additionally, the self-harm rate among females in this age range has increased every year.

Sex:

- Male youth had higher suicide rates than female youth; this difference is likely due to a higher use by males of firearms, which are highly lethal.
- Although data limitations currently prevent us from determining suicide and self-harm rates among California's lesbian, gay, bisexual, and transgender (LGBT) youth and young adults, it is known that youth and young adults who identify as LGBT are at elevated risk of suicide and self-harm.[vii]

Race and Ethnicity:

- AI/AN youth and young adults had a suicide rate of 14.8 per 100,000 when aggregated across 2018-2021, which was the highest of all race and ethnicity groups across these years.
- Black male youth had the highest rate of suicide in 2021 among all racial and ethnic groups, with an increase of more than 41% since 2018.
- Hispanic female youth had the lowest rate of suicide from 2018 to 2021 among all race and ethnicity groups, although the rate has increased by 48% since 2018.
- Black, White, and AI/AN female youth had the highest self-harm ED visit rates, which were higher than all other racial and ethnic groups.
- Being a member of a particular race/ethnicity does not inherently increase the risk of suicide or self-harm. Rather, youth of color are more likely to experience low SES, higher levels of ACEs, racism and other negative social determinants of health which may increase these risks.

Circumstances Surrounding Youth Suicide Deaths:

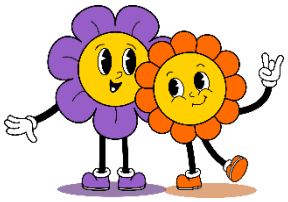
- Insights from 2021 CalVDRS data identify both similarities and differences in the circumstances of female and male youth who died by suicide.
    - Female youth had higher rates of reported mental health challenges including suicidal ideation and attempts, non- suicidal self-harm, as well as a history of mental health treatment compared to male youth.
    - Male and female youth had similar rates of having an alcohol or non-alcohol substance use problem, with non-alcohol substance use being more common than alcohol.

Examining the similarities and differences among youth impacted by suicide and self-harm provides important insights that inform the creation of developmentally and culturally appropriate supports for all of California's youth. For example, insights can be gleaned regarding possible differences in the barriers to help-seeking behaviors across different demographic groups. The following section provides opportunities and resources for suicide prevention.

Opportunities for Prevention

CDPH Youth Suicide Prevention Programs: Youth suicide and self-harm data not only shed light on the scope and depth of the problem but highlight opportunities for prevention and how preventative measures may be tailored for specific populations. Based on data from 2016-2021, CDPH's Office of Suicide Prevention (OSP) implemented two youth suicide prevention projects focused on supporting young people and their caregivers:

Youth Suicide Prevention Media and Outreach Campaign – A focused, data-driven, community-based youth suicide prevention and media outreach campaign for youth at increased risk of suicide.



Never a Bother

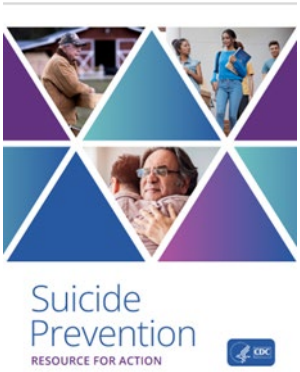
- The media campaign portion of the project, Never a Bother focused on preventing suicide among youth and young adults up to age 25 in California.
- To complement the media campaign, youth-serving community-based organizations (CBOs) and Tribal entities across the state were awarded grants to engage youth in a co-creation process for all aspects of the media campaign, promote the campaign as trusted messengers within populations disproportionately impacted by youth suicide, and to implement community-level evidence-based suicide prevention strategies.

Youth Suicide Reporting and Crisis Response Pilot Program – The pilot worked to develop and improve local-level planning and also further develop current systems to quickly report and comprehensively respond to youth suicides and attempts.

YOUTH SUICIDE PREVENTION & RESPONSE NETWORK

As part of the Children and Youth Behavioral Health Initiative (CYBHI), both projects were established through one-time funding in the Governor's 2022-2023 Budget and will run through June 2025. Learn more about OSP's Youth Suicide Prevention Projects.

