

Findings from the Utah Youth Suicide Research Project 1.0



**Department of Health
& Human Services**

Background of the Study

The Utah Youth Suicide Research Project (UYSRP) is a population-wide study of youth who died by suicide in Utah. In 2018, The Governor’s Task Force on Teen Suicide, which would later become the Governor’s Task Force on Suicide, called for in-depth research to better understand the reasons why youth in Utah were dying by suicide at alarmingly high rates.

The study comes on the heels of the work of Michelle Moskos, PhD, Doug Gray, MD, and colleagues, who found that youth who died by suicide were more likely to have anger or temper outbursts than depressive symptoms and that parents or friends were better at identifying different risk factors. For example, friends were more likely than parents to know about substance abuse, and parents were better at identifying physical or sexual abuse. Additionally, youth were very likely to have a psychiatric disorder (65%); 44% of youth with a psychiatric disorder were found to have prescriptions for psychotropic drugs at the time of their death, but none had these medications in their system at time of postmortem examination. Lack of engagement with psychotropic drugs was a notable finding.

Moskos et al. (2005), found stigma was a big factor, for example parents and friends believed the deceased thought “that nothing could help” and thought seeking help was a “sign of weakness or failure.” The presence of precipitating events, or activating events, as well as increasing social isolation leading up to the time of death were also major findings in the 2005 study. Using data from the same study, Gray et al. (2002) also found that youth who died by suicide were more likely to have contact with the juvenile courts, and that, despite exhibiting symptoms of mental illness, were less likely to be receiving treatment. The more the referrals to the courts, the greater the suicide risk. This study prompted the introduction of enhanced mental health services in juvenile justice settings for several years following the study, as well as an increase in gatekeeper training available to parents in Utah.

CDC Epi Aid

A report released by the Utah Department of Health (UDOH) in 2017 showed a 141.3% increase in suicide among youth ages 10 to 17 between 2011 and 2015 (Annor et al., 2017). The report was written by Centers for Disease Control and Prevention (CDC) Epidemic Intelligence Service (EIS) officers, in conjunction with UDOH staff. The CDC Epi-Aid team used secondary sources to derive their results, including records from the Office of the Medical Examiner, the Utah Violent Death Reporting System, the Prevention Needs Assessment survey, emergency department and hospitalization data, and other sources.

The CDC report (Annor et al., 2017) identified many trends, some of which were also identified in this report, as well as provided some early findings that deserved further investigation. Using more in-depth research methodologies, we investigated these findings further in the UYRSP. The CDC Epi-Aid found:

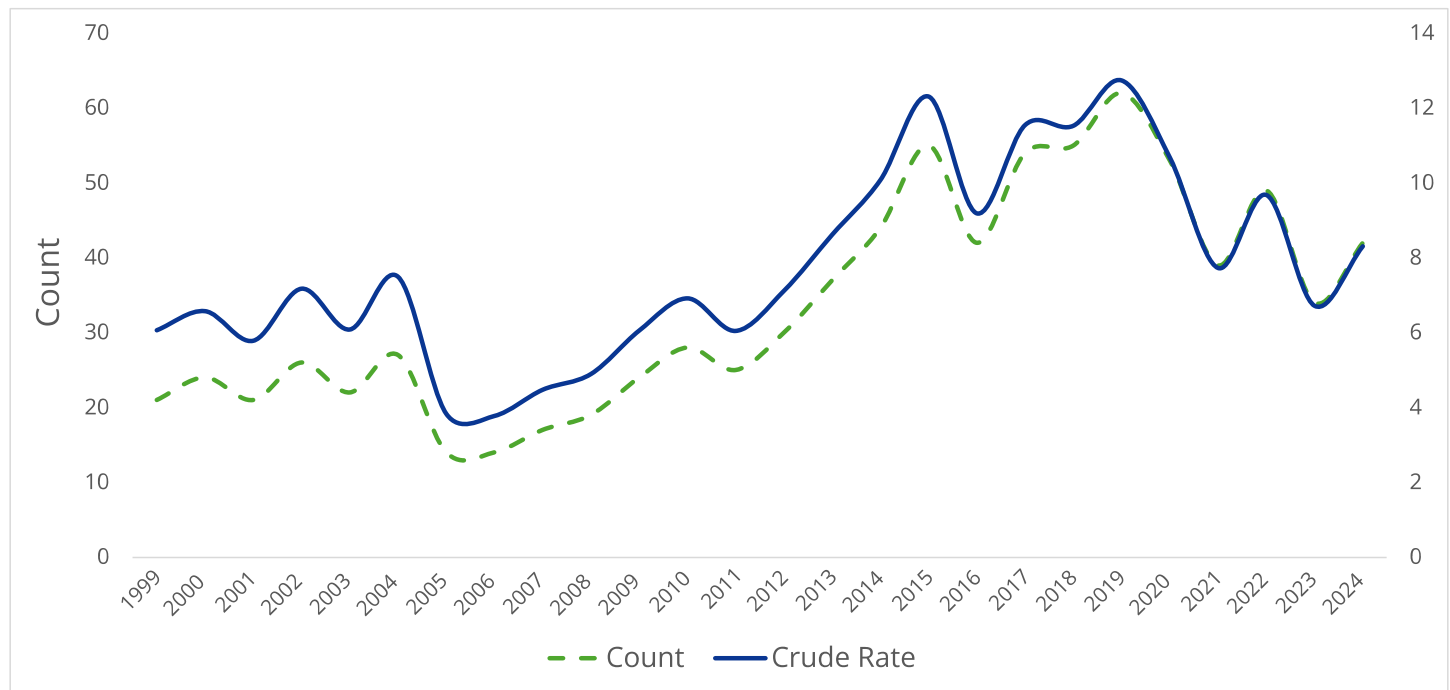
- 150 youth, ages 10 to 17, died by suicide between 2011 and 2015;
- 78% were male;
- 35.2% had a mental health diagnosis;
- 31.0% had a depressive mood at the time of suicide;
- 29.6% had a history of suicide ideation or attempt;
- 55.3% experienced a recent crisis;
- 23.9% disclosed intent to die within the last month of their life;
- 47.2% left a departure note;
- 15.0% identified as a sexual minority;
- 20.5% had a history of cutting or had evidence of recent cutting at the time of post-mortem examination;
- 12.6% of decedents had experienced a technology-related restriction prior to their death.

The CDC's findings prompted action on the part of parents, schools, communities, and state government, accelerating the development and implementation of SafeUT in January 2016 (a mobile phone application that connects youth to crisis services), increased funding to implement suicide prevention programs in schools, and others.

Youth Suicide in Utah, 1999 to 2019

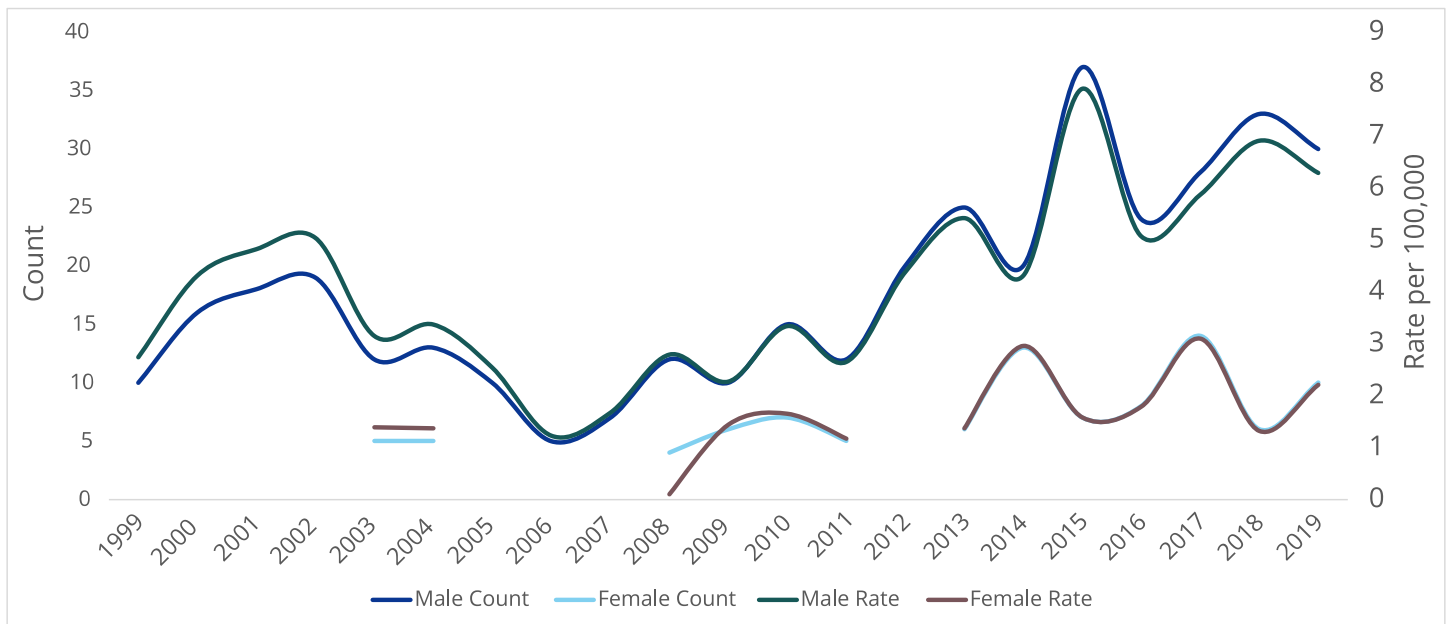
Suicide among youth in Utah increased dramatically starting in 2008 and accelerated between 2011 and 2015. Between 2015 and 2019, however, the rate stabilized at a very high level (4.3 per 100,000), representing an average of 40 youth who died by suicide every year. Between 2016 and 2019, the national youth suicide rate among youth ages 0 to 17 was 2.3 per 100,000, 46.5% lower than Utah's rate of youth suicide.

Figure 1. Suicide among youth (0 to 17) increased dramatically between 2008 and 2015, but stabilized at an alarmingly high rate between 2015 and 2019



Suicide counts and rates have been higher among males since at least 1999. Additionally, suicide grew the fastest among males between 2008 and 2015. During the study period, 2016-2019, when overall counts and rates were statistically stable, 75.2% of all deaths were males.

Figure 2. Three out of four suicide deaths among youth are males.

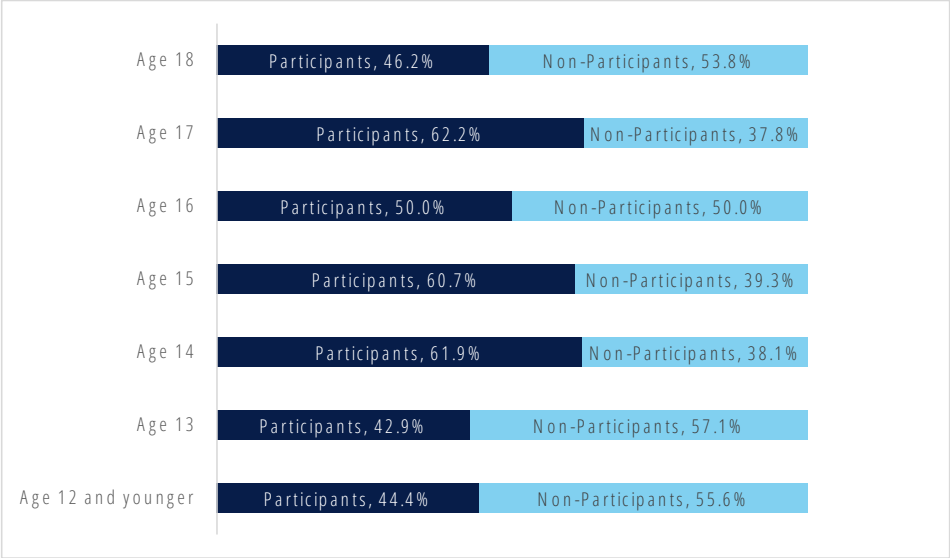


How UYSRP data compares to all youth who died by suicide.

108 of 203 youth who died by suicide and who met the case definition of the study (see below) were represented in the Utah Youth Suicide Research Project psychological autopsy phase. Parents, guardians and friends participated at a high rate (53.0%), but this study may still be prone to participation bias. In other words, the youth who are represented in this study may be different than the youth who were not represented in the study. For example, Native youth are underrepresented in this study and, consequently, the findings from this study may not accurately represent the circumstances of Native youth. Therefore, understanding how the 108 youth who were included in the study represent—or do not represent—all youth is important. In this section, researchers compare three groups: youth represented in the study, youth not represented, and the total number of youths who died by suicide. The third group is the sum of the represented and not represented groups.

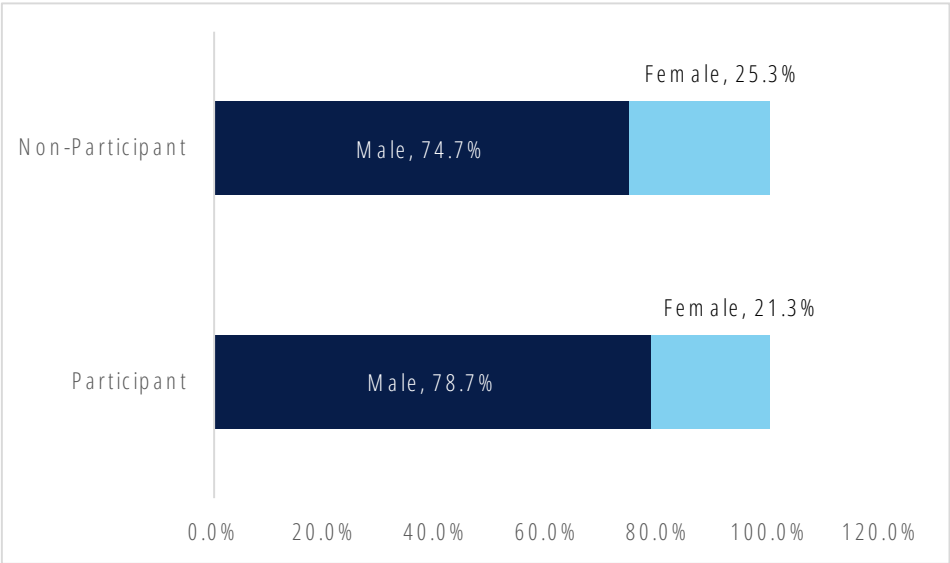
Age. Youth ages 10 to 17, plus 18-year-olds who were enrolled in high school or who had graduated within three months of their death by suicide were included in the study. Most youth, 79.0%, who died by suicide were in the latter three age years, 16, 17, and 18. Youth of all ages were represented in the study, but youth ages 12 and younger, 13, and 18 were slightly less well represented than ages 14 through 17.

Figure 3. By age, youth in UYSRP are similar to the overall distribution of youth who died by suicide.



Sex. Males account for 75.0% of all suicide deaths among youth between 2016 and 2019. By sex, both males and females are adequately represented in the study, although males are slightly more well-represented.

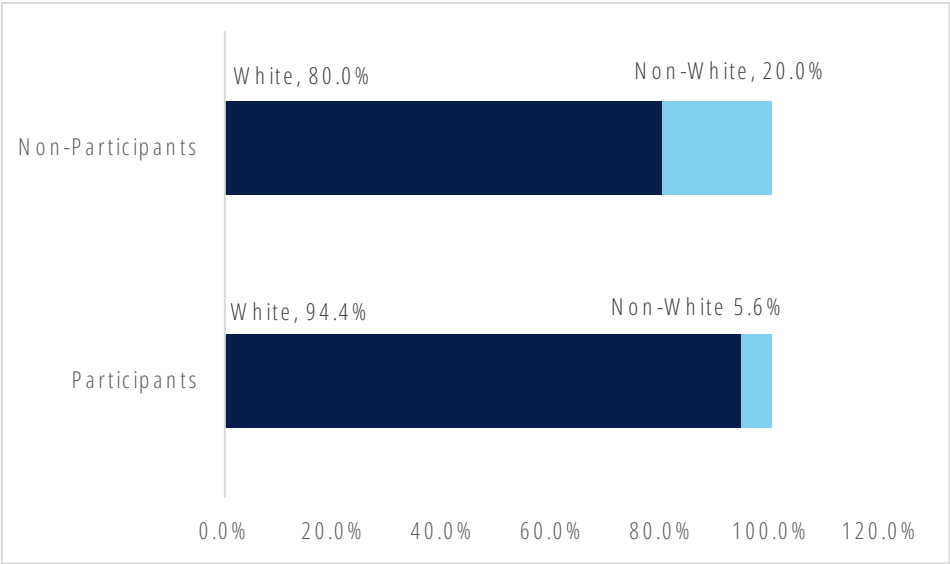
Figure 4. Both males and females are proportionately represented in UYSRP.



Race. White youth (all ethnicities) represent 87.7% of all youth who died by suicide between 2016 and 2019 in Utah. In UYSRP, white youth were slightly overrepresented relative to other race groups. In other words, 54.6% of youth who identified as white (all ethnicities) were represented in the study. Asian youth were also more likely than not to participate in the study. However, all other race groups were underrepresented in UYSRP. Overall, UYSRP data is not representative of racial minority youth who die by suicide. Due to

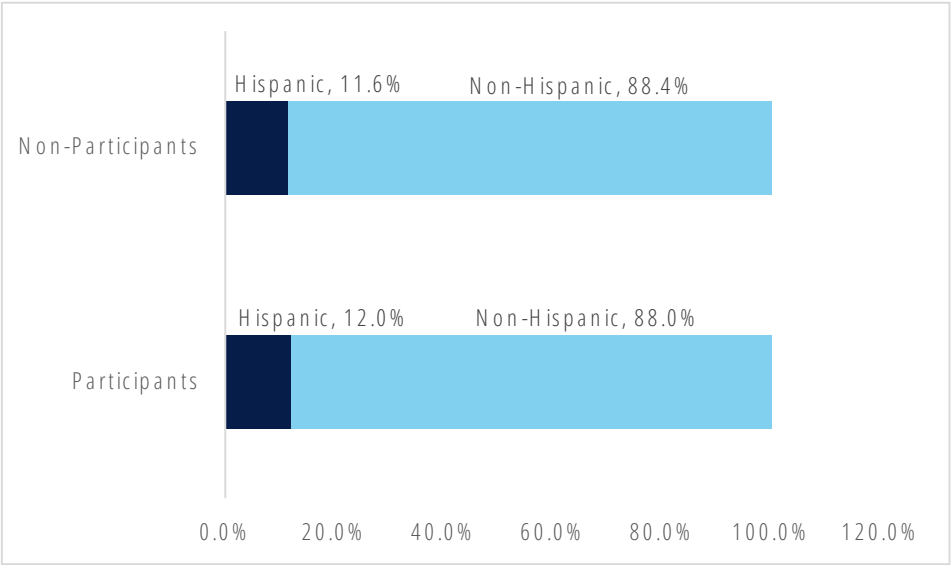
small counts, non-white youth (all ethnicities) were aggregated into a single group, resulting in two race categories: white and non-white in Figure 5. Authors of this report recognize that the experiences of minority youth who died by suicide are not the same; each racial group likely has distinct characteristics related to suicide risk. Indeed, the authors’ inability to decipher trends is a limitation of this study. Researchers ought to engage in outreach with minority groups to increase participation to ensure representation.

Figure 5. UYSRP is not representative of non-White (all ethnicities) youth who die by suicide.



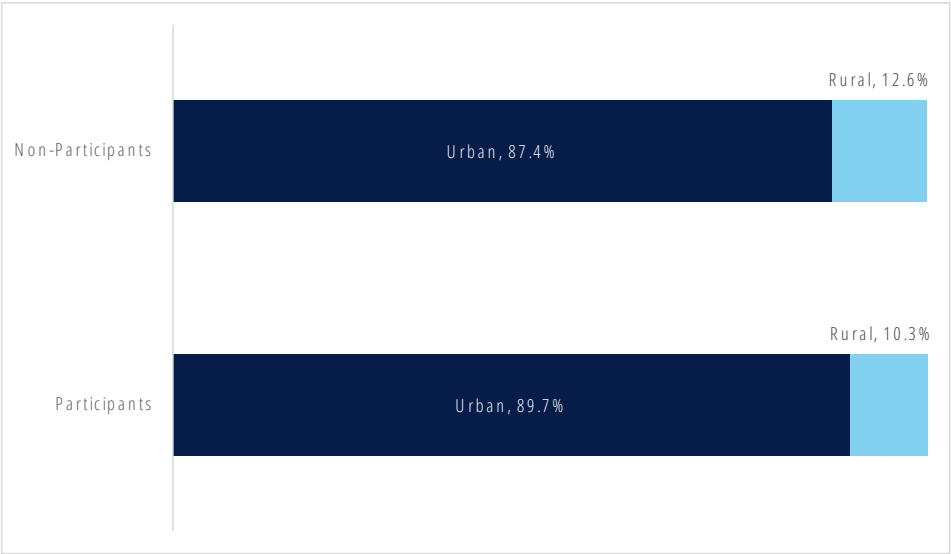
Ethnicity. 13.4% of youth who died by suicide between 2016 and 2019 in Utah identified as Hispanic (all races). Both Hispanic and non-Hispanic youth were equally represented in the UYSRP data: 54.2% of Hispanic youth who died by suicide were represented alongside 53.1% of non-Hispanic youth.

Figure 6. Hispanic and non-Hispanic youth (all races) who died by suicide were equally represented in UYSRP.