Use a Comprehensive Approach: The Centers for Disease Control and Prevention (CDC) recommend taking a comprehensive public health approach to suicide prevention that includes strategies for individuals, families, and communities. Implementation of complementary prevention strategies tailored for populations who are most at risk within a community can lessen harm and prevent future risk. Visit the Centers for Disease Control and Prevention Suicide Prevention Resource for Action Webpage to learn more about implementing a comprehensive approach to suicide prevention.



Focus on Risk and Protective Factors: To effectively reduce the likelihood of suicide and injury from self-harm, prevention efforts should be focused on groups who are disproportionately impacted by suicide and self-harm injury, and/or those who have experienced increasing trends in suicide and self-harm injury rates in recent years. Other risk factors can also identify groups who may be most in need of support (e.g., individuals with alcohol and/or substance use problems, individuals with a history of suicide thoughts or plans, individuals in crisis).

Additionally, advancing protective factors as a part of prevention programming may offer a unique opportunity to build resilience and foster support at the individual, relationship, and community level to help decrease suicide risk. Protective factors include effective coping and problem-solving skills, support from and connection to others, and availability and quality of care, among others. Recognizing the critical role of protective factors also highlights the importance of including cultural identity – a protective factor in itself – in programs and messaging. Learn more on the Centers for Disease Control and Prevention (CDC) Risk and Protective Factors webpage.

Reduce Access to Lethal Means:

Firearms, a uniquely fatal weapon, are the second most commonly used method for suicide among youth ages 15-24 overall, and the leading method for male youth ages 10-24. Safe firearm storage and other strategies that may limit access to firearms (e.g., gun locks, gun safes, gun violence restraining orders) may help to prevent these deaths in the future.

Poisoning is the second leading method of suicide among female youth and drives the greatest number of self-harm ED visits among youth. Safe storage of prescriptions and other drugs can help prevent these injuries.

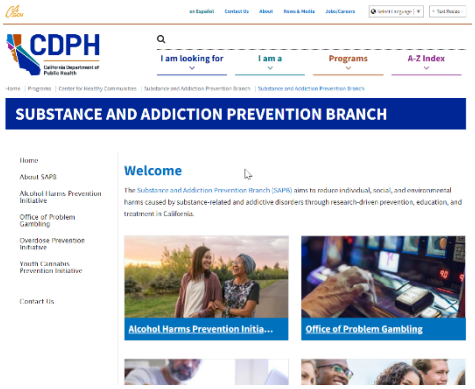
Resources for Prevention

California Department of Public Health (CDPH) Suicide Prevention Program

Visit the CDPH Suicide Prevention webpage for a series of prevention resources, including:

- Suicide Prevention Resources for Professionals
- Data on Suicide and Self-harm in California
- Population-Specific Crisis Hotlines, Warmlines, and Resources

California Department of Public Health (CDPH) Substance and Addiction Prevention Branch



Visit the CDPH Substance and Addiction Prevention Branch webpage for information on

- Alcohol use research and harms prevention
- Overdose surveillance and prevention
- Cannabis surveillance and youth cannabis prevention

Know the Signs

The California Mental Health Services Authority (CalMHSA) has developed Know The Signs as a trusted resource for learning practical first steps individuals can take to help prevent suicide in their home and community. "Every day in California friends, family and co-workers struggle with emotional pain. For some, it's too difficult to talk about the pain, thoughts of suicide, and the need for help. Everyone can play a role in suicide prevention by learning the warning signs of suicide, finding the words to reach out to a loved one, and knowing where to turn for help." To learn more, visit Know the Signs webpage.

Framework for Successful Messaging

Messaging to the public about suicide prevention? The Framework for Successful Messaging is a research-based resource that outlines four critical issues to consider when messaging to the public about suicide. Tips include educating on warning signs, focusing on prevention and hope, and avoiding sensational language, among many others. Visit the action Alliance's Framework for Successful Messaging webpage to learn more.

California Health and Human Resources (CalHHS) Mental Health Resources for Youth

Visit the CalHHS Mental Health Resources for Youth webpage for mental health and suicide prevention resources for youth, parents, family, and friends.