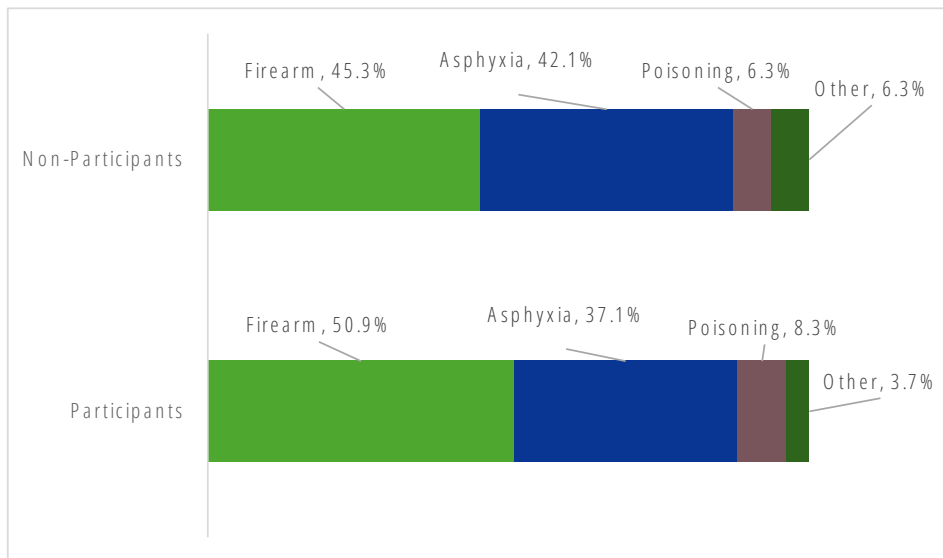
Place type. 88.2% of youth who died by suicide in Utah between 2016 and 2019 resided in a place that is considered urban by the National Center for Health Statistics (Urban/Rural Classification System 2013, classifications 1 through 4). Proportions of urban and rural youth are similar in UYSRP: 53.6% of urban youth participated compared to 47.8% of rural youth who died by suicide.

Figure 7. Youth who died by suicide and who resided in urban places were similarly represented compared to rural youth.



Suicide method. 48.3% of youth who died by suicide between 2016 and 2019 in Utah used a firearm. 39.4% died by suicide via asphyxiation, 7.4% died by poisoning, and 4.9% died by some other method. With the exception of youth who died by suicide using some other method, youth were similarly represented in UYSRP by the method they used to end their own life.

Figure 8. Youth who died by suicide were proportionately represented in UYSRP by the method by which they died.



The Utah Youth Suicide Research Project (UYSRP)

Methods

This study was designed and implemented in late 2017 and early 2018 using psychological autopsy methodology developed by the American Association of Suicidology (AAS). This methodology, which was employed in the study of suicides on railroad rights-of-way, standardized psychological autopsy protocols into a common set of questions and domains of inquiry (Berman et al., 2014). Investigators used the AAS psychological autopsy protocol as a foundation but removed questions and sections that were not germane to youth, adapted some questions to make them applicable to youth, and added questions based on lines of inquiry uncovered by the 2017 CDC Epi-Aid study. The proposed research protocol was piloted with five suicide loss survivors' parents who were known to the OME through suicide prevention advocacy. These loss survivors provided feedback on the protocol, which was incorporated into the final research protocol prior to the start of the study. The protocol was edited twice after research commenced: first, marijuana was removed as an illicit drug and treated as an independent drug category; second, the way prescription drugs were recorded in the protocol was adjusted to allow for ease and accuracy of recording in the electronic database. None of the changes to the protocol after research commenced were substantive.

The data gathered in this study are qualitative and largely exploratory. Investigators have deliberately chosen not to ground this report in any specific theoretical framework of suicide to allow for a variety of further research questions and reports. Researchers aimed to gather information comprehensively, covering psychological, psychiatric, behavioral, sociological, educational, and biological models of suicide.

Case definition. The DHHS Office of the Medical Examiner determined that there were 213 suicide deaths among 10- to 18-year-olds between January 1, 2016 and December 31, 2019. Cases in which the youth were not a Utah resident were excluded from this study, which mostly consisted of youth who were transported to level one trauma facility in Utah from a place that has no access to this high level of care. Youth who were out of state residents who were solely in Utah for the purpose of attending residential treatment were also excluded from the study. 18-year-olds who were graduated for more than 3 months when they died by suicide were also excluded. 203 youth suicide deaths remained within the case definition for this study.

In total, 108 youth were represented in this study by one or more completed interviews with parents, family members, and friends. 30 parents/guardians chose not to participate in the study and investigators were unable to contact 65 parents/guardians. The participation rate was 53.0% overall; of families that were able to be contacted, 78.0% chose to participate.

Of the 108 youth who were represented in the study, 47 (43.9%) had one interview, 26 (24.3%) had two interviews, and 34 (31.8%) had 3 or more interviews. Psychological autopsy methodology indicates that 3 or more interviews are typically required to validate informant's responses and gather sufficient information

to identify motives of the suicide. Researchers conducted an analysis that compared findings from the 47 youth with one interview, the 26 with two interviews, and 34 with 3 or more interviews to determine if the information changed between these groups. The biggest differences were apparent between youth with only one interview and youth with two interviews; youth with two interviews compared to youth with 3 or more interviews did have some differences, but these differences were less common. Throughout the report, we have made note of these differences. More advanced analyses ought to consider the differences in information (i.e., statistically control for the number of interviews obtained for a youth), but this analysis uses all the information available in the findings section.

Contacting informants and conducting interviews. Individuals who knew about the youth, including parents, siblings, friends, and others, are referred to in this report as informants.

The Office of the Medical Examiner contacted each parent or guardian by mailing them a letter with the DHHS IRB-approved letter of consent. After two weeks had passed, study personnel contacted the family member by phone to ask if they had questions about the study and if they would like to participate. If the study coordinator was unable to reach the family member, they waited one to two weeks and attempted to call again. If they still received no response, a letter was mailed to the family indicating that we attempted to call and requested a call back. This letter did yield additional participation as some of the phone numbers the OME had on file were out of date. The letter also included a list of bereavement resources.

If informants reported they wanted to participate, but could not due to emotional barriers, study personnel asked if there was someone else who would be interested in participating or if the informant wished to delay their participation. By locating alternative informants, a small number of youth were included in the study that would not have been otherwise. Likewise, some parents and friends chose to be interviewed months or even years after researchers first contacted them. If parents or guardians chose not to participate or study personnel were unable to contact them, no effort was made to contact that youth's siblings, friends, etc.

Investigators conducted primary interviews with parents/guardians. Primary interviews include questions about health insurance, medical care, and family characteristics that friends may not be well suited to answer. Primary interviews are lengthier and more thorough. While investigators were scheduling interviews with parents and guardians, they indicated that they would be asked about the youth's friends and how to contact them in the interview. Near the end of the interview itself, the investigator asked about additional contacts, including siblings and friends. Some parents indicated that their child had no friends and therefore, no one else would have information about the youth. Some others indicated that they did not feel comfortable making such a referral, and others not only gave information about the youth's friends, but helped investigators contact the friends. Many parents/guardians provided several friends' contact information.

Siblings and friends participated in secondary interviews, which are slightly abbreviated. Upon receiving contact information from parents/guardians, investigators contacted the friend or sibling via phone. The investigator first asked if the informant was age 18. If they were not 18, the investigator gave a brief description of the study and asked for the youth's parent's/guardian's contact information. If the youth was 18 or older, the investigator obtained contact information and sent them a short description of the study, as well as the informed consent letter. The study coordinator then called the informant back 3 days to 2 weeks later, asked if they had questions about the study, and then proceeded to schedule the informant for an interview if they indicated they wanted to participate. If the informant was the second or third informant, the investigator prepared the youth that they would be asked to give another friend's contact information at the end of their interview. Near the end of the secondary interview, the informant was asked to provide names and contact information of additional people who knew the deceased youth well. Most youth were willing to provide this information if they knew of it.

Informants were provided the option of participating in interviews in face-to-face meetings at the Office of the Medical Examiner in Taylorsville, Utah, or by participating via phone. Interviews began in March 2018, and most interviews were conducted by phone. In March 2020, interviews were discontinued due to the COVID-19 pandemic. In late 2020 and early 2021, interviews resumed, but no in-person interviews were offered. Investigators were aware that they would lose some ability to engage with informants by interviewing them over the phone. At the same time, this low-barrier form of participation allowed more individuals from remote places in Utah to participate. Additionally, phone interviews allowed informants to have privacy and to be in the comfort of a setting of their choosing.

A text reminder was sent from an OME cell phone on the business day prior to the interview. At the scheduled time, a study interviewer called or met with the informant. Interviewers initiated recording upon contact. Interviewers again asked if they had any questions about the study or about the provided consent form. If they did not, the interviewer reminded them that they did not have to participate in the study, they could stop participating at any time, they could choose to not answer any questions they did not want to answer and could request breaks or even to stop the interview and resume it another day. If the interviewer was confident they had addressed any concerns or questions from the informant, the investigator proceeded by asking if the informant consented to be interviewed. If they said no, the interview stopped immediately; no informants discontinued the interview. If the informant said yes, the interviewer asked if the informant consented to having their interview recorded. The vast majority of informants consented to recording. If they did not, only the consent portion of the interview was preserved; investigators immediately stopped recording when the informant indicated they preferred not to be recorded.

Investigators asked open ended questions throughout the interview and for most questions, coded them in real-time. For example, investigators asked "Where was [first name] born?" The responses were coded into "Utah," "Other U.S. State," "Outside of the U.S.," "Other," and "Unknown." If the informant said, "Idaho," their

response would have been coded “Other U.S. State.” Additionally, investigators were encouraged to phrase questions in ways that felt natural and resembled a conversational style—but still maintained the integrity of a given question. Investigators were also permitted to collect information in any order; they did not have to go in the order of the research protocol. By using open ended questions, allowing informants to direct the conversation to topics of their choosing, and allowing for alternative phrasing of questions, investigators could maintain a more conversational style.

Most interviews lasted for approximately two hours but ranged from 45 minutes to nearly 6 hours. Interviewers were strongly encouraged to promote breaks, particularly after 2 hours. Interviewers were also encouraged to be attuned to the informant’s emotions, offer validation and compassion when appropriate, and if necessary, discontinue the interview temporarily or permanently.

Interviewers consisted of volunteers, most of whom were University of Utah medical students, medical residents, or health science students. Some faculty also participated as interviewers. Interviewers were selected based on their experienced and demonstrated ability to engage in highly sensitive research by the principal investigator and consultant faculty members from the University of Utah School of Medicine Department of Psychiatry. Interviewers were trained to conduct these interviews by a) attending a training on how to conduct sensitive interviews, b) a review of the interview protocol and the intent of the questions so that they could comfortably rephrase questions or adapt to the informant’s needs without altering the question’s intent, c) trained in how to respond to a person experiencing a suicidal or homicidal crisis, and d) most interviewers shadowed other, more experienced interviewers before conducting their own interviews. Interviews were conducted at the Office of the Medical Examiner under the supervision of the principal investigator. Faculty consultants also periodically attended interviews to ensure the quality of the interview, adequate response by the interviewers to the informant, and ensure the well-being of the interviewers.

At the conclusion of each interview, interviewers conducted the “Brief Grief Questionnaire” (Ito et al., 2012), which helped investigators assess if the informant’s grief was normal grief or grief more likely associated with complicated or prolonged grief. If informants scored high on the Brief Grief Questionnaire, a warm hand-off was made to an appropriate grief resource. If informants scored within normal limits, they were provided with grief resource information, but no active referrals were made. Investigators also asked the informant if they were considering ending their own life. If they responded affirmatively, they were connected to the suicide prevention lifeline using a local access number, as well as a warm hand-off was made to an appropriate grief resource. If they were homicidal, the matter was referred to local law enforcement was made, and a warm hand-off was made to an appropriate local grief resource. Many parents and friends scored highly on the Brief Grief Questionnaire, some informants were indeed found to be at an elevated risk for suicide, and no informants reported being homicidal.

If informants scored highly on the Brief Grief Questionnaire, indicated they were thinking about suicide, or were extremely distressed during the interview, a study coordinator contacted them two days after the

interview to assess their well-being. If they did not meet any of these criteria, a study coordinator contacted them one to two weeks after the interview to assess their well-being. Many informants expressed to study coordinators during these follow up calls that the interviews were emotionally difficult, but that the interview provided perspective and that they were grateful for the experience and to be able to talk about the child or friend who died by suicide.

Data management. Investigators recorded information on printed protocols. When recording narrative responses, investigators wrote down as much as they could on the research protocol, and that was later transferred into REDCap. Later, all interviews were transcribed using an automated service; this transcribed data was used in this analysis only for validating a small number of narrative responses on select questions. Research assistants later entered data from paper protocols into REDCap. Study data were collected and managed using REDCap electronic data capture tools hosted at the Utah Department of Health and Human Services (DHHS) (Harris et al., 2019; Harris et al., 2009). REDCap (Research Electronic Data Capture) is a secure, web-based software platform designed to support data capture for research studies, providing 1) an intuitive interface for validated data capture; 2) audit trails for tracking data manipulation and export procedures; 3) automated export procedures for seamless data downloads to common statistical packages; and 4) procedures for data integration and interoperability with external sources. Data entered into REDCap were validated—that is, checked for errors and omissions—by a second research assistant.

When multiple interviews were conducted, research assistants used a process called “endorsement,” to establish final data for a youth who died by suicide. Endorsement is a process in which the researcher asks, “what is the most likely to be the truth?” If three informants all indicate the same response, the response is coded in the endorsement with no adjustment. If there is disagreement between any of the informant’s responses, the researcher looks for additional evidence to corroborate a response. For example, if two individuals indicate that the deceased youth did not use illicit drugs, but the third informant indicates that he did, and he knows that he did because he used the drugs with him, the answer is coded “yes” to using illicit drugs because there is believable evidence to corroborate the 3rd informant’s response. In cases where there is equal information between informants, researchers deferred to the parent’s response in the endorsement. If the response was not binary (e.g., “yes,” or “no”), the researcher chose the most sensitive response. For example, if one informant reported that the youth used illicit drugs once per month and a second informant reported that the youth used illicit drugs once per week, the researcher coded the response as “once per week.”

Informants often provided contradicting evidence. For example, an informant may have indicated that the youth never expressed that he felt like a burden. However, in a different question, the informant indicated that the youth frequently said, “You’d be better off without me”—language that is commonly used to express feelings of burdensomeness. In this circumstance, the interviewer changed the response to the question about burdensomeness from “no,” to “yes.” Because of the length and comprehensive nature of the

interview, sometimes interviewers were unable to identify these contradictions. In this case, the researcher and research assistants would later change the response from “no,” to “yes” and make note of this change in an analytical memo attached to every endorsement. When no corroboration was available for responses in disagreement, researchers defaulted to the parent/guardians’ response.

Researchers avoided the response “unknown” whenever possible. If no informant had information, responses were recorded as “unknown,” but if one informant provided a response (e.g., “yes” or “no”), researchers used that information to code the endorsement rather than leaving the response as “unknown.” A second circumstance in which a response was coded “unknown” occurred when informants provided information that was in disagreement, and for which there was corroboration for both responses. When informants responded “as far as I know, no,” or “I don’t think so,” these responses were recorded as “no” rather than “unknown.”

After an endorsement was completed, the initial endorsement was set aside and the original interview protocols were given to a second researcher who created a second endorsement using the same rules. The first and second endorsement were then compared by a third researcher for agreement. Disagreements were flagged by the third researcher. These disagreements were then resolved by the principal investigator by reviewing the original interview protocols and sometimes referring to recordings of the interviews to better understand the informant’s response. This endorsement process was completed for any youth who died by suicide for which two or more interviews were conducted. Endorsements with multiple interviews were complex.

Qualitative Analysis. Although most of the data presented is quantitative, we conducted a qualitative analysis on one critical question, “Why do you think they ended their life?” Using thematic analysis, two research assistants open-coded the responses separately. The research assistants then compared their preliminary codes, and created a codebook based on themes that emerged. From there, the research assistants collaborated to code the responses again based on the thematic codebook. Qualitative findings will appear throughout the report by topic area, but novel findings are reported in the section “why suicide.”

This study was reviewed and approved by the Utah DHHS Internal Review Board in 2018 and annually since then. The researchers aimed to first and foremost do no harm, to assist suicide loss survivors, and provide an accurate, comprehensive view of youth suicide in Utah.

A note about the age of the data in this report

We investigated suicide deaths among teens who died between 2016 and 2019. This report is being released in 2026, seven years after the last death represented in this study. The data in this report represents more than an epidemiological report on suicide deaths; this report is an in-depth look into the demographic characteristics and circumstances that preceded these deaths. Data collection took years to complete, the COVID-19 pandemic significantly disrupted the research process, and this report uses novel methodology that had to be rigorously tested at multiple stages to ensure validity and accuracy of the data.

Despite the time that has passed since the last youth represented in this study died by suicide, we strongly believe that this report contains findings that are insightful, unique, and valuable—and that these findings are as important in 2026 as they were in 2019. When the data in this report is used to prompt action, we believe that our ability to prevent suicide deaths among youth will improve. Indeed, we believe that this data is lifesaving.

This research also tells us clearly that we must continue this investigation. While much about adolescence has not changed since the youth represented in this report died, many things have. Therefore, the Utah DHHS Office of the Medical Examiner is committed to conducting a second wave of the Utah Youth Suicide Research Project, which we detail at the end of this report in “future directions.”

About this Report

This report is largely descriptive. Researchers identified overarching domains of information, and then subcomponents of that domain. A discussion about each of these domains details the findings, what they add to our knowledge about youth suicide in Utah and how this data compares to other similar findings. Recommendations on how to prevent youth suicide using this data were developed in a collaborative process with the Utah DHHS Suicide Child Fatality Review Committee, the Utah Suicide Prevention Committee, the Utah DHHS OME Suicide Loss Survivor’s Council, together with subject matter experts.

Authorship, Contributors, Consultants, and Reviewers

In addition to the contributions of the Office of the Medical Examiner epidemiology staff, the UYSRP was made possible due to the hundreds of volunteer hours contribute by students, faculty, and other volunteers.

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Suicide Child Fatality Review Committee

The Suicide Child Fatality Review Committee reviewed several iterations of findings from this report and issued recommendations on how to make this data actionable. These recommendations are listed at the end of each findings section and in their entirety at the end of this report. The Suicide Child Fatality Review Committee is comprised of experts in suicide prevention, treatment, and postvention, individuals with lived experience, advocates and experts who represent various public and private sectors, including health care providers and administrators, school professionals, child welfare administrators, justice-involved youth administrators, and others. The recommendations of the Suicide Child Fatality Review Committee are made independently; while DHHS facilitates these meetings, the views of this committee are independent and do not necessarily reflect the views of DHHS or the State of Utah.

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Findings

The results from this report are presented in common themes: demographic characteristics, adversity, connectedness, system engagement, health and healthcare engagement, alcohol, tobacco, drugs, and marijuana, and suicide risk. Each theme presents findings from multiple sections and concludes with a discussion of the findings.

Demographic characteristics

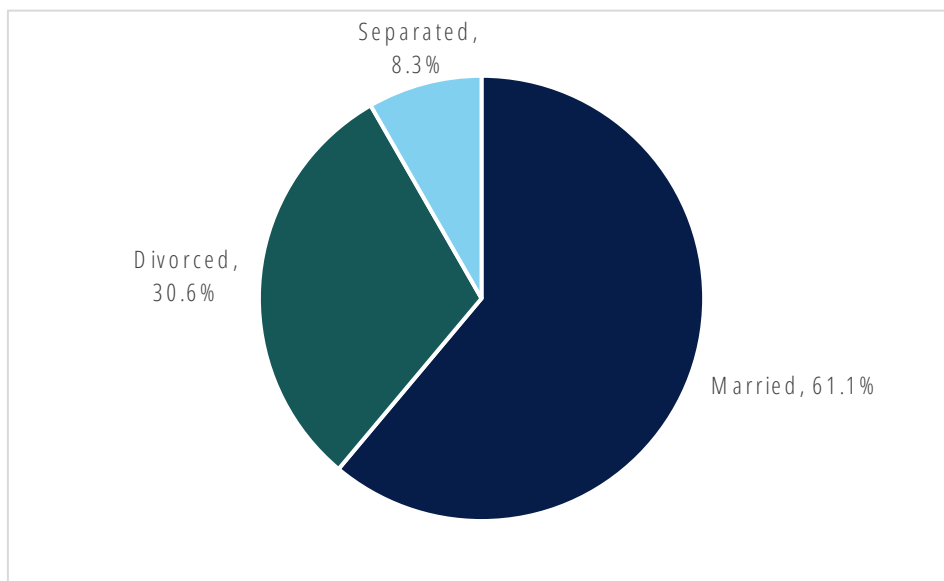
Family characteristics

86.9% of youth lived with their parents or guardians¹ when they died by suicide. Informants were unsure where the youth lived when they died by suicide in fewer than five deaths.² 61.1% of youth's parents were married; 30.6% of youth who died by suicide had parents who were divorced (many of whom were remarried), and an additional 8.3% of youth's parents were separated—not living together—but not divorced. Youth whose parents were divorced were equally likely to split their time between their parents' homes (46.9%) or reside in only one parent's home (43.8%). Most of the youth who split their time between their parents' homes had stepparents (80.0%).

¹ Guardians were most frequently grandparents with whom the youth had resided with for a long period of time.

² To protect the privacy of participants and deceased youth, counts greater than 0 but fewer than 4 are described as “fewer than four” throughout this report.

Figure 9. Most youth who died by suicide lived in households with two parents who were married.



95.4% of youth in the study had siblings. Including half siblings and stepsiblings, youth who died by suicide had an average of 3.4 siblings, and a median of 3 siblings. 25.0% of youth had 4 or more siblings.

Socioeconomic status. The median income of the households where youth lived when they died by suicide was between \$80,000 and \$100,000 per year. By income distribution, the median of youths’ households nearly rose to the next level, \$100,000 to \$125,000. Investigators measured household income using an ordinal measurement; the exact dollar amount was not obtained from youth’s parents or guardians.

Interviewers asked if at last one parent was employed at the time of the youth’s death, and 97.2.% indicated “yes.” Interviewers did not differentiate why parents were unemployed.

Table 1. Socioeconomic household characteristics of youth who died by suicide compared to Utah levels in 2019

Characteristic		Households in which a youth suicide occurred	All Utah households ³
Education			
	Less than high school	Fewer than 5	7.0%
	High school or equivalent	9.4%	22.0%
	Some college	29.9%	23.1%
	College degree (associate or bachelor's)	37.4%	34.7%
	Master's degree or professional degree	21.5%	13.2%
Income			
	Median annual income	\$80,000 to \$100,000	\$88,531
Employment			
	Unemployment	Fewer than 5	2.6% ⁴

Household military status. 9.4% of youth lived in a household where one or more parents or guardians served or were actively serving in the U.S. military. 3.7% (nearly half of households with a parent or guardian in the military) had a parent deploy to an active combat zone.

Family health status. Over a quarter (27.8%) of parents interviewed in this study reported that the cost of health care was moderately or very stressful for their family, ranking it over a 3 on a scale of 1 to 5 where 5 is the most stressful.

43.9% of youth who died by suicide lived in a household where at least one other member was diagnosed with a mental illness. A third (33.3%) lived in households where a parent reported another household member engaging in problematic drinking behaviors. Over a quarter (26.9%) reported that the youth who died by suicide lived in a household in which another person was abusing prescription and/or illicit drugs.

45.8% of youth lived in households where a different household member incurred a serious injury or illness, and 33.6% had a household member die.

³ https://ibis.utah.gov/ibisph-view/indicator/complete_profile/HHInc.html
https://ibis.utah.gov/ibisph-view/indicator/complete_profile/EduLevPop.html

⁴ <https://jobs.utah.gov/wi/pubs/em/pastreports/19annual/narrative.pdf>

Table 2. Family health status characteristics

Characteristic		Youth suicide	Utah
Health insurance			
	Parents did not have health insurance at time of youth's death	6.5%	8.6% ⁵
Cost of healthcare	Cost of health care was stressful (for the whole household)	27.8%	14.2% ⁶
Behavioral health	Households with a member with a diagnosed mental illness	43.9%	23.0% ⁷
	Households with at least one member reported to be dependent on alcohol	33.3%	11.2% ⁸
	Households with at least member who abused prescription or illicit drugs	26.9% ⁹	No proxy measure available
Serious injury or illness	Proportion of households where a serious injury or illness occurred (not to youth who died by suicide)	45.8%	No proxy measure available
Death	Proportion of households in which a death occurred (other than the youth who died by suicide)	33.6%	No proxy measure available

Nativity, race and ethnicity

79.4% of youth who died by suicide were born and raised in Utah. 18.7% were born outside of Utah and later moved to Utah.

85.2% of youth in the study identified as white, non-Hispanic. 12.1% identified as Hispanic (any race). The remainder identified as some other race (non-Hispanic).

Sex and Gender Identity

3 out of 4 youth who died by suicide between 2016 and 2019 were male.

5 <https://ibis.utah.gov/ibisph-view/indicator/view/HlthIns.html>

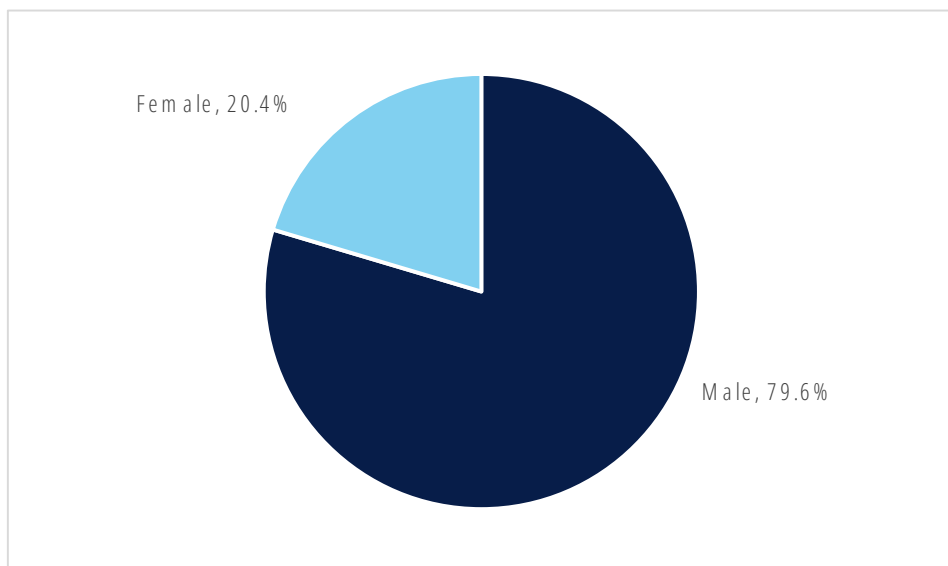
6 https://ibis.utah.gov/ibisph-view/indicator/view/CosBarHtlhCar.UT_US.html

7 https://ibis.utah.gov/ibisph-view/indicator/view/Dep.UT_US.html (Depression)

8 https://ibis.utah.gov/ibisph-view/indicator/view/AlcConBinDri.UT_US.html (binge drinking)

9 An additional 4.6% may have been known to abuse prescription or illicit drugs, but informants were unsure.

Figure 10. Males account for 3 out of every 4 suicide deaths among youth



92.6% of the youth in the study were reported to be cisgender, that is, their sex assigned at birth corresponded with their gender at the time of their death. 6.5% of youth identified as transgender or were questioning their gender identity at the time of their death.

Sexual Orientation

80.0% of youth identified as straight or heterosexual, while 17.6% reported identifying as gay, lesbian, bisexual, questioning, or asexual (LGBQA). Fewer than 5 had an unknown sexual orientation.

Sexual orientation is complex, and is comprised of identity, attraction and behavior. Most scholars recognize sexual orientation as primarily an identity. 6.0% of youth reported either having sex with someone of the same sex on at least one occasion or expressed sexual attraction to someone who was the same sex but identified as straight/heterosexual. Some individuals have sex with other individuals of the same sex and never consider themselves LGBQA (Ward, 2015). While it's possible that some youth who died by suicide may never identify as anything other than straight, it's also true that coming out is a developmental process, and that some of these youth may have been wrestling with sexual attraction to individuals of the same sex and identity but did not yet openly identify as LGBQA. Ultimately, the proportion of youth whose sexuality is something other than heterosexual may be higher than 17.6%.

Discussion: Demographics

The 108 youths represented in the Utah Youth Suicide research project come from households that, in most ways, are representative of youth throughout Utah. In 2019, The U.S. Census Bureau estimated 55.7% of Utahns ages 15 and older were married (U.S. Census Bureau). Youth who died by suicide were slightly more likely to have parents who were married, 61.1%. Keep in mind, however, that the Census estimates include

adults who were married, divorced, and remarried in their estimate of married adults. Research in this study measured the marital status of the youth's *parents*, who may be divorced and remarried. 30.6% of youth who died by suicide had parents who were divorced, and additional 8.3% were married but separated. The U.S. Census Bureau estimates 9.0% of Utah adults' marital status is divorced, and 1.4% are separated. That proportions of divorce and separation are higher among youth who died by suicide may point to a history of living through a divorce or experiencing parental conflict at some point in their lifetime. This finding is consistent with other research demonstrating the impacts of changes in living situation due to parental separation or divorce, including correlation with suicide mortality in youth (Feigelman et al., 2016). However, researchers in this study didn't directly measure levels of parental conflict. Further, a divorce could mean that a child experiences less family conflict when parents who argue or engage in violence no longer live with each other.

Most youth who died by suicide had siblings and/or stepsiblings (95.4%). While family, parents and siblings included, is generally considered protective of suicide risk by suicide researchers (Stack & Kposowa, 2016), little is known about the impact of sibship, except siblings as suicide loss survivors (Erlangsen & Pitman, 2017).

Youth who died by suicide were slightly more likely to live in households with higher educational attainment—recorded as the highest level of education either parent or guardian reported—than the average in the state. Median household income aligns with the state median income in 2019. The rate of unemployment among parents of youth who died by suicide (fewer than five) was similar to the state rate (2.6%). However, researchers did not elaborate on why parents or guardians were unemployed. The overall unemployment rate for the state only counts individuals who are not employed and who are seeking employment. Researchers were aware that a very small number of parents were disabled and may have been obtaining disability benefits. Therefore, the estimate of unemployment among parents of youth who died by suicide may be higher than it would be if the same definition was used as the state definition.

According to the Utah Department of Workforce Services, 5.0% of Utah households between 2018 and 2022 had at least one veteran (2024). A higher proportion (9.4%) of Utah youth who died by suicide lived in a household with at least one parent/guardian veteran. Living with a veteran, particularly veterans who suffer from Post-Traumatic Stress Disorder or other service-related mental health problems results in higher suicide risk for their family members (Peterson et al., 2022; U.S. Department of Defense, 2020). This finding holds true for adolescents in particular, with youth in military-involved families tending to exhibit more suicide-related thoughts and behaviors than their peers. This effect is likely to be due in part to higher prevalence of Adverse Childhood Experiences (ACES) and military-specific stressors, especially if parents are deployed (Clements-Nolle et al., 2021; Gilreath et al., 2016; De Pedro et al., 2018).

Parents of youth who died by suicide were less likely than the Utah population in 2019 to report not having health insurance. Children are more likely to have better health outcomes when their parents have health insurance (Gopalan et al., 2022). This finding may be especially true for accessing mental health treatment,

as access to appropriate mental health care is more difficult and participation rates of mental health treatment programs are reduced in populations that are un- or under-insured (James et al., 2015). That parents were more likely to be insured than the general population of Utah likely helps explain why, in part, youth who died by suicide utilized mental health care services more frequently than youth in the state generally.

Parents and guardians of youth who died by suicide were more likely to report that the cost of healthcare was a source of stress (27.8%). Comparatively, in 2019, 14.2% of Utahns said that there was a time in the past 12 months that they could not afford to see a doctor when they needed to (DHHS, 2024f). While these comparisons are crude because researchers in the youth study did not limit *when* health care was stressful, the disparity in the measure is adequate to conclude that parents of youth who died by suicide did indeed find the cost of health care challenging.

Having health insurance coverage does not eliminate the stress of paying for healthcare, especially in the behavioral healthcare arena. Even among individuals with insurance coverage, reports of fragmented care, delayed care, surprise bills due to inaccurate network directories, inadequate coverage, and insurance denials of care received are commonplace. Issues with coverage and payment consistently occur more often for mental health care than general medical concerns (Busch & Kyanko, 2020; Modi et al., 2022).

Youth were more likely to live in households where a family member suffered from a mental illness (43.9%). There was no directly equivalent measure for all Utah adults, but 23.0% reported being diagnosed with depression in 2019, and 21.4% reported having poor mental for more than 7 of the previous 30 days (DHHS, 2024g). Given the disparities, it's very likely that youth who died by suicide lived in homes with a higher prevalence of a diagnosed mental health disorder. This finding is consistent with other epidemiological research showing association between poor parental mental health and death by suicide in adolescents (Maguire et al., 2022).

Youth also lived in households where problematic alcohol consumption was prevalent (33.3%). In 2019, 11.2% of Utahns reported behaviors consistent with binge drinking behaviors (DHHS, 2024d). While there was no comparison measure, over a quarter of youth (26.9%) lived in households where someone else was reported to be abusing prescription and/or illicit drugs.

One third (33.6%) of youth who died by suicide experienced the death of a household member prior. Burns et al. (2020) estimate 7.0% of youth in the U.S. experience the loss of a parent or sibling before their 18th birthday. There is no direct comparison specifically for Utah.

Most youth who died by suicide in Utah were white, non-Hispanic. However, a notable number of Hispanic (all races) youth were included in the study. Additionally, non-white, non-Hispanic youth were also invited to participate in the study, but the participation rate was low. Researchers need to explore culturally appropriate avenues to encourage participation among racial minorities. Investigators asked several additional questions about race in this study, but because counts of non-White individuals were relatively

small, researchers could not infer any trends based on race. Further, because of the limited data about race in this study, researchers could not determine the role race or ethnicity played in contributing to or reducing suicide risk. Other research, however, demonstrates that trajectories of youth suicide mortality and suicidal behaviors differ by race and ethnicity, and that minority populations have unique needs that should be considered in research as well as in prevention and treatment practice (Erausquin et al., 2019; Lee & Wong, 2020). As discussed in the methodology section of this report, future studies should attempt to represent more minority youth who died by suicide.

That 3 out of 4 youth who died by suicide were male comes as no surprise to researchers, based on historical trends. The method by which males and females attempt suicide explains a great deal of this disparity: 55% of males who died by suicide in YSRP used a firearm. Evidence from a similar youth psychological autopsy study suggests trajectories and patterns of thoughts and experiences leading up to death by suicide may differ by gender (Mérelle et al., 2020). However, emergency room data shows that 75% of all youth ages 10 to 17 who attempted suicide were female. Including both males and females, 61% attempted suicide by poisoning (e.g., overdose) (DHHS, 2024c); comparatively, 7.4% of all youth who died by suicide died by drug overdose/poisoning. Data from this study and historical studies strongly suggests that youth who attempt suicide are different than youth who non-fatally attempt suicide—with some similarities between the two groups. Accordingly, interventions for individuals at risk of suicide death are different than strategies aimed at preventing suicide attempt.

The number of youths who identified as transgender, including non-binary and agender, was a small count, but disproportionately represented in the suicide death data (6.5%). A survey of 8th, 9th and 12th graders from 2019 estimates that 0.3% of Utah students identify as transgender (DHHS, 2019). Additionally, gender diverse youth in Utah in 2019 were more likely to seriously consider suicide (59.7%) and attempt suicide within the past 12 months (31.8%), according to a population-based survey (DHHS, 2019).

Gender diverse youth who died by suicide reported instances of rejection or experiences that were perceived as rejection. Transgender youth reported that they were discriminated against in multiple domains: wanting gender affirming surgery but could not get it (for reasons the investigators were not able to determine), they were pushed out of their job after they transitioned, and they felt misunderstood and isolated due to their gender identity. One peer summed up these experiences succinctly, stating: *“I think it was primarily the transphobia she experienced and just not feeling like the world wanted her around.”*

2019 Student Health and Risk Prevention: Prevention Needs Assessment Survey (SHARP) data indicate that 11.9% of youth identified as a sexual orientation other than straight/heterosexual (DHHS, 2019). Youth who died by suicide and who identified as LGBQA (lesbian, gay, bisexual, questioning, asexual) were more likely to die by suicide than the general population of youth, 17.6% of youth who died by suicide identified as LGBQA. While this study is among the first to document sexual orientation among youth who died by suicide, increased suicide risk is well documented in the literature. Research indicates LGBQA youth are at higher risk

for suicide related thoughts and behaviors due to unique factors in their life experience, which can include experiences like internal and external stigma, family rejection, discrimination, and hostile school climate (Battalen et al., 2021; Gorse, 2022; Hatchel et al., 2019; O'Reilly et al., 2021; Peter et al., 2016; Williams et al., 2022). Our qualitative analysis indicated that this research mirrored the experiences of the youth in our study, with one parent relating:

“...he had made a video on his phone right before...saying that he didn't want to be a burden to anybody, but I know there were other things, and I know some of it has to do with his sexual preference. I know that that did bother him. He never came out to me even though I talked to him about it and told him, you know, it's ok, he just still never wanted to say it. But I know some of that has to do with him not being able to be with the one that he wanted to.”

Another parent stated: *“her friend told me afterwards that she was struggling big time with feeling gay and thought that we could not accept that.”*

Related Recommendations from the Suicide Child Fatality Review Committee:

- Court-approved providers should include suicide prevention training as part of the mandatory education required for parents seeking a divorce.
- Academic and government institutions should increase cultural competence in suicide and prevention research, including recruiting more researchers and staff from minority communities.
- Leaders and decision makers should promote public policy that reduces risk of suicide for LGBTQ+ youth

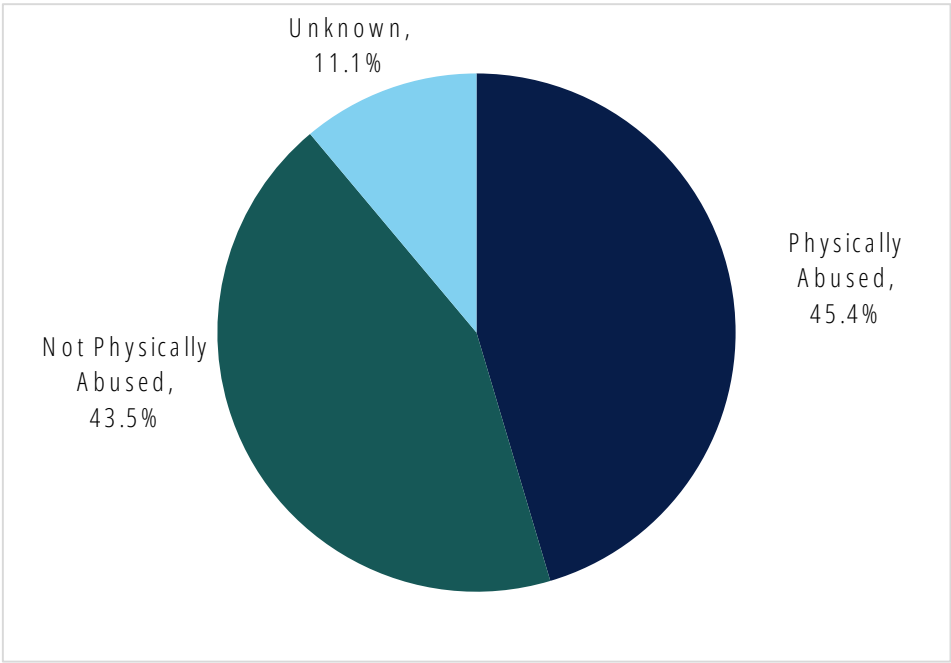
Adversity

Traumatic Experiences in Childhood

This study explored traumatic experiences in childhood in four ways: physical abuse, sexual abuse, emotional abuse, and generalized trauma. For each type of experience, informants were asked if the youth who died by suicide was physically abused, for example, but then asked about specific behaviors. If informants responded “no,” that the youth had not been physically abused, but subsequently responded affirmatively to one or more of the specific abuse behaviors, follow up questions were not asked because the informant did not recognize these behaviors as abusive.

Physical abuse. 45.4% of youth who died by suicide experienced physical abuse at some point in their lifetime. 26.9% of informants responded that the youth had been physically abused; an additional 14.3% responded affirmatively about at least one specific abusive behavior. 39.8% of youth experienced at least one abusive behavior that their caregiver(s) and friends did not recognize as physical abuse. Investigators could not determine whether 11.1% had been physically abused or not.

Figure 11. At least two out of five youth who died by suicide experienced physical abuse.

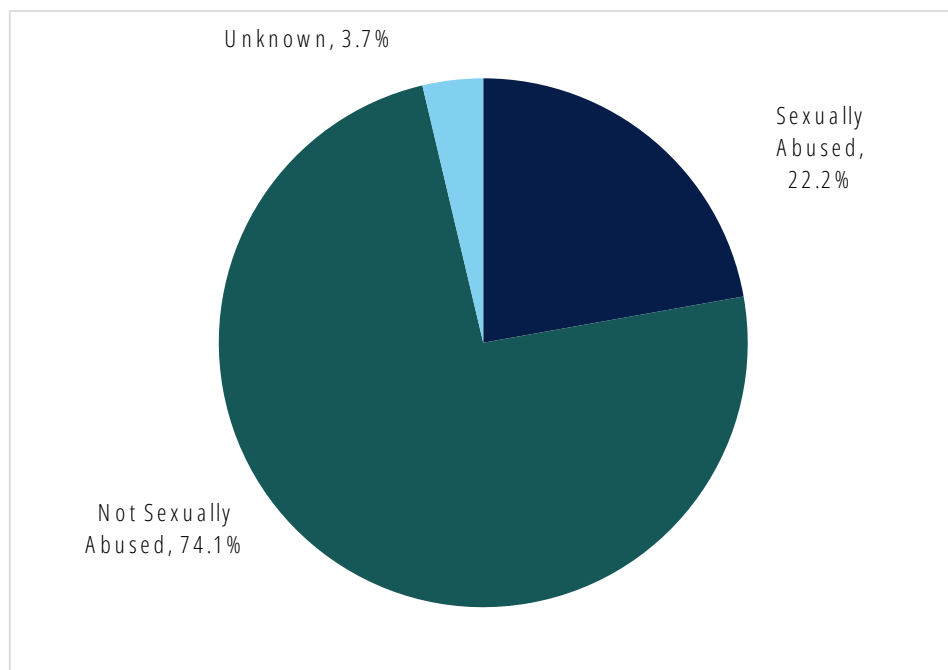


Most physical abuse occurred and ended at least two years prior to the time the youth died by suicide. The most common forms of physical abuse were being hit with a closed fist (i.e., punched) and hit with an object, usually a belt or kitchen utensil.

Sexual abuse. 22.2% of youth were reportedly sexually abused. Interviewers were not able to ask behavior

specific questions related to sexual abuse if the informant answered no to the initial question, “Was NAME the victim of sexual abuse?” Because of that limitation, the proportion of youth who were reportedly sexually abused is likely to be higher than researchers report here. Whether or not the youth was sexually abused was unknown in fewer than 5 deaths. Females were disproportionately more likely to have experienced sexual abuse: 63.6% of females were reported to have experienced sexual abuse compared to 11.6% of all males.

Figure 12. Over 1 in 5 youth who died by suicide were sexually abused.

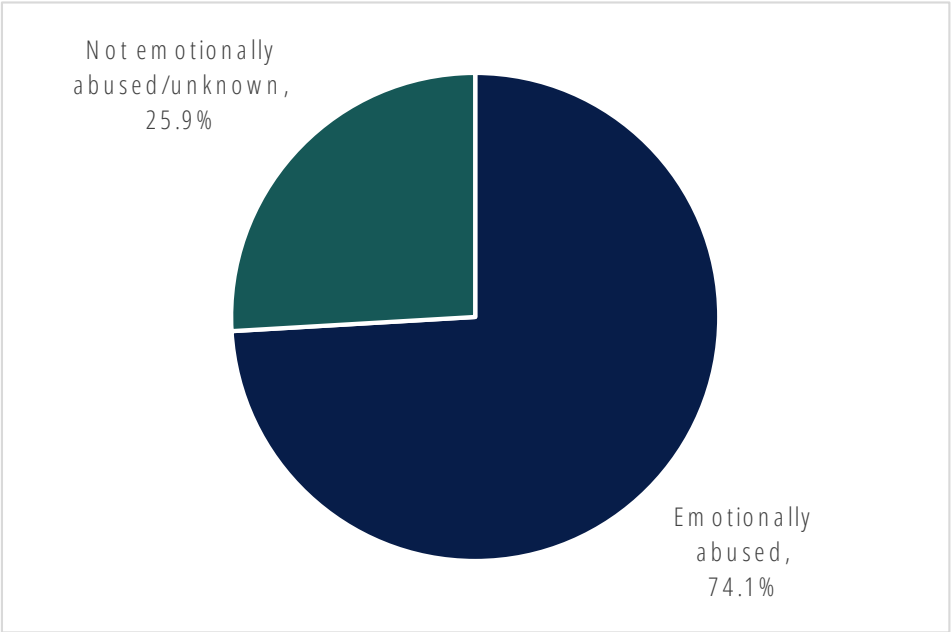


The perpetrator of sexual abuse was identified most often as an acquaintance of the youth; friends, siblings and strangers were also commonly identified as perpetrators.