Free & Confidential Support

The phone, text, and chat lines below can be used if you're thinking about suicide, are worried about a friend or loved one, or would like emotional support. All resources listed below are free and confidential.

- **988 – National Suicide & Crisis Lifeline**
  Call/text 9-8-8 or chat on the National Suicide & Crisis Lifeline webpage. Looking for more ways to help yourself get through a crisis? Visit the 988 Help Yourself

webpage to find tips and resources, like help finding a therapist or support group, or making a safety plan.

- **Teen Line**
  Call **1-800-852-8336**, text "TEEN" to **839-863** or chat on the Teen Line webpage. Teen Line provides support, resources, and hope to young people through a hotline of professionally trained teen counselors, and outreach programs that de-stigmatize and normalize mental health.
- **The Trevor Project**
  Call **1-866-488-7386**, text "START" to **678-678**, or chat on the Trevor Project webpage. LGBTQ+ young people ages 13-24 can reach out 24/7/365 to a crisis counselor who is understanding of LGBTQ+ issues and won't judge you. If you are thinking about harming yourself — get immediate support by text, phone, or online chat.
- **California Peer-Run Warmline**
  Call or text **1-855-845-7415** to get mental and emotional support and help to identify the path forward. California Peer-Run Warmline (also known as CalHOPE) counselors will hold space, listen, and support you. For more information, visit the California Peer-Run Warmline webpage.

Additional resources can be found on the CDPH Crisis Hotlines, Warmlines & Resources webpage. For youth-specific supports, scroll to the bottom of the page and select "Youth and Young Adults."

Supplemental Information

This section includes data tables with counts of suicide deaths and self-harm ED visits by demographic characteristics, technical notes regarding the analysis and limitations of the information presented in this report.

Suicide Data Tables

Table 2: Counts of deaths by suicide among youth by age range and sex between 2018 and 2021

Category	Female (2018)	Male (2018)	Female (2019)	Male (2019)	Female (2020)	Male (2020)	Female (2021)	Male (2021)
10-24 Years Old	131	413	109	416	136	386	143	406
10-14 Years Old	11	16	13	14	18	31	26	19
15-19 Years Old	38	134	30	127	60	114	50	117
20-24 Years Old	82	263	66	275	58	241	67	270

Table 3: Counts of deaths by suicide among youth by race and ethnicity and sex between 2018 and 2021

Category	Female (2018)	Male (2018)	Female (2019)	Male (2019)	Female (2020)	Male (2020)	Female (2021)	Male (2021)
AI/AN	*	*	*	*	*	*	*	*
API	24	47	15	47	14	31	23	48
Black	*	25	*	22	14	32	*	34
Hispanic	43	165	41	170	55	167	62	162
Multiracial	*	26	*	22	14	20	*	16
White	53	144	38	152	38	132	38	141
Other/Unknown	*	*	*	*	*	*	*	*

* Rows with injury counts that appear blank have <11 injuries and are suppressed for data de-identification purposes. See technical notes for more information about AI/AN and Other groups.

Table 4: Counts of deaths by suicide among youth by method of injury and sex between 2018 and 2021

Category	Female (2018)	Male (2018)	Female (2019)	Male (2019)	Female (2020)	Male (2020)	Female (2021)	Male (2021)
Firearm	15	134	11	130	14	134	18	163
Poisoning	30	26	27	34	29	28	23	39
Suffocation	68	183	47	181	79	164	80	146
Other/Unknown	18	70	24	71	14	60	22	58

Self-Harm Data Tables

Table 5: Counts of self-harm ED visits among youth by age range and sex between 2018 and 2021

	Female (2018)	Male (2018)	Female (2019)	Male (2019)	Female (2020)	Male (2020)	Female (2021)	Male (2021)
10-24	12,494	5,375	11,748	5,183	11,941	4,897	14,659	4,761
10-14	3,215	824	3,068	768	3,473	604	4,833	703
15-19	6,439	2,484	5,930	2,434	5,971	2,350	7,174	2,230
20-24	2,840	2,067	2,750	1,981	2,497	1,943	2,652	1,828

Table 6: Counts of self-harm ED visits among youth by race and ethnicity and sex between 2018 and 2021

	Female (2018)	Male (2018)	Female (2019)	Male (2019)	Female (2020)	Male (2020)	Female (2021)	Male (2021)
AI/AN	72	28	59	27	45	26	61	24
API	725	252	674	209	656	213	872	247
Black	976	458	971	467	940	392	1,104	420
Hispanic	4,925	2,103	4,598	2,145	4,668	1,973	5,902	1,937
Multiracial	+	+	178	51	204	74	280	93
White	4,873	2,139	4,437	1,923	4,658	1,891	5,468	1,691
Other/Unknown	923	395	831	361	770	328	972	349

+ The multiracial category was not available for ED visits in 2018.