8.4% of all youth who died by suicide were sexually abused on more than one occasion. In other words, one third of youth who were sexually abused were abused more than once. While most of the sexual abuse occurred more than two years prior the youth’s death by suicide, some had occurred within weeks or months of their death.

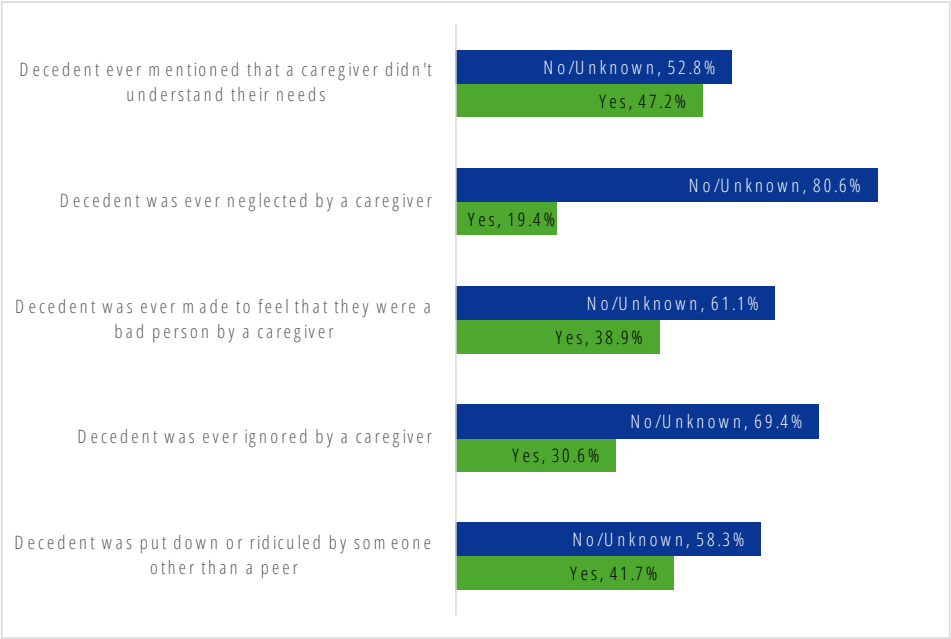
Emotional abuse. 74.1% of youth reportedly experienced emotional abuse. 50.9% of parents and caregivers labeled this mistreatment as emotional abuse, but an additional 23.1% responded affirmatively to one or more specific behavior—deliberately ignoring, neglect, ridicule, being made to feel as though they were a bad person, and/or being out of touch with a child’s needs. Of those who had experienced emotional abuse, 84.1% were reported to express thoughts of “guilt, inferiority, self-blame, sinfulness, remorse, or ruin” compared to 56.3% of youth for whom no emotional abuse was reported.

Figure 13. Three quarters of youth who died by suicide experienced emotional abuse.



Informants described emotional abuse frequently as “yelling” and “screaming” at the youth, name calling, especially “stupid,” “dumb,” and other words that conveyed a similar meaning. Some friends of youth who were informants indicated that the deceased youths told them that their parent(s) made them feel like they were a burden just for living in their home. When informants mentioned these types of abuse, they also frequently—in at least 40% of instances—mentioned that caregivers put down and demeaned their children when they were intoxicated. Investigators also learned of youth not being provided food as a punishment, being confined from family and friends for long periods of time and using youth as a scapegoat for failures and negative events that impacted a family, but over which the youth had no control. Coaches were mentioned on several occasions as ridiculing or shaming a youth in front of their peers for performing below expectations.

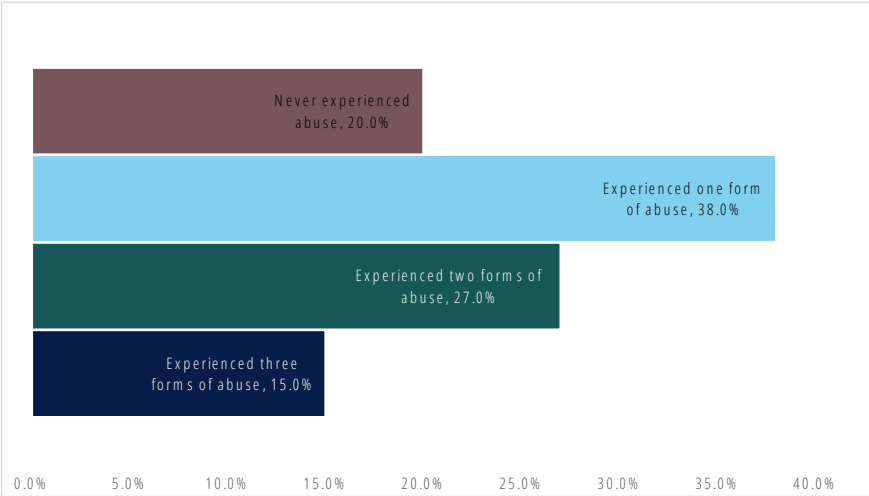
Figure 14. The most common type of emotional abuse was neglect, but several other types were also prevalent.



Parents were the most common perpetrators of physical and emotional abuse; acquaintances were most often identified as the perpetrators of sexual abuse. Stepparents were also frequently identified as perpetrators of emotional abuse.

Polyvictimization. 79.6% of youth who died by suicide had experienced at least one form of child maltreatment. However, a large proportion (41.6%) of youth experienced two or more kinds of maltreatment. 14.8% experienced all three types of maltreatment at least once. Just 22 youth who died by suicide (20.4%) were reported to have never experienced any kind of physical, emotional, or sexual abuse or maltreatment.

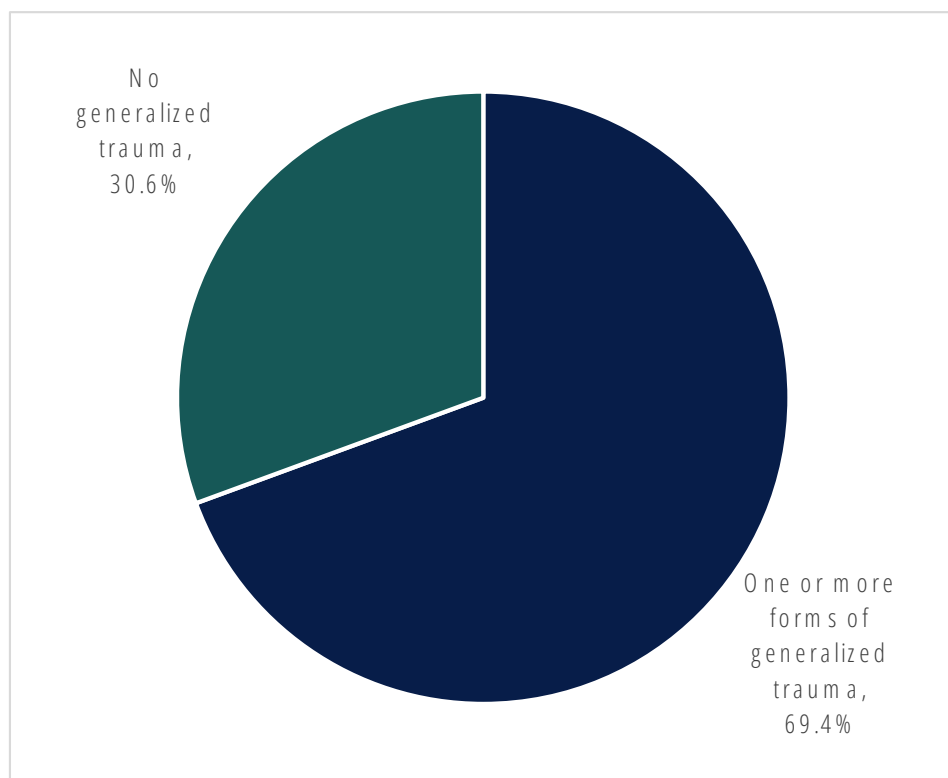
Figure 15. Nearly 80% of youth who died by suicide experienced some form of abuse, and some experienced multiple forms of maltreatment.



Generalized trauma. Youth were reported to have experienced trauma that was not inflicted by someone or necessarily toward them, but in their presence. Informants reported that 38.0% of youth who died by suicide had witnessed violence face-to-face, excluding violence experienced on virtual mediums such as television, social media and video games. More than one youth was reported to have witnessed a violent death first-hand. A great deal of this violence could be categorized into two themes equally: fights and assaults witnessed at school or between peers and secondly, domestic violence between parents, stepparents, and romantic partners of parents. A small number of youth experienced both fights at school and violence between family members at home.

5.6% of youth experienced a natural disaster, most often an earthquake. 22.2% were reported to have experienced a serious injury, serious illness, or death of someone close, and 27.8% were reported to have experienced a serious accident that was not connected to any suicidal behavior or event that could be characterized as abuse or bullying. Nearly all these events were linked to motor vehicle accidents or sports-related injuries.

Figure 16. Two thirds of youth who died by suicide experienced at least one form of generalized trauma.



Considering all types of generalized trauma, 69.4% of youth who died by suicide had experienced at least one form of generalized trauma.

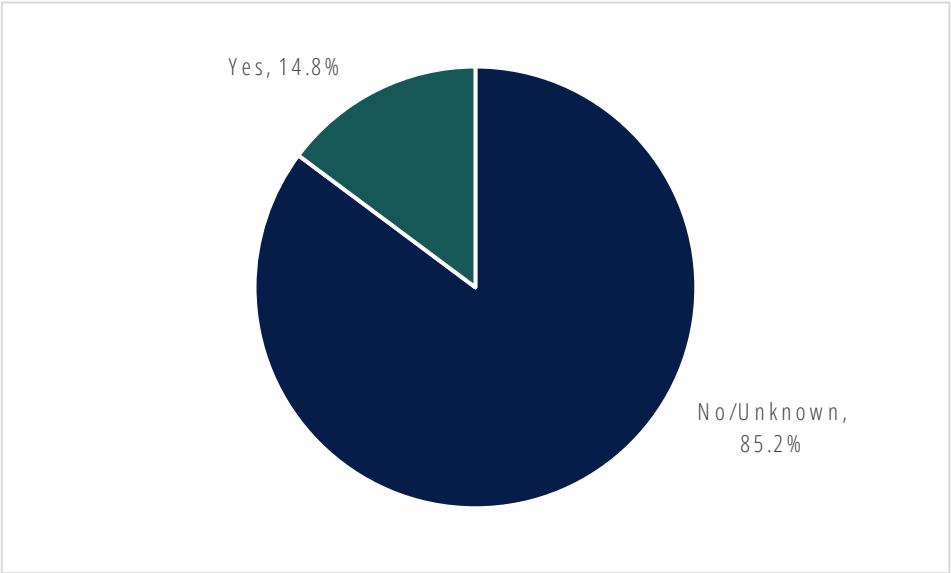
Perpetration of violence. 24.1% of youth who died by suicide were reported to have perpetrated physical or sexual violence. The vast majority of these events were described as physical altercations. Sexually violent acts and emotional violence (e.g., threats of physical or sexual violence) were present, but uncommon. Of the events described 58.6% could have possibly risen to the level of criminal charges. Many of these events were violence directed at siblings. Investigators were careful to distinguish between heated disagreements between siblings and family members and physical violence. Although infrequent, these violent acts were sometimes the activating event that occurred within days or even hours of the youth dying by suicide.

25 of the 26 youth who perpetrated violence were reported to have experienced at least one form of maltreatment. Of the 18 youth who experienced all three types of abuse—physical, sexual, and emotional abuse—half (9) were also perpetrators of violence. Youth who perpetrated violence were also significantly more likely to have experienced abuse than those who were not. Our findings indicate that not only youth who are victims of violence are at a higher risk of suicide death, but those that perpetrate violence are also at a higher risk. And, those youth who are both victims and perpetrators may be at an especially high risk of suicide death.

Housing Status and Residential Mobility

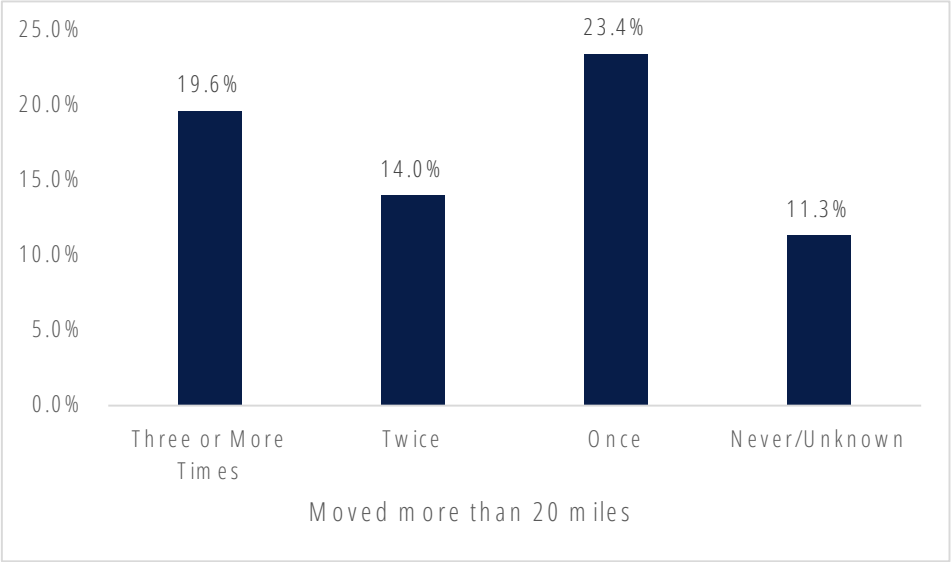
Nearly 15% (14.8%) of youth who died by suicide experienced a period of homelessness in their lifetime. An additional 1.8% may have experienced a period of homelessness, but researchers could not be sure. The circumstances of youth experiencing homelessness most commonly were the youth ran away from home after being kicked out or experiencing family conflict, or that the entire family was homeless. When families became homeless, informants claimed that they were able to quickly find temporary shelter with a relative or in a hotel.

Figure 18. Nearly 1 in 7 youth who died by suicide experienced at least one period of homelessness.



In this study, investigators asked how many times the youth moved more than 20 mile in their lifetime. Most youth had moved more than 20 miles at least once (59.2%). Of those who moved, 23.4% moved just once, 14.0% moved twice, and 19.6% moved three or more times.

Figure 19. One in five youth moved more than 20 miles at least 3 times in their lifetime, a destabilizing event that disrupts social connection.



Discussion: Adversity in childhood among youth who died by suicide

In 2021, the closest year to 2019 available, 12.8% of 11th graders in Utah reported that they had experienced physical abuse in the past 12 months (DHHS, 2021). 21.4% of Utah adults ages 18 to 35 report having been physically abused at least once in their childhood (DHHS, 2024b). Both incidence and prevalence measures fall well short of the nearly 2 in 5 youth who died by suicide who were reportedly physically abused at least once in their lifetime. Respondents in the population level measures may not recognize a particular behavior as physical abuse and therefore do not report that they had been abused in childhood. Despite the differences in these measures, however, researchers believe that the high prevalence of physical abuse among children in this study is a unique finding, and that physical abuse is indeed associated with a higher risk of suicide death among youth.

National estimates indicate 26.5% of females and 5.1% of males aged 17 experienced sexual abuse or sexual assault in their lifetime (Finkelhor et al., 2014). In Utah, 14.3% of high school aged youth reported experiencing sexual violence (by anyone) in 2019 in the previous 12 months (CDC, 2024). Utah experiences one of the highest rates of self-reported sex abuse incidence in the nation (Utah Women & Leadership Project, 2020). 14.8% of adults (age 18+) in Utah report being sexually abused in Utah (DHHS, 2024e). In this study, 22.2% of youth were reportedly sexually abused at some point in their lifetime, but this is likely a low estimate, due to the investigators inability to ask about specific behaviors that describe types of sexual abuse. Sexual abuse among youth who died by suicide was highly prevalent, particularly among females: 63.6% of females who died by suicide were sexually abused compared to 19.2% of the Utah population (using self-reports by adults) DHHS (2024e).

Previous research on youth who experienced specific types of emotional abuse, threat and deprivation, showed an increase in suicide attempts (Brown et al., 2024). However, this study and others like it studied children who attempted suicide non-fatally. Additionally, previous studies of child emotional abuse tend to focus on psychiatric populations, not population level findings. In 2021, the closest year to 2019 for which data is available, 45.0% of Utah 11th graders reported experiencing emotional abuse and 38.3% of Utah adults report experiencing emotional abuse in childhood (DHHS, 2024a). Nearly 77% of youth who died by suicide experienced emotional abuse. While the way emotional abuse was measured in the present study compared to previous measures of incidence and prevalence of emotional abuse result in the inability for direct comparison, researchers note the large disparity in prevalence between population estimates and the proportion of youth who died by suicide who also experienced emotional abuse. Indeed, emotional abuse was highly prevalent among youth who died by suicide.

Youth who died by suicide in this study were very likely to have experienced at least one type of maltreatment in their lifetime. While we were unable to determine a population estimate to compare, it's notable that 88.90% of youth who died by suicide experienced maltreatment at some point in their lifetime.

Perpetration of violence in adolescence, therefore, may be a strong signal of impending self-directed violence. Nearly all the youth who perpetrated violence in this study were also victims of maltreatment. Our findings suggest that youth who initiate violence may be more likely to have experienced maltreatment—and that the risk of suicide mortality is more closely linked with maltreatment than initiation of violence. Rooney et al. (2019) also found that being both a victim and a perpetrator of violence leads to higher risk of suicide.

Experiencing more than one kind of trauma or abuse, or polyvictimization, has been shown to increase suicide risk, using scores from the Columbia Suicide Severity Rating Scale (CSSRS) (Fedina et al., 2023). Children who were exposed to multiple types of one trauma were 6 times as likely to report suicidal ideation in another study (Turner et al., 2012). One study estimates 18.0% of children ages 3 to 17 experience polyvictimization in the United States (Finkelhor et al., 2007). Half of youth in our study who died by suicide (51.9%) experienced two or more kinds of trauma. While there is no other known study of the impact of abuse and risk of suicide mortality, the evidence from UYSRP strongly indicates that multiple kinds of abuse or victimization are common among youth who die by suicide.

The impacts of generalized trauma on suicide risk are not well understood, in no small part because of the lack of specificity on defining generalized trauma in the research. Given that nearly 70% of youth who died by suicide experienced at least one form of generalized trauma, however, these findings strongly suggest that generalized trauma contributes to suicide risk. Researchers ought to investigate the role of generalized trauma further, together with other risk factors, especially other forms of abuse and victimization. Past trauma of various types emerged as a significant theme in qualitative analysis. Many informants cited traumatic experiences as being a contributing factor in these youths' decision to end their life. Additionally, many of these narratives highlighted that the deceased did not feel they had somewhere to turn, or an outlet for these experiences.

For example, a peer said: *“he had some trauma and some baggage he carried [related to his experiences of experiencing abuse and being placed in out-of-home care], and I think he joked about it a lot to cope with it. You know, to, maybe it was something that he carried with him and instead of venting, he would rather just kind of see people laugh at his expense and kind of spin it into something funny.”*

Another peer said: *“I felt like there was a lot of past things that I didn’t, I don’t know about, but I definitely do think a lot of past things that happened to her and hard things that she had to go through. She had everybody in that household [...] being mean to her, bullying her [...] just telling her that she couldn’t be around them. [And then] the fact that she got molested, I feel like it was a lot of stuff that just kept stacking and I feel like she never really had a proper outlet towards a lot of things. I feel like it was just hard for her and it just kept getting harder and harder without it ever really stopping... I don’t know a lot about her past, but just being around her a lot of the time I felt like there might have been something but it was never drawn out. Yeah, because I, I ponder it... Everyone has their own demons. And I feel like her demons were just pretty, pretty damn strong.”*

The impact of homelessness on suicide risk in childhood is typically understood as a mediating or moderating factor. In other words, youth who experience homelessness are reported to express feelings of helplessness or being trapped, and youth cope with these feelings by using alcohol or drugs, or engaging in high risk behavior (Kidd & Carroll, 2007). Youth who experience homelessness are also more likely to come from unstable family situations and be victims of abuse (Cleverley & Kidd, 2011). 15% of youth who died by suicide experienced homelessness at some point in their lifetime. No population estimate of lifetime prevalence of homelessness among youth was found at the writing of this report. Researchers in the current study most frequently heard stories of youth experiencing homelessness because they ran away from home or were kicked out. Further, researchers attempted to identify any strong correlations between the three domains of abuse (physical, sexual, and emotional) as well as any of the types of substance use (alcohol, misused prescription drugs, illicit drugs, tobacco, and marijuana), and only illicit drugs—substances like LSD, ecstasy, cocaine, heroin, methamphetamine, etc.—had any strong association with homelessness. For some youth represented in UYSRP, homelessness inevitably contributed to suicide risk, but this relationship is not well understood.

Frequent residential mobility can also result in increased suicide risk, primarily because such moves disrupt social network and the ability of a young person to connect with their peers and community (Hagedoorn & Helbich, 2022; Zhang et al., 2021). Youth who moved three or more times were notably less likely to indicate that they belonged in their community than youth who never moved or moved only once. There were no differences between youth who never moved and moved between 1 and 4 times when asked if they were happy with their friendships. Youth who moved 5 or more times were less likely to be happy with their friendships.

Adverse experiences in childhood have been well studied and are strongly associated with increased risk of suicide ideation and suicide attempt (Mortier et al., 2022; Tatyana, 2024). Nearly all of the youth who were represented in the UYSRP experienced adversity, ranging from generalized trauma to multiple forms of abuse, to bullying. Researchers need to better understand the reasons why the youth in this study died by suicide compared to youth who experience similar adversities and do not attempt or die by suicide.

Related Recommendations from the Suicide Child Fatality Review Committee:

- DCFS and other child abuse prevention leaders should include a suicide prevention assessment and intervention protocol in child abuse investigations to identify youth who are seriously considering suicide and then intervene, even in unsubstantiated claims.
- Educate bystanders to recognize child maltreatment and how to report suspected child maltreatment.
- Parents and schools should promote healthy relationships and teach skills to deal with adversity and promote resilience.
- Schools should utilize social skills training to address skill deficits and model healthy peer to peer relationships.

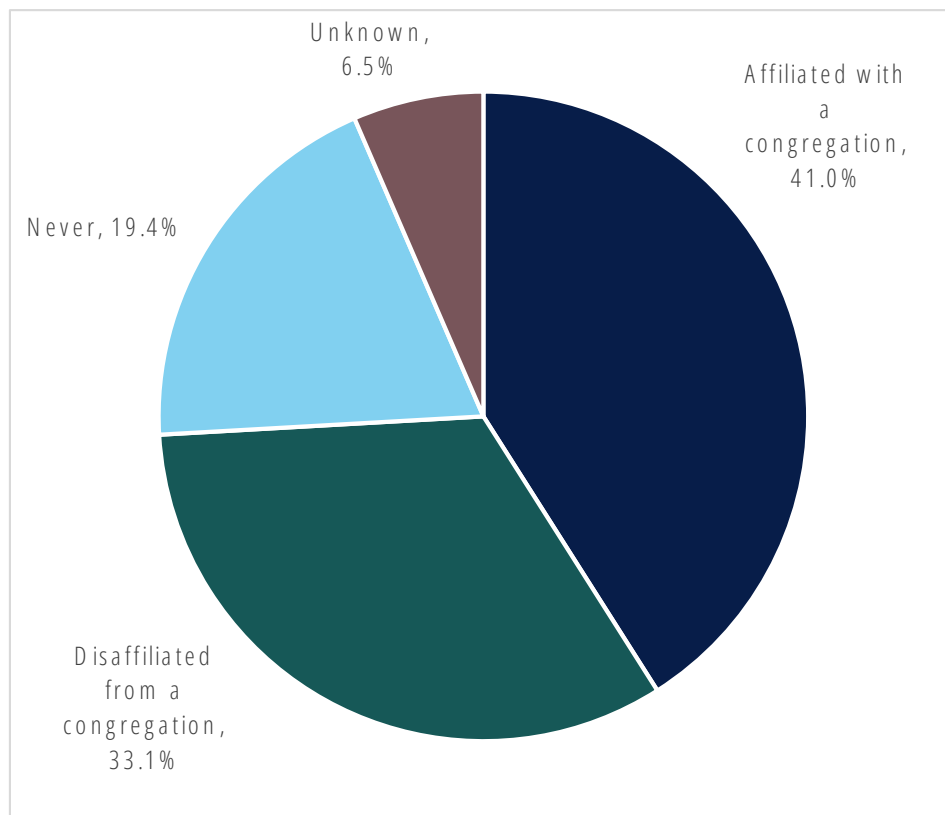
Social connection

Researchers explored the sources of social connection and whether these connections changed or were disrupted over time, especially leading up to the suicide death of the youth. Sources of social connection include religion, relationships, and social connectedness in peer groups. Engagement on social media and via video games are also considered a possible source of social connection; therefore, investigators' exploration of the role of media is also included here.

Religion

41.0% percent of youth who died by suicide considered themselves to be a member of a religious congregation at the time they died. 19.4% were never part of a religious congregation. A third of youth who died by suicide were once part of a religious congregation but no longer affiliated at the time they died. Religious affiliation for an additional 6.5% of youth could not be determined at the time of their death.

Figure 20. The plurality of youth who died by suicide considered themselves to be a member of a religious congregation, and about an equal portion disaffiliated.



Of the youth who were active at the time of death, 75.0% of youth identified as a member of the Church of Jesus Christ of Latter-day Saints, 13.6% identified as Roman Catholic, and the remaining youth belonged to other religions. Of those who formerly identified as a member of a religious congregation, 75.0% were

members of the Church of Jesus Christ of Latter-day Saints, 11.1% were Roman Catholic, and the remaining 13.9% were from various other religious groups.

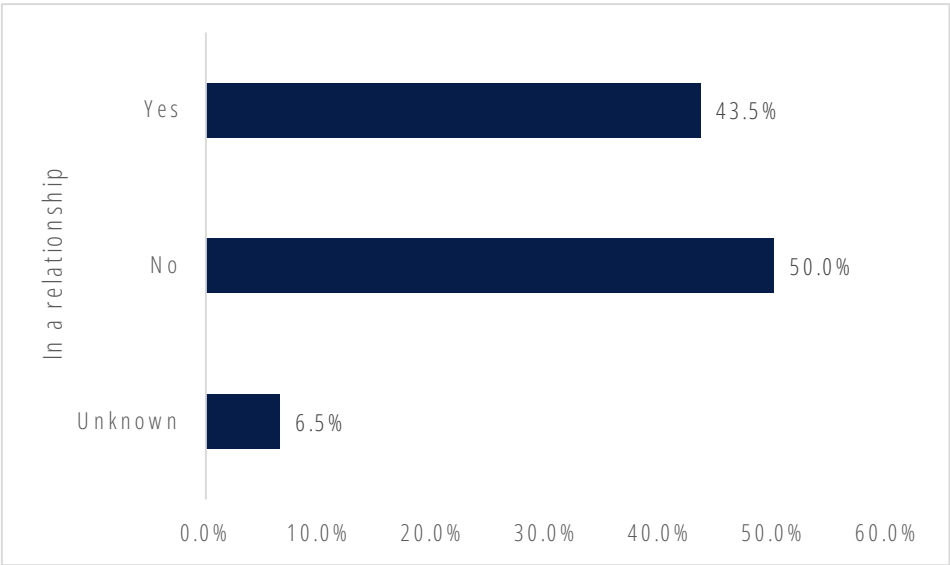
41.2% of youth who affiliated with a faith congregation at any time attended religious services once per week or more leading up to their death by suicide, and 27.1% attended less than weekly, but at least once per year. The remaining 21.2% attended less than once per year or investigators were unable to determine how frequently the youth attended religious services.

40.9% of youth who were religiously affiliated at the time of their death were reported to be in conflict with their religious congregation at the time of their death. Investigators were unable to determine if a youth was experiencing conflict with their religious congregation for an additional 11.9% of youth. Two common themes emerged related to conflict with a religious congregation: feeling abandoned by God (e.g., “God is cruel for allowing hunger in the world,” “how could God create a person with a mental illness?”) and beliefs surrounding sexual orientation, including among youth who identified as straight/heterosexual. Other themes of this conflict include feeling socially excluded within their congregation, feeling that religious interviews were too intrusive, and conflicts regarding sexual behavior. One in five youth who were ever religiously affiliated were told by an adult that they couldn’t participate in church activities.

Relationships

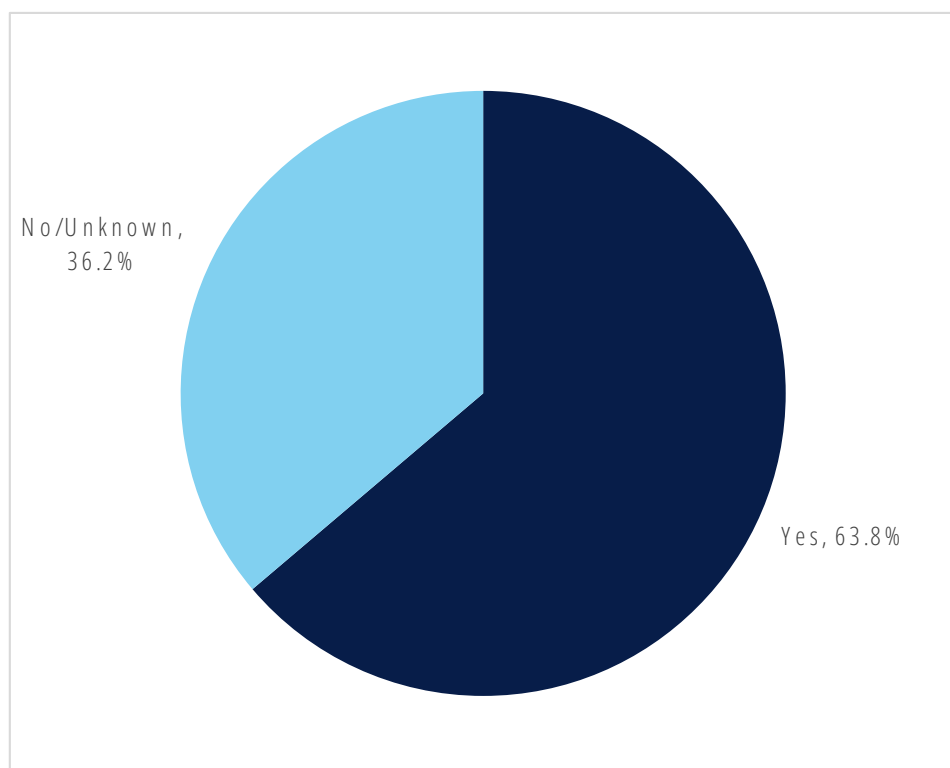
43.5% of youth who died by suicide had a romantic partner (i.e., girlfriend or boyfriend) in the time leading up to their death. Investigators could not determine whether 6.5% of youth were in a relationship leading up to the time they died.

Figure 21. Nearly half of youth who died by suicide were in a romantic relationship around the time they died.



Of youth who were in a relationship, two-thirds were in relationships that were less than a year long, and 30% were at least a year long. 63.8% of these romantic relationships were on the verge of breaking up or had very recently ended around the time the youth died by suicide. Many informants spoke of these break ups, particularly those breakups that were within just one or two days of the death, as a primary motivator for the youth to end their own life. Nearly 26% of youth who died by suicide had been in a romantic relationship prior to their death but were not in a relationship in the period leading up to their death. An additional 22.2% were never in a romantic relationship.

Figure 22. Of youth who were in a romantic relationship, 63.8% were on the verge of breaking up at the time the youth died by suicide.

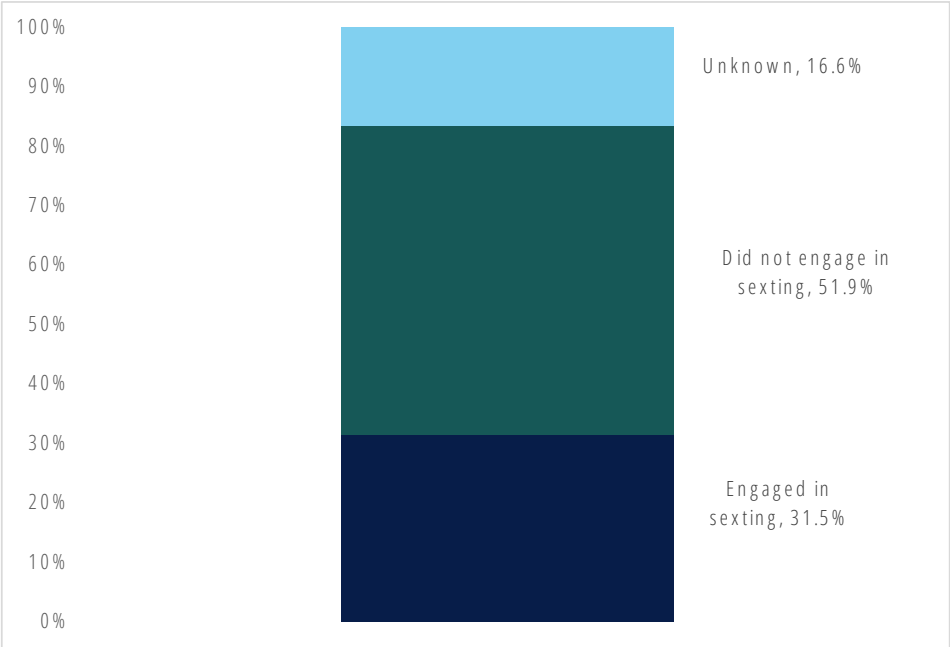


44.4% of youth were sexually active at some point in their life; an additional 13.0% could not be determined as sexually active or not. Most of this sexual activity occurred within the context of a romantic relationship; however, 14.8% engaged in casual sex. While it was not common, there was evidence that a small number of youths engaged in sexual activity in exchange for money, drugs, or something else.

31.5% of youth who died by suicide engaged in “sexting,” or sending and/or receive nude photos or videos of themselves. Whether or not a young person engaged in sexting was unknown for 16.7% of youth. Most sexting occurred between romantic partners; some, however, was shared anonymously or on a website that facilitates the exchange of nude photos, presumably by adults. On at least four occasions, these photos were sent with an expectation of privacy, either to a romantic partner or a person of sexual interest, and these nude photos were shared with others by the recipient without consent. A small number of youths

were extorted or promised money in exchange for photos by an unknown person. Although it was rare, a small number of young people ended their life within hours of sending a nude photo because of possible repercussions (e.g., extortion and exploitation or legal intervention). 35.0% of youth who engaged in sexting were disciplined after a parent or guardian learned of their behavior. Many parents and guardians, however, did not learn about the sexting until after the youth had died by suicide. A small number of youths were previously investigated or warned by law enforcement, according to informants, about the consequences of sexting.

Figure 23. Over a third of youth were known to engage in “sexting”— sending and/or receiving nude photos.



No youth in this study were reported to have been pregnant at any time in their life. However, some youths were known to experience the possibility of an unwanted pregnancy. These events were discovered by parents, and sometimes friends, after the youth had died by suicide.

Social connectedness in peer groups

We measured social connectedness in this study by asking questions about the way the youth who died by suicide related to and connected with their peer group. Our hypothesis was that the responses for the youth would be similar for each question. In other words, if the youth felt that there were people who would listen and understand when he needed to talk, that the answer would be “yes” for all the subsequent questions in this block. If the answer was “no,” then the subsequent responses would also be “no.”

However, only the first five questions functioned as a block, as shown in Table 1. The majority of the responses in the sixth question, belonging in their community, were no. In other words, despite most youth having friends and family who they could talk to and with whom they were, at least for the most part, happy with, this did not translate into a feeling of belongingness.

Table 3. Youth who died by suicide were reported to be decently well connected to their communities, but the majority said they did not feel like they belonged in their community. Majority responses are in bold.

Question	Yes	No	Unknown
Did [NAME] feel that there were people who would listen and understand when [HE] needed to talk?	74.1%	15.7%	10.2%
In a crisis, did [HE] feel the support needed from friends and/or family?	68.5%	24.1%	7.4%
Did [NAME] know people [HE] could count on if he needed help right away?	91.7%	4.6%	3.7%
Was [NAME] happy with [HIS] friendships?	64.8%	28.7%	6.5%
Were there people in [NAME]’s life with whom [HE] could do enjoyable things?	96.3%	0.9%	2.8%
Did [NAME] feel that [HE] belonged in [HIS] community?	39.1%	53.7%	10.2%

Belonging is a critical protective factor, as defined in Joiner’s Interpersonal Theory of suicide, with demonstrated evidenced in a number of subsequent studies (Joiner, 2005; Robison et al., 2024; Van Orden et al., 2012). Regrettably, this study did not shed a great deal of light on why these young individuals felt as though they did not belong in their community, or, how respondents collaterally knew if the person who died did or did not feel like they belonged in their community.

When asked specifically why the youth ended their own life, parents and peers expanded upon social connection. The most common theme centered on a general, ambiguous sense of being an outcast, unlikeable and isolated: “no matter what, he just didn’t fit in,” “felt like he didn’t belong anymore,” “always felt like an outsider.” This theme was the second most evident in the qualitative analysis of why the youth died. One parent expands further, saying “I don’t think she could find her place where she belonged around and couldn’t handle the pressure of her trying to figure out where she fit in...I think sometimes when you feel like you are having trouble fitting in, you know, and you’re feeling bad about yourself. It’s, it’s hard to see beyond that.” This parent touches on a very complex cycle–struggling to find a place her daughter belonged, figuring out who she was, and feeling bad about not belonging. Another parent echoes this feeling, reflecting “My best guess is he was feeling lonely...he didn’t think that that was going to change.” Again, a youth feeling like they didn’t have a place without any hope of it changing.

Peers also spoke about similar patterns. One friend reported “...he always had, like, his friends...and then I think when he started to see his friend’s kind of like, slowly, kinda distance themselves, I think that’s when he was, like, something’s wrong. I’m losing my friends because I’m like a horrible person.” Some youth who died by suicide felt like a lack of friends or distancing from friends meant there was something wrong with them. More research needs to be conducted to better understand this generalized sentiment, how to discover it in assessments and interactions, and how to facilitate belongingness in these circumstances.

Some other common themes included being excluded by the Latter-day Saint majority in a given community, being excluded or feeling like an outsider at school, and failure to make friends or relate to others. Though the frequency was small, two other themes deserve mention: failure to be accepted for one’s gender identity and expression and feeling like an outsider due to race and/or ethnicity. Although the frequency of these remarks was small in the qualitative analysis, the total number of individuals who identified as a gender identity minority or a racial or ethnic minority was also very small. I.e., a high proportion of individuals from these two groups felt as though they did not belong in their community *because* of their gender identity or race/ethnicity.

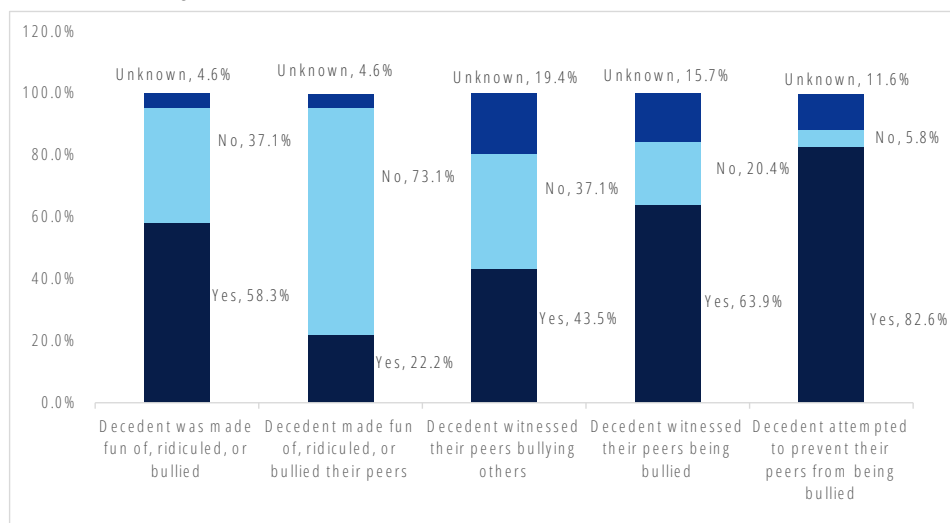
This study uses a referral system to learn who was close to the youth who died by suicide. Investigators in the study did not specifically ask about the size of friend groups, but when asked about friends, many parents remarked that the youth had no friends. Continued research ought to better understand the size and quality of peer groups and how those factors protect from or contribute to suicide risk.

Bullying and cyberbullying

Researchers wanted to understand how many youth who died by suicide were bullied in person, how many were bullied virtually (i.e., via social media, text message, video games, or other online environments), and how many youth were bullied in both in person and online.

Face-to-face bullying. 58.3% of youth who died by suicide were bullied in person. Investigators could not determine if an additional 4.6% of youth were bullied in person. Youth were bullied for all kinds of reasons. However, females were more likely to be bullied by their peers gossiping behind their back with other peers; males were more likely to be bullied by being called derogatory names to their face. While the frequency was low, we discovered instances in which a youth was bullied face-to-face by their peers following the death of a friend or classmate; the peers blamed the death of their friend on the youth who then went on to die by suicide. Parents were more likely to explain bullying as “boys being boys” or “teasing,” whereas peers—for the same youth who died by suicide—identified the behavior as bullying.

Figure 24. Informants reported that bullying is pervasive among youth who died by suicide.



In addition to being bullied, informants recounted that 22.2% of youth who died by suicide were bullies. And, of the youth who were bullied, 70.8% of them also engaged in bullying. 43.5% were reported to have witnessed their peers engaged in bullying (19.4% unknown), and 63.9% of youth witnessed their peers being bullied.

Just 9.3% (10 youth) reportedly never experienced in person bullying in any form. Bullying was pervasive among youth who died by suicide.

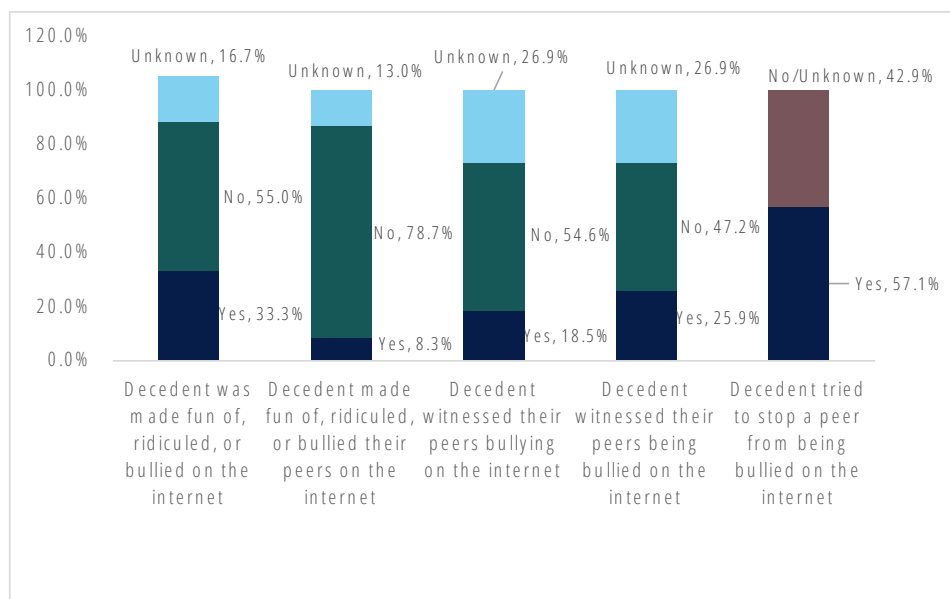
Caregivers and peers did not think bullying played a major role in the youth’s motivation to end their own life. In just 11.1% of deaths did informants claim that face-to-face bullying played a significant role. 45.4% of informants claimed that in-person bullying played no role in youth’s motivation to end their life. In the most extreme circumstance, a youth was threatened with a knife by peers at school. However, the circumstances of the bullying for those who thought it played a significant role versus those who thought it played a small or no role were similar. More investigation is required to determine the characteristics that may cause the impacts of face-to-face bullying to have an significant impact.