Table 7: Counts of self-harm ED visits among youth by method of injury and sex between 2018 and 2021

	Female (2018)	Male (2018)	Female (2019)	Male (2019)	Female (2020)	Male (2020)	Female (2021)	Male (2021)
Firearm	4,423	1,743	4,071	1,767	4,038	1,631	5,186	1,676
Poisoning	7,167	2,465	6,805	2,352	6,937	2,319	8,366	2,118
Suffocation	904	1,167	872	5,768	14,840	947	1,107	967
Other/Unknown	4,423	1,743	4,071	1,767	4,038	1,631	5,186	1,676

Technical Notes

General Notes

- All rates reported as per 100,000 individuals.
- Population denominator data for rate calculations are from the California Department of Finance (DOF) Table P-3: Complete State and County Projections Dataset (2010-2060). July 2021 Release.

Suicide Data

- Suicide death data was limited to California residents, therefore, suicide deaths to non-residents that occurred in California were excluded. Suicide death data come from death certificate information provided by informants and clinicians and may be subject to error.
- Suicides are identified on the death certificate as an underlying cause of death with ICD-10 codes X60-X84 Y87.0, U03.0, or U3.9.
- Suicide data do not include deaths among those who used the End-of-Life Option Act (EOLA). EOLA provides individuals with terminal illnesses the ability to consult with a physician for aid-in-dying care. The cause of death for those who choose to use EOLA is recorded as the underlying terminal illness and is not considered suicide. If interested in data related to EOLA, visit the EOLA webpage on the CDPH website.

- Suicide data includes suicide deaths that occurred among the incarcerated population. However, the death files CDPH produces does not allow the ability to tease out the incarcerated population, therefore, suicide deaths solely among incarcerated population cannot be determined using these data. If interested in suicide data among the incarcerated population, the California Department of Corrections and Rehabilitation (CDCR) has published a report on suicide data for all CDCR institutions across the state.
- For deaths occurring in 2021, less than 11 youth who died by suicide were identified as a gender identity other than male or female, and none were identified in 2018-2020 as being a gender identity other than male or female. Therefore, it is not possible to present vital statistics data on gender identity in this report. California death certificates do not yet consistently include information on sexual orientation; therefore, it is not possible to present vital statistics data on sexual orientation.
- Per Assembly Bill (AB) 1726, The Accounting of Health and Education in Asian and Pacific Islander (API) Demographics Act, CDPH is mandated to expand the number of API groups for which information is collected and reported. Data on deaths that occurred in 2021 reported on California death certificates did not include data on expanded API groups; therefore, it is not possible to present vital statistics data on these expanded groups for decedents from 2021. In the future, the Injury and Violence Prevention Branch will aim to report data for additional API groups, including the expanded groups noted in AB 1726, as it becomes available, and in accordance with data de-identification guidelines.
- The annual rates for American Indian/Alaska Native (AI/AN) and other race categories are not presented due to very low counts and concerns with potential identification of individuals. The 4-year aggregated rate (2018-2021) for suicide deaths of youth 10-24 years old who are AI/AN is 14.8 per 100,000. Because the count of individuals in this category is less than 20 it is considered an unreliable rate, and caution is urged in its interpretation. Less than 20 youth 10-24 years old who are another race not listed died by suicide by between 2018-2021.

Self-Harm Data

- Self-harm emergency department (ED) visits only include cases of intentional self-harm and are primarily “treat and release” visits. Visits that result in hospitalization or death are excluded.