Cyberbullying. 33.3% of youth were reported to have been bullied in a virtual environment. However, peers were more likely than caregivers to recount that youth had been cyberbullied. Cyberbullying online occurred via text, on social media platforms, and on video games where players can speak to each other (either with friends they know, anonymous other players, or both). The nature of the cyberbullying entailed homophobic slurs, body shaming, and other remarks that were hurtful. A parent recalled their child referencing the bullying online and saying, [paraphrased] “why do they hate me so much?” Although relatively rare, informants recalled instances in which a young person was extorted online for sex and/or money.

8.3% of youth were identified as cyberbullies (13% unknown), 18.5% saw the youth bully others in virtual

spaces (25.9% unknown), and 25.9% saw the youth being bullied online (26.9% unknown). Because it is much easier to maintain privacy online, and many youths did, the proportion of unknown responses in cyberbullying is quite large, relative to in-person bullying and other types of adversity measures. 38.0% of youth who died by suicide reportedly did not experience any kind of cyberbullying. While cyberbullying was less pervasive than face to face bullying, fully 62.0% of youth who died by suicide experienced cyberbullying of at least one kind. Peers were also more likely to report cyberbullying perpetration or witnessing cyberbullying than parents but were equally as likely to report whether the deceased child was bullied online.

Figure 25. Two-thirds of youth who died by suicide were bullied online or were exposed to bullying in virtual spaces.



Just 5.6% of informants claimed that cyberbullying was almost entirely the cause or entirely the cause of the youth dying by suicide. 77.8% claimed that cyberbullying had no connection or very little connection to the youth’s motivation to end their life. There was no difference in the apparent circumstances between the group who said that cyberbullying played a small or no role in causing the suicide death compared to those who said cyberbullying was almost entirely or entirely the cause. More investigation is required to determine the characteristics that may cause the impacts of cyberbullying to have an extreme impact.

Media, video games, and pornography

Suicide related media and news. Investigators in this study examined whether youth who died by suicide had consumed media content that portrays or involves a suicide death. 36.1% reported that they had, and 14.8% were unsure. Investigators specifically asked whether youth had watched Netflix’s *13 Reasons Why*, season one, if the youth died after the release of the show in March 2017. This TV series graphically portrayed the suicide death of a teen twice but has since revised the show to not portray these graphic scenes after robust evidence demonstrated that the show contributed to increases in suicidality among teens. 23.2% of youth

watched the show. 12.0% of youth discussed their reactions to the show with at least one informant. Some youth said that they related to the show and recommended it to others as a way for others to understand how they felt. Others remarked that the show was dark or that they thought that suicide was a bad choice, and informants interpreted this information as evidence that the youth was not suicidal.

Investigators asked about news reports related to suicide separately from fictional portrayals. 32.4% of youth were reported to watch or read news stories about suicide. An additional 17.6% may have watched such content, but informants were unsure.

Social media. 93.5% of youth who died by suicide had at least one social media account. 28.8% had a Facebook account, 24.8% had Instagram, and 23.0% had Snapchat. Other social media accounts included Twitter, Reddit, TikTok, Tumblr, Whatsapp, Kik, YouTube, Twitch, VSCO, Discord, Tinder, Grindr, Pinterest, Groupme, Afterschool, and Vine. 65.0% of parents or guardians reported that they monitored the youth's social media account. Investigators did not ask how, when, or how frequently.

21.8% had just one social media account, 22.8% had two social media accounts, 23.8% had three, and 27.7% had four or more accounts. 29.0% spent less than one hour on social media per day, 29.0% spent one to two hours, 22.0% spent three to four hours, and 20.0% spent 5 or more hours. Females were more likely to spend more time on social media than males: a third of females (33.3%) spent five or more hours on social media per day compared to 16.5% of males.

Figure 26. Nearly all youth had at least one social media account.

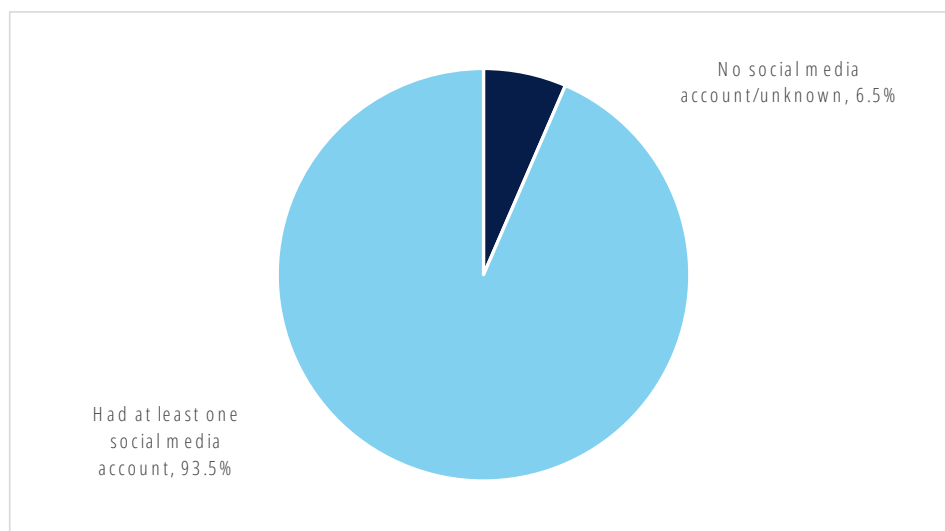
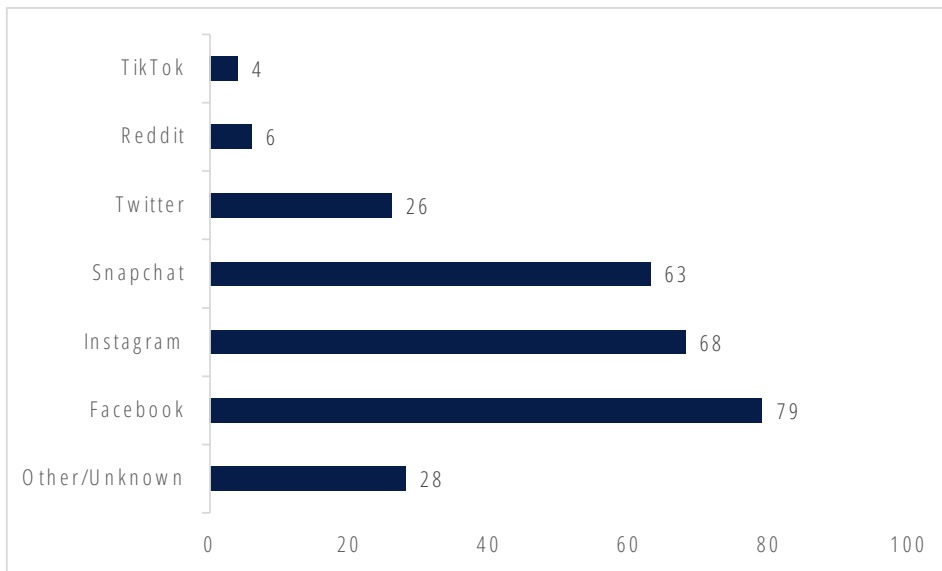


Figure 27. Youth who died by suicide most frequently had Snapchat, Facebook, and Instagram.



Investigators did not have access to youth’s social media accounts or their smartphones. However, they did ask if the youth posted anything with a theme of death in the year prior to their suicide. 37.0% said that they had. These posts included media of popular entertainers talking about or making music about suicide, expressions of poor quality of life, talking about someone else who had died, and others.

18.0% of youth were known to have posted that they wanted to die on social media; an additional 8.0% may have posted similar content, but informants were not sure. These ranged from vague mentions of suicide or wanting to die by suicide to departure notes posted immediately prior to death. Peers were more likely than parents to know about or have seen these posts.

37.0% were known to have asked for help on social media. An additional 11.0% may have also asked for help, but informants were unsure. Investigators did not include SafeUT in this question, even though it is a smartphone app.. Upon further investigation, nearly all these requests for help were via private message; in other words, not posts on social media feeds for multiple viewers to see, but direct messages to friends or acquaintances.

Video games. Nearly all youth who died by suicide played video games (93.5%). 23.0% played video games less than an hour per day. 28.0% played for one or two hours per day, 26.0% played for three or four hours, and 9.0% played for five or more hours per day. Informants weren’t sure how long youth played video games for 14.0% of youth. Males were more likely to play video games longer each day: 9.6% of males played video games for five or more hours compared to 5.9% of females. The three most frequently mentioned games were *Call of Duty*, *Minecraft*, and *Halo*. Informants reported that 70.0% of video games were violent. Investigators did not define “violent” for informants but rather left what is and is not violent as a subjective definition for informants. 64.0% of youth used video games to communicate with other people, including peers who they knew and strangers.

Figure 28. Nearly all youth who died by suicide played video games.

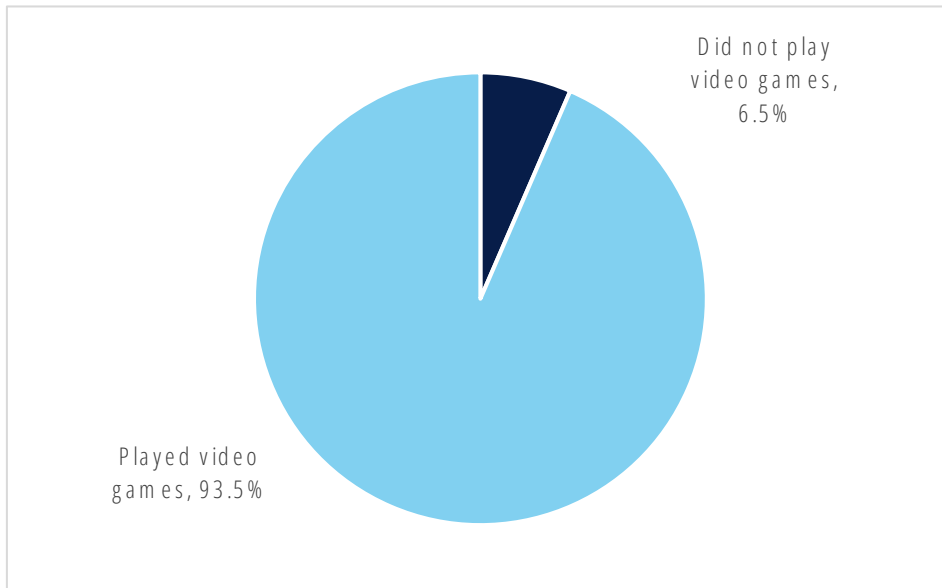
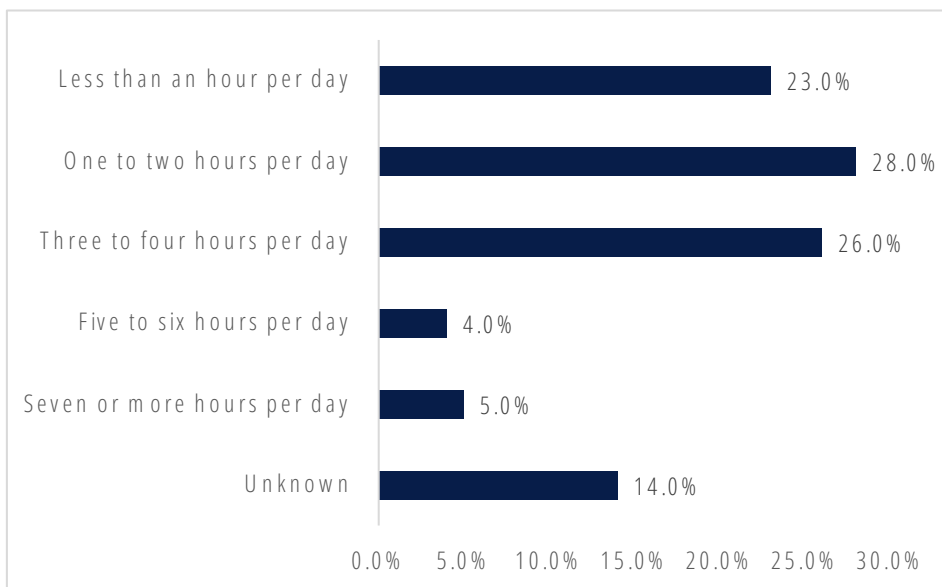


Figure 29. Most youth played video games for several hours each day, with some playing for more than five hours.



Pornography. 53.7% of youth who died by suicide were reported to have viewed pornography. Investigators did not define what is and is not pornography but left that definition to the informants as a subjective measure. 18.5% of informants were not sure if the youth had viewed pornography. Most informants had spoken to the youth (77.6%) about viewing pornography, but the content of those discussions was not investigated. Most informants reported the kind of pornography the youth was viewing was not violent (62.1%).

Restriction from social media, video games, and connected devices. 61.7% of informants reported that restricting youth from electronic devices, including their smartphones, video games, computers, etc., was a form of discipline they used. 14.0% of youth were reported to be restricted from their electronic devices within two days of their death. Fewer than four were restricted between three days and two weeks of their death.

Discussion: Social connection

Religion is a form of social connection, and ultimately results in protecting many individuals from suicidal thoughts and attempts (Kuran & ÖZer, 2023). 41% of youth who died by suicide in this study, however, were religious. It is unclear why religion for this rather sizeable proportion of youth was not enough of a protective factor to prevent suicide. The Utah Suicide Prevention Committee and Coalition partners with faith communities—and all people—to train and educate community members on suicide prevention techniques. Evidence from this study indicates that congregations could play a significant role in preventing suicide among youth.

Many of the youth who were active in a religion at the time of their death (40.1%) were reported to be in conflict with their faith tradition. Additionally, for reasons that were not entirely enumerated in this study, an additional 33.1% of youth disaffiliated with a religion at some point prior to their death. Conflict and disagreements about values were among the reasons in the group that disaffiliated—but so was the claim that the youth “just stopped going.” For some people, religion can cause conflict, both socially and psychologically. Our findings confirm with previous studies of suicide attempt and suicide ideation: the inability to connect with a congregation is associated with suicide risk (Sorri et al., 1996). Another study of LGBTQ+ university students found suicide risk increases if the person is in conflict with their religion and identifies that religion is important to them (Lytle et al., 2018). For both adolescents and adults, previous studies have found attending religious services is associated with lower suicide rates (Kleiman & Liu, 2014; VanderWeele et al., 2017).

Nearly all modern studies on the role of religion and suicide, however, examine groups of individuals who experience suicidal ideation or suicide attempt, not suicide death (Exline et al., 2000; Mirza et al., 2024). While those who die by suicide are often different than those who seriously consider or attempt suicide, religion does not seem to be significantly different, considering our findings are consistent with previous research.

A large proportion (43.5%) of youth in this study were in a romantic relationship or were very recently when they died by suicide. There is no comparable population estimate of the proportion of teens who are in romantic relationships at any given time, however. It’s also true that most (63.8%) of the youth who died by suicide were in relationships that were on the verge of ending—or had just very recently ended. Yet, “breaking up” is not a new developmental experience; in fact, it’s considered a developmental milestone. Therefore, understanding the role of breaking up needs to be better understood in contemporary contexts: what about breaking up now is different than breaking up ten or twenty years ago and how do those differences translate to higher risk of suicide.

Recent studies on the association between suicide and romantic relationships or being sexually active focus on suicidal ideation (Fallahi-Khoshknab et al., 2023; Rector et al., 2003; St. George et al., 2023). These same studies report that romantic relationships and being sexually active were associated with increased suicide ideation. Our study adds valuable insight into the romantic relationships and sexual behavior of youth who die by suicide: for the youth in this study, relationships that were ending, specifically, posed a very volatile time, and many died in this fraught period.

The influences of sexting on suicide is mixed; while some studies found that sexting has no influence on suicide risk (Frøyland et al., 2024), others conclude that sexting can lead to suicide or substance use (Ahern & Mechling, 2013; Dodaj et al., 2024; Ybarra & Mitchell, 2014). Since there is no estimate of how many youths exchange sexually explicit photos consensually with peers, we can only say that this behavior was common among many teens who died by suicide. We cannot make a claim that exchanging explicit photos lead to increased risk for most teens who engaged in this behavior. However, informants made it clear that youth whose explicit photos were shared without their consent were deeply troubled by this act. Such behavior was extremely dangerous when photos were sent anonymously and later used as blackmail for money, sex or drugs.

Belonging is a critical protective factor, as defined in Joiner's Interpersonal Theory of suicide, with demonstrated evidenced in a number of subsequent studies (Joiner, 2005; Robison et al., 2024; Van Orden et al., 2012). We were unable to shed a great deal of light on why individuals in this study felt as though they did not belong in their community, or, how respondents collaterally knew if the person who died did or did not feel like they belonged in their community. Future research ought to break down the components of belongingness into specific questions and ask informants for evidence to support their answers. However, previous studies have found that family and school connectedness are identified as protective factors against a suicide attempt (Arango et al., 2024; Gillespie et al., 2024; Nebhinani, 2018). That most youth in this study were reported to not feel like they belonged in their community is both unsurprising and identifies a critical opportunity for schools, communities, and families to engage to send clear messages of belongingness and acceptance.

Bullying and cyberbullying are well-known to researchers of suicide risk in youth (Li et al., 2024; Mueller, James, et al., 2015; Zimerman et al., 2018). According to 2019 SHARP, 27.7% of students reported that they were somewhat or very worried about bullying at school. 18.1% reported that they had been bullied at school in the past year, and 20.8% reported they had been bullied online (DHHS, 2019).

Bullying—not just being bullied or bullying others, but also witnessing bullying—were pervasive among youth who died by suicide. Just 6 youth (5.6%) never experienced any form of bullying. Among youth who died by suicide, bullying of some type was typical. Evidence from this study strongly suggests the existence of a bullying ecosystem. C.J. Pascoe (Arum et al., 2014) describes a similar bullying ecosystem in which high school boys use a derogatory slur to define and police masculine behaviors. Barbara Coloroso (2011) also points to the role of witnesses in bullying. In this ecosystem, the impacts of bullying extend beyond

the bully and the bullied—the two groups of concern most often mentioned in anti-bullying campaigns—to entire social networks. Bullying is a form of social control that allows for and disallows certain types of identity expression, behaviors, and physical attributes. In other words, bullying reinforces a hegemony of what and who is acceptable and what and who is not. Therefore, suicide risk increases not just for the bully and bullied, but for all young people who navigate and are socially organized by bullying. At the same time, informants did not believe bullying was a key motive for the youth's suicide death. Understanding how the experience of bullying and existing in a bullying ecosystem intersects with and interacts with other factors is key.

Many youths (36.1%) who died by suicide watched or were exposed to media that portrayed or discussed suicide. In one study, 59% of a national sample of youth learned about suicide online (Dunlop et al., 2011). Furthermore, participating in discussion forums around suicide are associated with an increased risk of suicidal ideation (Dunlop et al., 2011).

Nearly one in four youth in this study had watched the popular Netflix show, *13 Reasons Why*—and a small number even made references to the show in their departure notes or in their behavior leading up to their death. Exposure to media that portrays suicide can be unsafe and even promote suicidal behaviors if it shows method of suicide death or normalizes suicide as a way to handle stressful circumstances (Abrutyn & Mueller, 2014; da Rosa et al., 2019; Mueller, 2019; Mueller & Abrutyn, 2015; Mueller, Abrutyn, et al., 2015; Mueller & Abrutyn, 2016; Niederkrotenthaler et al., 2019; Zimmerman et al., 2016). The release of the show *13 Reasons Why* was associated with suicide contagion by media (Niederkrotenthaler et al., 2019). Importantly, we did not find specific evidence that exposure to suicidal content *caused* suicide death, nor have previous studies been able to associate suicide attempt with exposure to suicidal content. Researchers have largely been unable to explain why some youth who are exposed to suicidal content engage in suicidal behavior and others do not. Absent causality, it's notable that nearly one-in-four youth who died by suicide had watched *13 Reasons Why* and still more others had consumed suicidal content.

We want to make the important distinction between consuming suicidal content and talking about suicide. Research definitively shows that talking about suicide in the context of understanding, care, and hope does not lead to increased suicide risk, and for many people, decreases risk of suicidal thinking (Dazzi et al., 2014).

Engagement on social media platforms was commonplace for youth in this study, and many youths had access to and used multiple social media platforms. However, what they did on those platforms and how much time they spent specifically on those forums is mostly unknown. Informants relayed estimates of the amount of time youth spent on their phones, but most could not say for certain what they were doing while on their phones—engaging on social media, watching videos, playing games, etc. Further, youth in this study used smartphones in hugely disparate ways: some youth were reported to be on their smartphones “all the time,” while others were reported to barely use their smartphones—some parents and friends expressing frustration that a youth took exceedingly long periods to return text messages or phone calls, or not replying at all. Therefore, we are cautious about making any claims between the relationship between suicide

mortality, the use of social media, and the amount of time a teen spent using their phone. Indeed, there is mixed evidence between screen time and suicide (Gillespie et al., 2024; Jaycox et al., 2024). Frequent social media use has been associated with increased feelings of sadness and hopelessness, which contribute to suicide risk (Young et al., 2024). Some studies demonstrate correlation between screen time and increased depression, anxiety and loneliness—all risk factors for suicide (Twenge, 2017), and even make bolder claims about social media and screentime’s causality of behavioral health problems (Haidt, 2024).

Of youth who had access to social media, 18.0% of youth posted content that suggested they wanted to die and 37.0% of youth who died in our study were known to have asked for help using a social media platform. About one in five who engaged in either of these behaviors posted content related to their own death and asking for help. In a national study of youth who died by suicide between 2017 and 2019, 50% expressed an intent to die on social media (Chatfield et al., 2024). Therefore, fewer of the youth this study used social media to ask for help than in the previous study. Nevertheless, social media platforms are common modes of communication between peers; recognition and response to suicidal comments, even passive ones, and appropriately answering calls for help in virtual environments may be key. Because online environments provide some degree of anonymity and control, some teens may feel more comfortable using these environments to ask for help or express their feelings. Suicide prevention techniques, such as gatekeeper training, may be effective in virtual places specifically, as these conversations present both unique challenges and opportunities for life saving intervention.

Like social media, playing video games among youth who died by suicide was common (93.5%). Moreover, one-third of youth who died by suicide played video games played for four or more hours every day. Haidt (2024) claims that the frequent and prolonged use of smartphones leads to disengagement from in-person interaction, which may be more detrimental than the actual use of the smartphone. The same claim could extend the prolonged use of video games: increased suicide risk via mediating and moderating factors like vulnerability to mental illness may lead to increased risk of suicide. Video games, in and of themselves, are associated with increased suicide risk (Rostad et al., 2021). This study does not establish a causal link between video game use, regardless of the amount of time a youth spent playing video games, and suicide death. It does suggest, however, that engagement with video games is a key frontier for suicide prevention. Further, when the amount of time a youth spends playing video games interferes with other activities, it may be a sign of avoidance of other social arenas, or the presence of other problems.

Viewing pornography was common among youth who died by suicide in our study (53.7%). There is limited evidence in previous research to link suicide risk with pornography exposure. In an Italian sample, adolescents who were exposed to pornography were more likely to have suicidal thoughts or attempt suicide (Romito & Beltramini, 2015). Furthermore, problematic pornography use is associated with suicidal

thoughts (McGraw et al., 2024). More research is needed to fully understand pornography's effect on suicide risk. For example, it's unclear if the inherent viewing of pornography increases suicide risk, or if other mechanisms, like shame, fear of discipline, or sense of moral failure contribute to suicide risk.

A previous study of youth suicide in Utah found that 13.0% of youth who died by suicide between 2011 and 2015 had been restricted from an electronic device just prior to their death (Annor et al., 2017), a novel finding that has since been replicated by fatality review boards in other states. In our study, 14.0% of youth who died had been restricted from an electronic device within two days of their death—sometimes fewer than two hours. In a national study of youth who died by suicide between 2017 and 2019, 23% of youth faced technology restrictions prior to their death (Chatfield et al., 2024). This finding is consistent with an analysis of the 2017 National Violent Death Reporting System (NVDRS), reflecting that on a national level, nearly a quarter of interpersonal conflicts leading up to death by suicide in youth involved technology, including technology restriction as punishment (Orlins et al., 2021). Readers should note that the use of and possession of smartphones and electronic devices during this period of time also increased (Vogels et al., 2022).

Related Recommendations from the Suicide Child Fatality Review Committee:

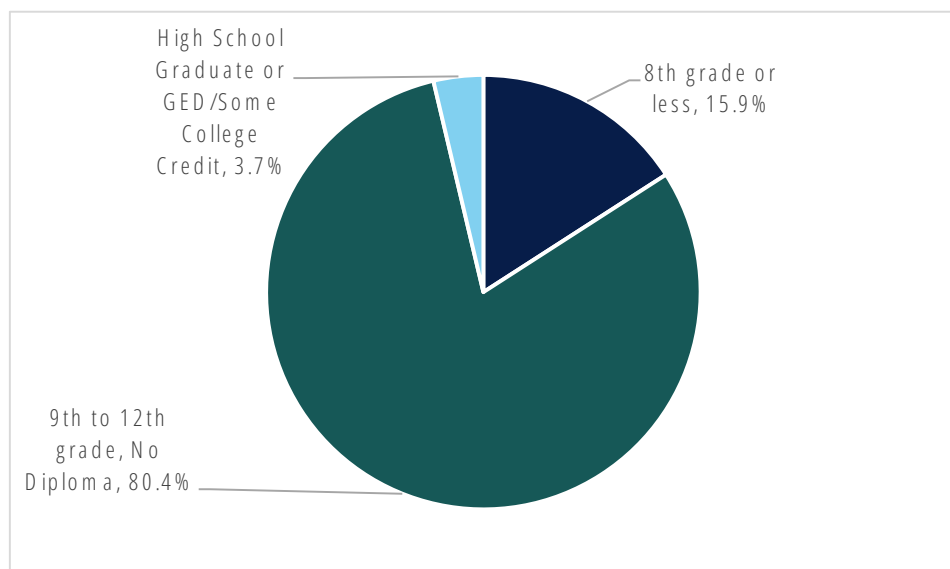
- Religious leaders and communities should engage in deliberate strategies to promote acceptance and connectedness even in times of conflict or disagreement.
- Religious organizations should increase resources for youth experiencing a faith transition and promote ways to resolve conflict in a family if youth desire to participate differently or not participate in religious activities.
- Parents, schools and communities should promote education for parents and students on healthy dynamics in romantic relationships and dating as well as friendships and general peer interactions.
- Families, schools, policymakers, and communities should collaborate to design and implement programming and solutions to address urgent issues related to internet safety, including sexting and sextortion.
- School mental health professionals and healthcare providers should use validated screening tools in the appropriate settings to identify youth who are having difficulty connecting to their peers and community and then work with youth and families to engage youth with their communities.
- Mental health professionals, suicide prevention advocates, and community leaders should work with youth and families to increase awareness and recognition of signs of suicide on social media and provide strategies to respond and help.

System interactions

School experiences

Readers are advised that the deaths in this study occurred prior to the COVID-19 pandemic.

Figure 30. Most youth who died by suicide were enrolled in high school.



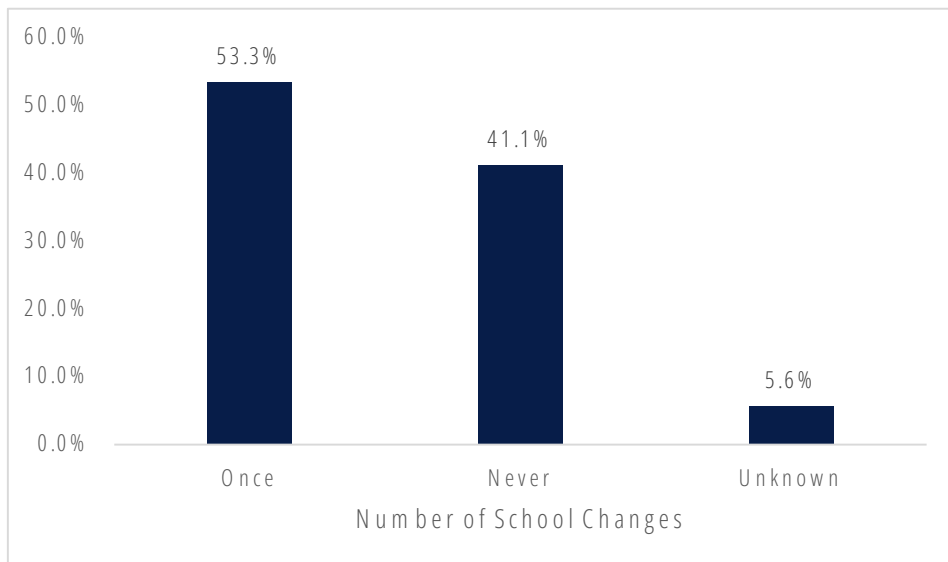
The vast majority of youth who died by suicide completed a grade between 9 to 12 (80.4%) but had not graduated; 15.9% completed 8th grade or a lower grade. 2.8% had graduated high school within three months of their death. 7.5% dropped out of school and drop out status was unable to be determined for an additional 6.5% (based on interview data). While most respondents were not sure when the youth had dropped out, most reported that the youth had dropped out more than two weeks prior to their death.

73.2% of students who died by suicide were reportedly close to a teacher, coach, or some other adult at school; informants recounted that these relationships waned in the time leading up to the death of the youth.

We asked if the youth had an unusual aversion to attending school—more than usual child or teen complaints about not wanting to go to school: 49.1% said yes. Youth who were bullied and/or cyberbullied were more likely to report having a strong aversion to attending school. 58.3% of students who were bullied had a strong aversion to attending school.

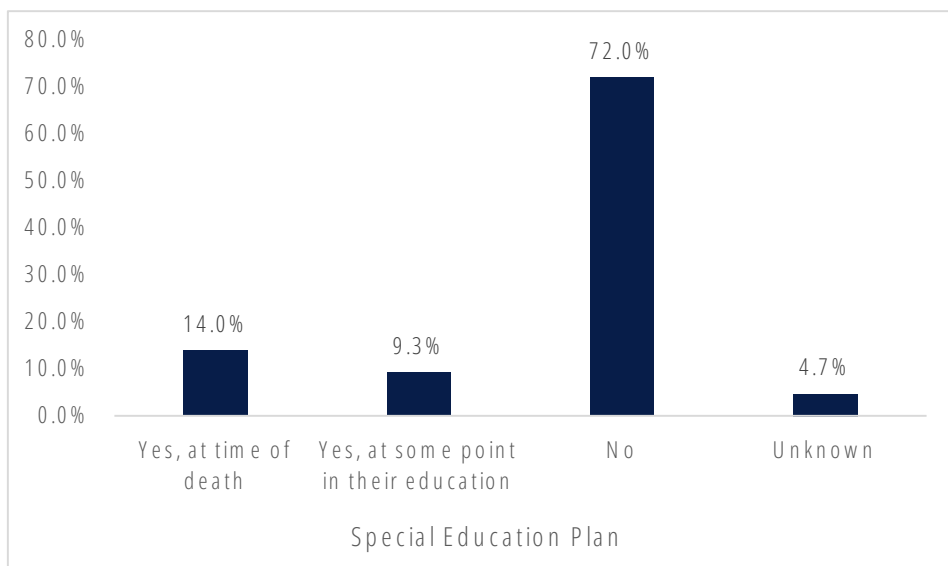
School mobility. We defined switching schools as changing schools without moving primary residence, and the change in school was not an expected developmental change (e.g., graduating from middle school to high school). 53.3% of youth switched schools at some time in their life. A small number of these school transitions were in and out of treatment-based education settings.

Figure 31. Over half of youth who died by suicide changed schools locally outside of developmentally expected school transitions.



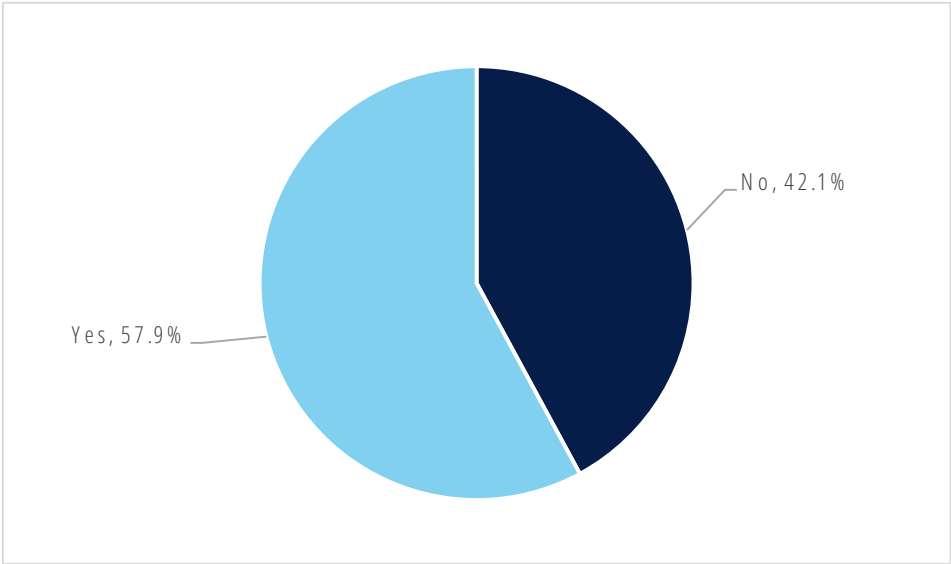
Special education plans. 20.6% of youth were reported to be attending an alternative high school at the time they died by suicide. 14.0% had an individual education plan (IEP), or a 504 plan—a plan put in place by educators to improve access to learning for students with disabilities—or some other special education plan at the time they died. An additional 9.4% had an IEP, 504 or other special education plan at some point in their education, but not at the time they died. For 4.7%, special education status was unknown.

Figure 32. Nearly one in four youth who died by suicide had a special education plan, 504 or some other plan in place at the time they died or sometime prior to their death.



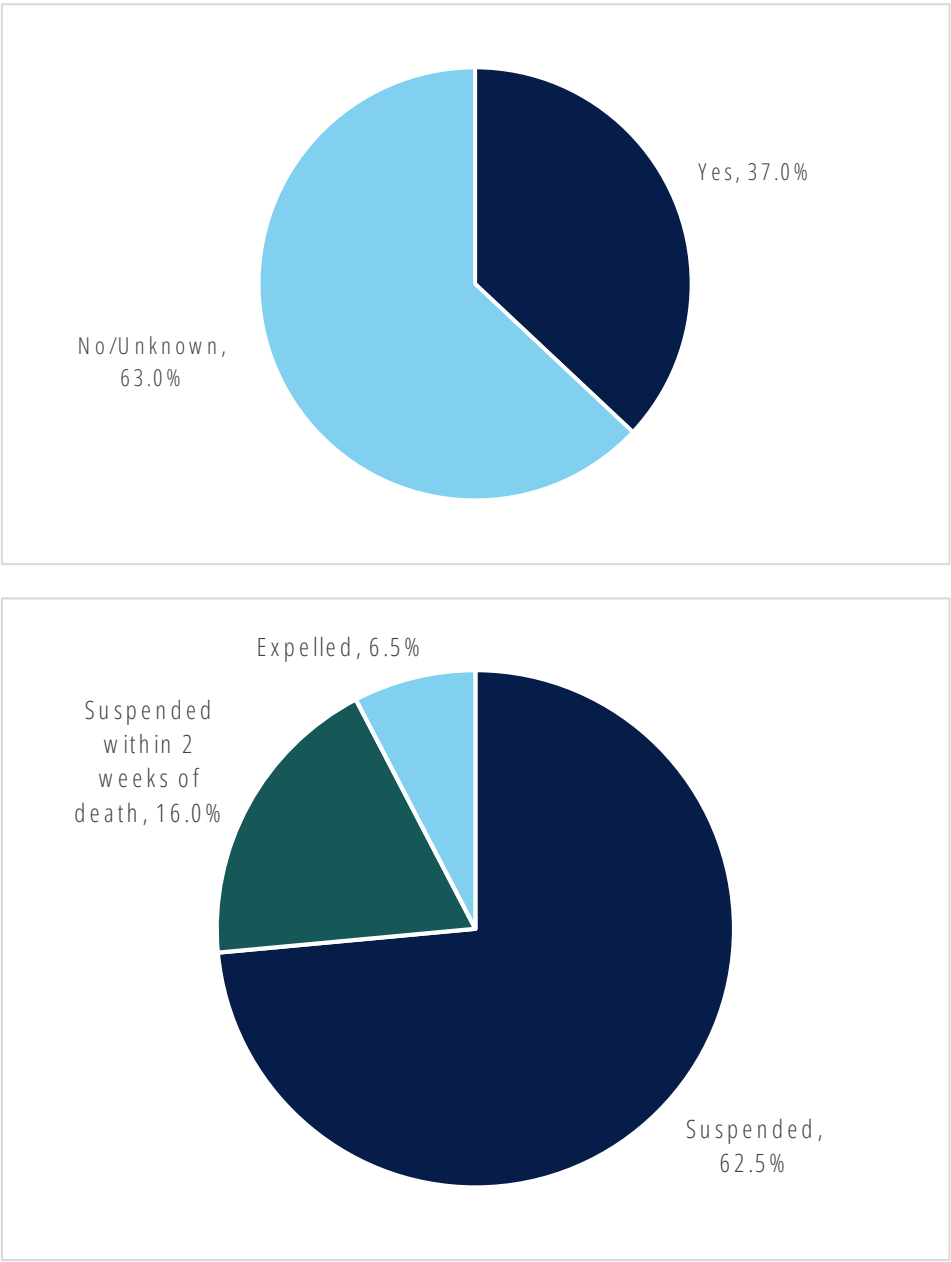
Absenteeism and truancy. 41.7% of youth had an extensive record of absenteeism from school or were chronically tardy. We defined “extensive” as being absent more than 1 day per week and/or being tardy more than 1 day per week. While we did not ask why, informants often explained the circumstances. Two themes emerged: severe mental illness that prevented a teen from going to school, and youth simply not going to school. Some parents responded with a sense of desperation, saying that they could not make their child go to school and that there were no repercussions from the school for their child not attending.

Figure 33. Absenteeism and chronic lateness were prevalent among youth who died by suicide, according to parents and friends.



Discipline. 37.0% of youth had disciplinary actions taken against them by their school, according to parents and friends. Of those who were disciplined, 62.5% were suspended; 16.0% were suspended within two weeks of their death. 6.5% of all youth were expelled from school. Some of these teens who were expelled re-enrolled in treatment-based education settings, a private school, detention-based educational setting, or in a different school district. Others stayed at home and did not return to school. Other forms of discipline included detention, legal intervention, and being required to do custodial work.

Figure 34a and Figure 34b. Just over a third of youth who died by suicide were disciplined by their school, some within days of their death.



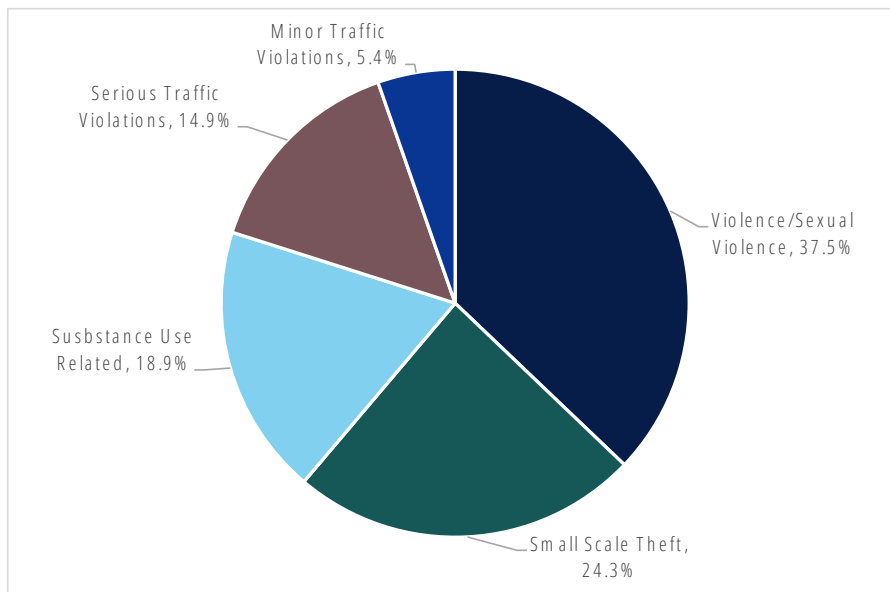
Extracurricular activities. More than 4 in 5 youth participated in extracurricular activities at some point in their education. Activities ranged from sports to school clubs, to community-based clubs, and others. The four most common activities were band, football, track, and soccer. Some informants recounted that the youth stopped engaging in extracurricular activities in the year prior to their death.

Law Enforcement and Justice Involvement

41.0% of youth who died by suicide had at least one action taken against them by law enforcement at some time in their life; at least 8 of these encounters occurred within two weeks of a youth dying by suicide.

13.9% of youth were arrested, and 25.0% were reported by informants to have had at least one interaction with a juvenile court. Investigators documented 74 incidents when they asked about these interactions with police. 37.5% were acts of violence and sexual violence, 24.3% were small scale theft (e.g., stealing food from a convenience store), 18.9% were substance use related (most commonly possession of alcohol and marijuana), 14.9% were serious traffic violations, such as felony speeding or stealing a car, and 5.4% of incidents were minor traffic violations. Because of the way we collected information about youth who had interactions with law enforcement, we suspect that minor crimes, especially traffic violations, were underreported.

Figure 35. There were 74 documented interactions with law enforcement, involving 44 youth who died by suicide.



23.2% of youth were placed, at some point in their lifetime, in a group home or environment that was meant to provide rehabilitation following a criminal act. Some youth were placed in a secure detention facility for a period of time following a criminal act, then moved to a psychiatric inpatient facility; it is not possible using our informant data to determine exactly the trajectory of placement that occurred for youth who died by suicide. However, we know that, of those who were placed out of their primary home, 48.0% were placed in a facility for some kind of treatment following a criminal incident, 12.0% were placed in a group home, usually described as not secure (i.e., the youth could run away from the home). Other types of placements included foster care, a boot camp program or wilderness rehabilitation program, or intensive outpatient psychiatric treatment. 32.0% of these placements were reported to have occurred for less than two weeks; 36.0% of youth were placed outside of their primary home six months or longer. One in 5 of

these placements occurred within two weeks of the youth dying by suicide. Our data is limited in that it does not account for multiple placements outside of the home, though we did hear of frequent out-of-home placements for a very small number of youth with severe mental illness and/or criminal problems.

Of the 25 youth who were ever placed outside of their primary home, 36.0% were reported to have been placed in a juvenile detention facility at some point. Most of these placements were in state-operated facilities, though some youth were placed in secure detention in private facilities, both in Utah and out of state. Most placements in secure detention lasted less than two weeks, and nearly all of them lasted for less than three months.

We asked informants if the youth who died thought that they were being treated fairly when they were disciplined, regardless of whether they had ever had interactions with law enforcement, the courts, or the juvenile justice system. In other words, could the youth recognize that their negative action resulted in commensurate discipline. 46.0% of youth were reported to feel as though they were being unfairly disciplined; investigators could not determine whether an additional 14.0% of youth thought they were disciplined fairly.