- All self-harm ED visit data was limited to California residents in California facilities. Therefore, out-of-state residents treated for self-harm injuries in California facilities were excluded and California residents treated in out-of-state facilities were also excluded. The self- harm data only capture injuries treated at state-licensed hospitals and emergency medical services facilities. They do not include injuries treated in the outpatient setting or at federally licensed facilities, such as Veterans Affairs (VA) hospitals. They also do not capture injuries that go untreated.
- Self-harm ED visits are identified in the emergency department data files with ICD-10 CM diagnostic and external cause of injury codes. The definition developed by the CDC was used to identify non-fatal intentional self-harm ED visits and can be found in the State Injury Indicators Report. Methods of self-harm injury are also outlined in the document. A new ICD-10 CM code for identifying non-suicidal self-harm by unknown method (R45.88) was added in the last quarter of 2021 and was also included in the rate calculations for self-harm ED visits for 2021.
- In 2021, 19 youth who went to the ED for self-harm were identified as a gender identity other than male or female, and none were identified in 2018-2020 as being a gender identity other than male or female. Therefore, data on data on gender identity is not presented in the self-harm section of this report. Data available on California ED diagnostic codes do not include information on sexual orientation; therefore, it is not possible to present ED data on sexual orientation.

Circumstance Data (CalVDRS)

- 31 counties participated in CalVDRS data collection in 2021: Amador, Butte, Colusa, Fresno, Glenn, Humboldt, Imperial, Kings, Lake, Lassen, Los Angeles, Mendocino, Merced, Modoc, Mono, Orange, Placer, Sacramento, San Benito, San Diego, San Francisco, San Luis Obispo, San Mateo, Santa Cruz, Shasta, Siskiyou, Solano, Sonoma, Tehama, Ventura, and Yolo Counties.
- CalVDRS circumstances contributing to the suicide are not mutually exclusive, and more than one can be indicated for a single suicide death. Sexual orientation data is available in the CalVDRS data; however, the data is not systematically collected by coroners/medical examiners in all California counties. Of the 304 individuals discussed in this brief, eight individuals had sexual orientation reported. Therefore, due to very low counts, sexual orientation is not presented for CalVDRS data.

References

[i] Rivenbark, J.G., Odgers, C.L., Caspi, A., Harrington, H., Hogan, S., Houts, R.M., Poulton, R. and Moffitt, T.E. (2018), The high societal costs of childhood conduct problems: evidence from administrative records up to age 38 in a longitudinal birth cohort. The Journal of Child Psychology and Psychiatry, 59: 703-710. https://doi.org/10.1111/jcpp.12850

[ii] American Psychological Association, Working Group for Addressing Racial and Ethnic Disparities in Youth Mental Health. (2017). Addressing the mental health needs of racial and ethnic minority youth: A guide for practitioners. Retrieved from www.apa.org/pi/families/resources/mental-healthneeds.pdf.

[iii] Hafeez H, Zeshan M, Tahir MA, Jahan N, Naveed S. Health Care Disparities Among Lesbian, Gay, Bisexual, and Transgender Youth: A Literature Review. Cureus. 2017 Apr 20;9(4):e1184. doi: 10.7759/cureus.1184. PMID: 28638747; PMCID: PMC5478215.

[iv] U.S. Department of Health and Human Services, Office of Population Affairs. (2023). Take Action for Adolescents - A Call To Action for Adolescent Health and Well-Being. https://opa.hhs.gov/takeactionforadolescents

[v] National Academies of Sciences, Engineering, and Medicine. 2019. The Promise of Adolescence: Realizing Opportunity for All Youth. Washington, DC: The National Academies Press. https://doi.org/10.17226/25388.

[vi] John Mann, M.D., Christina A. Michel, B.A. Prevention of Firearm Suicide in the United States: What Works and What Is Possible. https://doi.org/10.1176/appi.ajp.2016.16010069

[vii] Hafeez H, Zeshan M, Tahir MA, Jahan N, Naveed S. Health Care Disparities Among Lesbian, Gay, Bisexual, and Transgender Youth: A Literature Review. Cureus. 2017 Apr 20;9(4):e1184. doi: 10.7759/cureus.1184. PMID: 28638747; PMCID: PMC5478215.