Discussion: Promoting positive social engagement at school and restorative justice in justice settings

Schools. Sociologists and social psychologists have long understood the importance of formalized school in socialization. Specifically, Brint (2006) explains that schools promote and enforce behavioral conformity, moral conformity and cultural conformity (135-136). Socialization in schools occurs through both formal channels (e.g., learning, following rules), but also, and very importantly, through informal channels that are usually peer-based. Failure to conform, particularly socially, results in alienation (Brint, 2006). From the lens of suicide prevention, school additionally provides important opportunities for connection, which is a powerful protective force against suicidal behavior (Arango et al., 2024). Social connection in schools, as well as neighborhoods, can even buffer against the negative impacts of sexual and physical abuse for some adolescents (Berny & Tanner-Smith, 2024).

Events and experiences that disrupt connectedness at school may significantly reduce the protective nature of school as a community. Bullying of any kind and victimization can produce this effect. In this section, researchers focus on structural disruptions and barriers to connectedness at school: school mobility, equitable opportunities at school, and social engagement in school.

The experiences at school of youth who died by suicide, at least for many youths in this study, suggest a fragmented, sometimes difficult experience. Many students moved schools frequently—aside from developmentally expected moves—which interrupts social connection as well as any services a student may have been receiving. We heard stories of student who left one school for social reasons (usually

bullying) who then went to a different school that did not have the same supports. Because of the need for services, the student sometimes transferred back to the original school. Other students in our study missed school frequently. Consistent with our findings, school absenteeism is associated with increased risk of suicidal ideation and suicide mortality (Epstein et al., 2018). As many as one in four may have had their school experience interrupted while they were placed in a group home or juvenile detention, again causing disruption to their attachment to school. These students may have continued to attend their normal school while living in a group home or attended school in detention.

One in five students who died by suicide attended an alternative school—schools that are often alternatives for students who are struggling in traditional secondary school environments. In the 2023-2024 school year, the Utah State Board of Education reported that 7.0% of all secondary students were enrolled at an alternative school. As long as these proportions have not changed substantially since 2016 to 2019, alternative school students are disproportionately represented among youth who die by suicide. Students who attend alternative school may also experience, generally, more adversities and behavioral problems than the general population of students who attend traditional secondary schools. Nevertheless, alternative schools are settings in which suicide prevention must be at the forefront, including assessment, intervention, and postvention in the wake of a student death.

School mobility. Over half (53.3%) of students experienced at least one school switch outside of expected developmental changes. Frequent moves from one school to another—school mobility—may be a signal of increased suicide risk for two reasons: disrupted social networks and as a sign that the youth is struggling to find a sense of belonging at school. In the first circumstance, peers may lose friends, lose access to informal and formal peer networks such as sports and clubs, etc. However, changing schools locally does not always result in the loss of friends and networks of peers. In the second circumstance, changing schools locally may be the result of students who, for example, are being bullied in one school, so they switch to another. Or, they are not receiving adequate educational support in one school, so they move to a different school. It's very likely that both of these circumstances occur simultaneously when a youth moves from one school to another; that is, they lose their peer group, but they also experience disruption or discontinued services that were being provided in the school setting, such as services provided in an individual education plan (IEP), or from school counselors. We heard of these types of experiences frequently among students who moved schools. This finding on school mobility without changing primary residence is novel and provides a potential new future direction for further study. Our findings suggest that school districts ought to develop transition plans for students who are switching from one school to another in the same district, and that state education authorities ought to develop a similar transition plan for students who are moving from one school to another outside of the school district. Such a plan and oversight will ensure transparency, continuity in services and prevent fewer students from falling through transition gaps—times when students exit one district with the intent to enroll in another, but do not actually re-enroll for a period of time.

Social engagement in school. Students experience a variety of social interactions each day with both peers and adults while at school and while participating in extracurricular activities. As mentioned previously, bullying or victimization can disrupt school connectedness. However, it is important to note that a positive school environment and strong school engagement can encourage help-seeking behavior, including reporting bullying victimization and disclosing thoughts of suicide, both of which are protective against suicide mortality (De Luca & Wyman 2012, Estévez-García et al., 2023). A large proportion of youth in our study participated in extracurricular activities, which is especially interesting, even if they weren't participating around the time they died. Generally, participation in school activities of any kind is protective against suicidal thoughts and behaviors by contributing to youth belongingness at school and giving them additional access to resources, structure, and adult support and mentorship (Bakken et al., 2025; Mata et al., 2012). That informants indicated reduced participation preceding death may mean that this could potentially serve as a warning sign that a youth may be struggling, and withdrawing from supportive environments may increase feelings of isolation and disconnection in a vulnerable time.

Justice. One in four youth who died by suicide in this study had been arrested one or more times, and 13.9% had been incarcerated. In youth, these serious interactions are often signals of other behavioral health problems. In nearly all justice settings, juvenile encounters are more likely to be rehabilitative rather than solely punitive. Traffic violations aside, these interactions provide an opportunity for inquiry, assessment and responses that reduce suicide risk. Previous work shows that while suicidal thoughts and behaviors are often associated with incarcerated youth, suicidal ideation is also highly prevalent among justice-involved youth that are not incarcerated (Kemp et al., 2016).

Elsewhere in this report, researchers note 1 in 4 youth were the perpetrators of violent acts. Nearly all these youth (88%) interacted with law enforcement. Additionally, 18.5% of youth had interactions with law enforcement for a non-violent criminal act. Previous research shows that, among males, perpetration of domestic violence is associated with higher likelihood of thinking about suicide (Perrin et al., 2024). Both victimization and perpetration of violence are associated with higher suicidal thinking (Rooney et al., 2019). More broadly, aggressive behavior of any kind is associated with higher suicide risk (McCloskey & Ammerman, 2018). In a previous psychological autopsy study of youth in the mid-1980s, aggressivity and hopelessness were highly prevalent (Shaffer et al., 1996). Findings from the 2019 Youth Risk Behavior Survey of high school-aged youth in Utah show that youth who were in a physical fight were more likely to attempt suicide than their peers who did not get in a physical fight (CDC, 2019). Violence, whether self-directed or directed at others, is a clear sign of increased suicide risk, particularly among males.

Similarly, reckless behavior—driving at high speeds, severe and/or frequent intoxication, etc.—has been associated in previous research with increased suicidal thinking (Maris et al., 2000). Several youths (14.9%) in this study were charged with significant crimes that were not violent, per se, but were extremely dangerous. Youth who engage in dangerous, possibly fatal, behaviors may be at a higher risk of suicide.

While there is no control group for comparison, that 2 in 5 youth who died by suicide engaged in behavior that caused law enforcement to become involved is notable, and is an opportunity to include suicide prevention assessment and intervention when youth behave in ways that are harmful to others or themselves.

Related recommendations from the Suicide Child Fatality Review Committee:

- School districts and administrators should create structural transition programs in schools at the local education authority level and charter schools to support students transitioning from school to school within a local education authority. Similarly, the Utah State Board of Education should facilitate a program that ensures structured, supported transitions for youth who are moving from one school district to another, or to or from a charter school, or to or from another state.
- Educate school staff, including teachers and coaches, to recognize social withdrawal, a risk factor that increases the likelihood of suicide. Withdrawal may look like a student's attendance changing or the student becoming less socially engaged.
- Local education authorities should expand suicide assessment and provide services that reduce suicide risk, especially in alternative schools.
- Policymakers, schools and local behavioral health leadership should invest in increased wraparound services for vulnerable youth in all schools.
- Schools should increase fidelity of implementation of suicide prevention programs. Additionally, school administrators should engage in multiple evidence-based suicide prevention programs concurrently and utilize multiple modes of prevention and intervention for students.
- Educators and juvenile justice professionals should adhere to restorative accountability practices in school discipline and discipline in other settings.

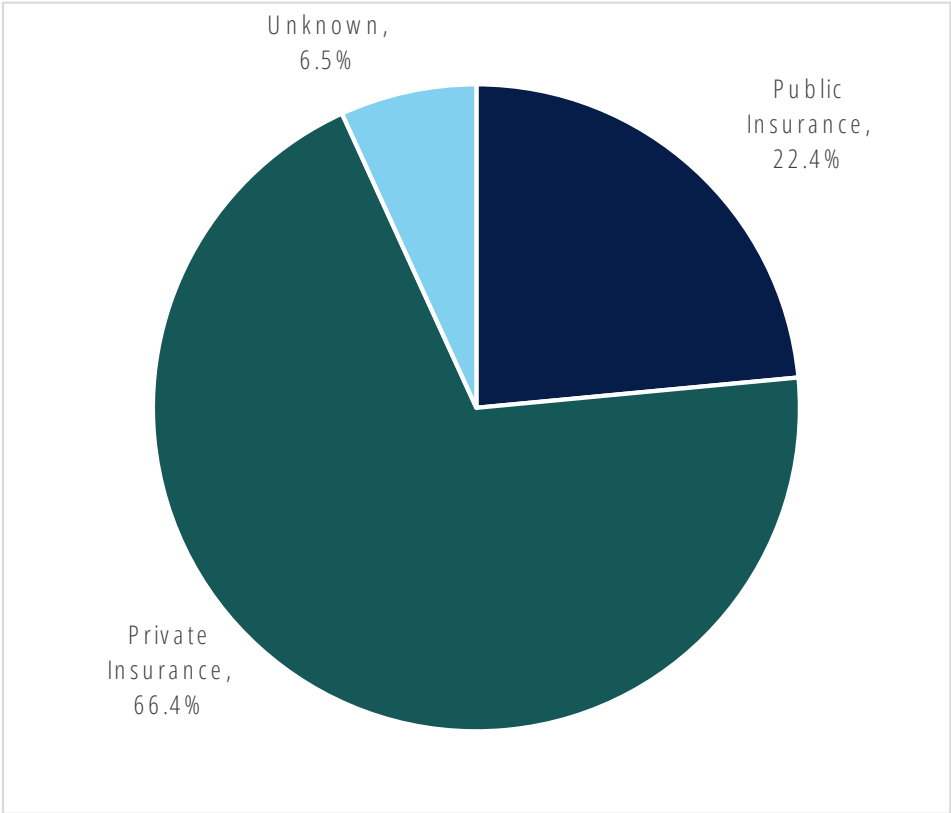
Health

Medical History

Investigators asked primary informants, usually parents, about the youth’s medical history. While we documented interactions with health care providers, diagnoses, and treatments, readers should be aware that these are all self-reported by parents and caregivers, not taken directly from medical records.

Health insurance. 95% of youth were reported to have been covered by health insurance at the time they died by suicide. Compared to the adult population, this proportion is high, which means that youth should have improved access to care compared to adults. 80.4% of youth were reported to have had continuous health care insurance coverage throughout their lifetime; 11.2% reported that there were one or more gaps in coverage at some point in the child’s life. Most of these gaps in coverage were not near the time the child died by suicide. Parents and caregivers overwhelmingly reported these gaps in coverage did not result in a child not receiving care that they should have received.

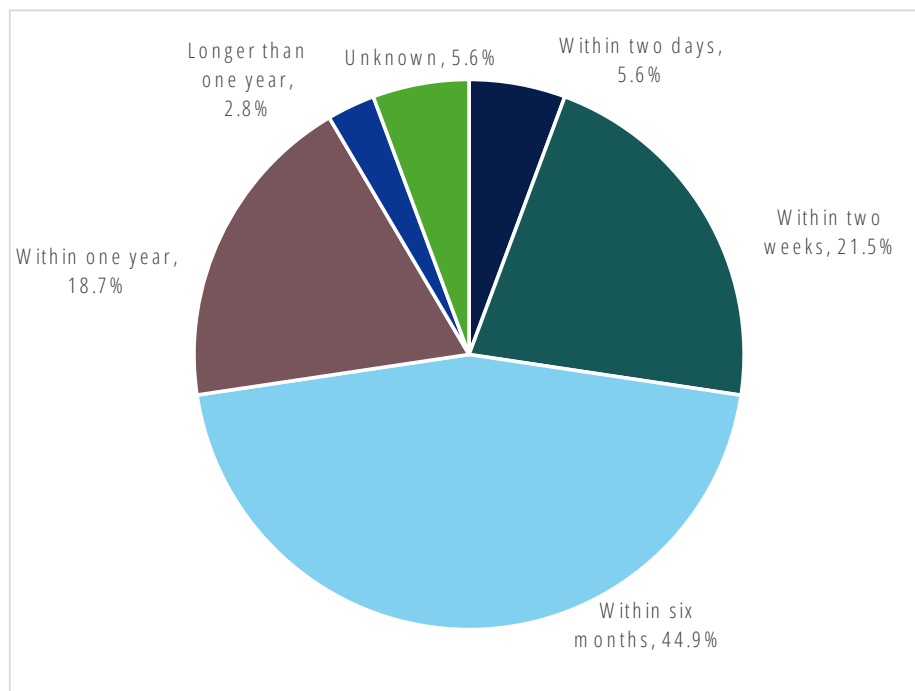
Figure 36. 95% of youth who died by suicide were covered by health insurance at the time they died.



22.4% of youth were covered by public insurance (i.e., Medicaid and/or the Children’s Health Insurance Program, CHIP), 66.4% were covered by private insurance, almost always employer-based health insurance. 6.5% of parents were unsure which type, public or private, insurance the youth had when they died.

Encounters with health care. 5.6% of youth who died by suicide saw a health care provider within 2 days of their death; an additional 21.5% saw a health care provider within 2 weeks of their death. In other words and of specific importance—27.1% of youth who died by suicide saw a health care provider within 2 weeks of their death. An additional 44.9% of youth saw a health care provider within 6 months of their death, and another 18.7% saw a health care provider within a year of their death. Fully 90.7% of youth who died by suicide saw a health care provider at least once in the year prior to their death.

Figure 37. Youth who died by suicide were very likely to have seen a health care physician within a year of their death, or even closer to the time they died.



85% of youth who died by suicide had a primary care provider at the time of their death. Most youth were last seen in a health care clinic (77.8%), followed by 11.2% in an emergency room or urgent care, 8.4% did not know the last setting, and the remainder were seen in some other health care setting, such as inpatient treatment.

Investigators asked about the primary reason the youth saw a health care provider on their last visit prior to death. Informants reported that some youth saw a provider for multiple reasons; we identified 116 concerns or medical complaints. 32.8% of these concerns were related to mental health, 26.7% were for a preventative checkup (i.e., a well child visit), 15.5% were for an illness, 11.2% were related to an injury, and 9.5% were related to medication refills or concerns, or for some other reason, and 4.3% were for an unknown reason.

Chronic medical problems. 19.4% of youth suffered from at least one chronic health condition. Nearly half (42.9%) of the chronic illness was reported to be asthma or some other chronic respiratory problem. Other types of medical problems included scoliosis, chronic bone and joint pain, and chronic gastrointestinal problems. All the youth with a reported chronic medical problem were diagnosed more than 6 months prior to their death.

Head injury. 27.8% of youth who died by suicide were reported to have sustained one or more head injuries in their lifetime. In fewer than 4 cases, investigators could not determine whether the youth had incurred a head injury. Of the youth who sustained a head injury, 40.0% sustained two or three head injuries, and 42.0% sustained 4 head injuries. Most head injuries were incurred while playing sports, followed by head injuries from motor vehicle crashes.

These injuries were reported by caregivers and guardians, not abstracted from medical records; this method allowed investigators to document head injuries that were never reported to a medical provider or treated. 40.0% of these head injuries occurred 2 or more years prior to death; 13.3% occurred within 6 months of death. 43.3% of the injuries were described as diagnosed concussions, 10.0% were diagnosed traumatic brain injuries (TBI), and 40.0% were never assessed or treated by a health care provider. An additional 6.7% of youth who incurred a head injury may or may not have ever been assessed or treated by a health care provider for their head injury.

Figure 38a. 27.8% of youth who died by suicide sustained one or more head injuries in their lifetime.

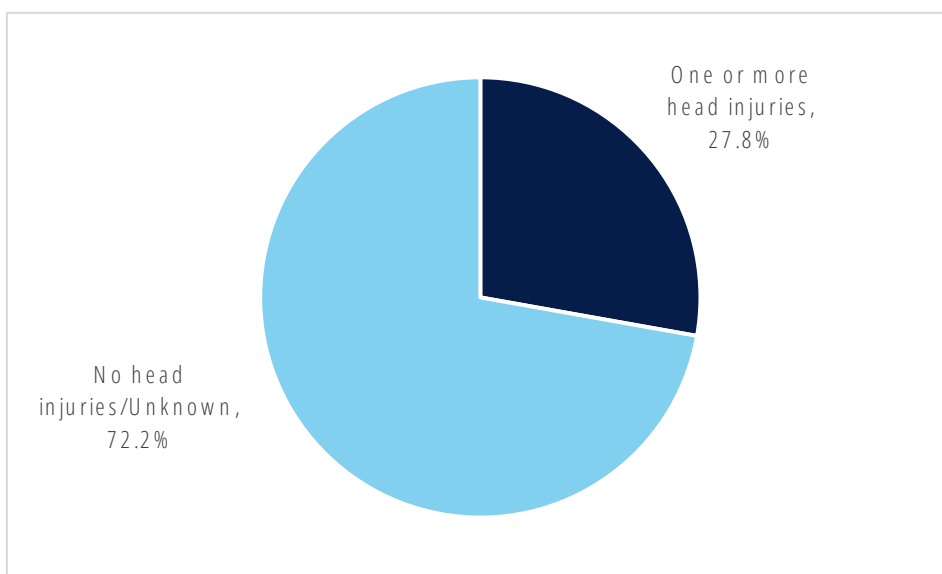
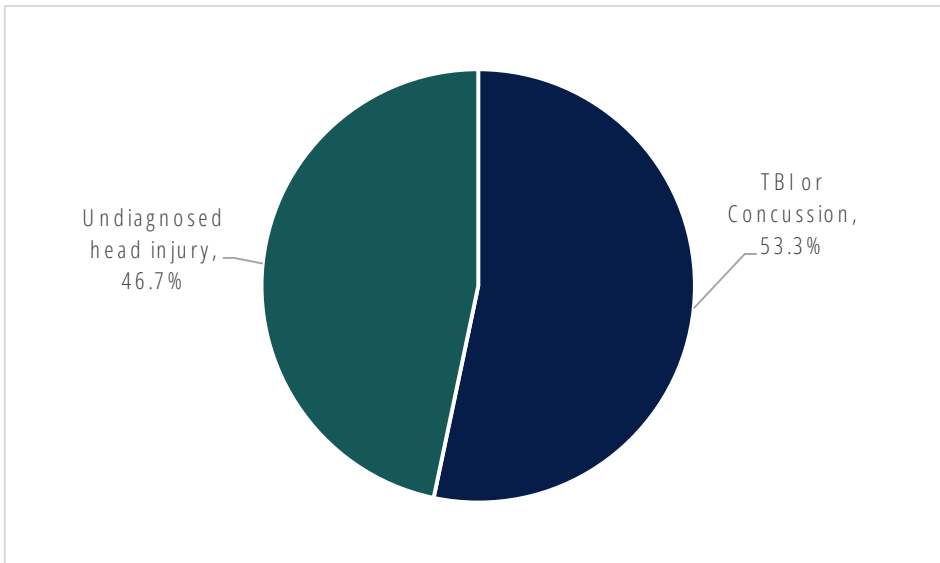


Figure 38b. Not all head injuries were diagnosed.



Other injuries. Excluding head injuries and injuries that occurred as a result of non-suicidal self-injury (NSSI) or a suicide attempt, 30.6% of youth who died by suicide experienced a serious injury at some point in their life. Most of these injuries were broken bones that occurred due an injury in sports or while being active (e.g., riding a bike).

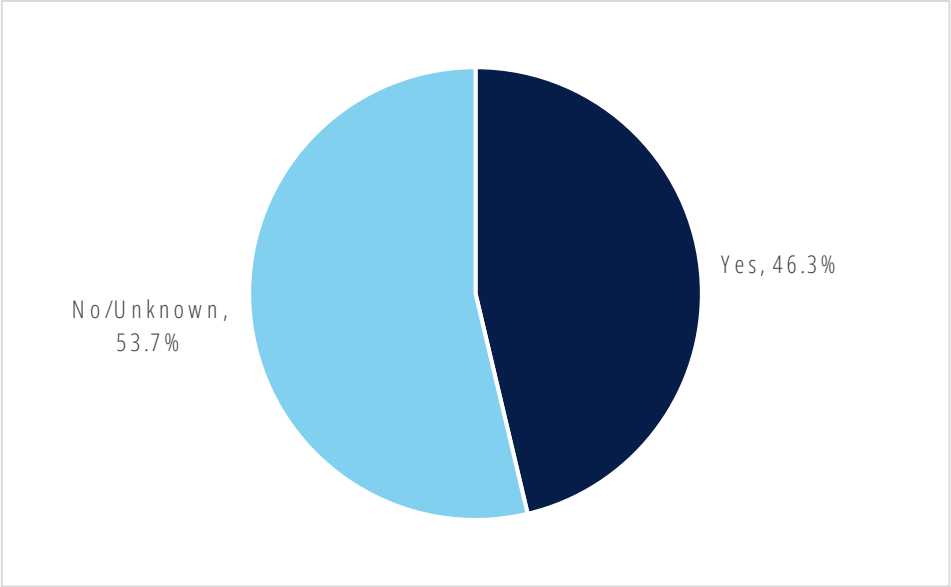
Disability. Very few youths who died by suicide were considered disabled, but of the small number that were, most had limited mobility.

Engagement and interactions with mental health providers

Investigators asked primary informants, usually parents, about the youth's history and engagement with mental health providers. While we documented interactions with mental health providers, readers should be aware that these are all self-reported by parents and caregivers, not taken directly from medical records.

46.3% of youth were ever diagnosed with a mental illness. Most of these initial diagnoses had been made more than a year prior to the youth's death by suicide; just 17.6% of diagnoses were made within the year of the youth's death. Of all diagnoses, 33.7% were made by a psychiatrist, 27.3% by a primary care physician, and 18.1% by a psychologist or other mental health care provider. The remainder were other providers, or the informant did not know who made the youth's initial diagnosis.

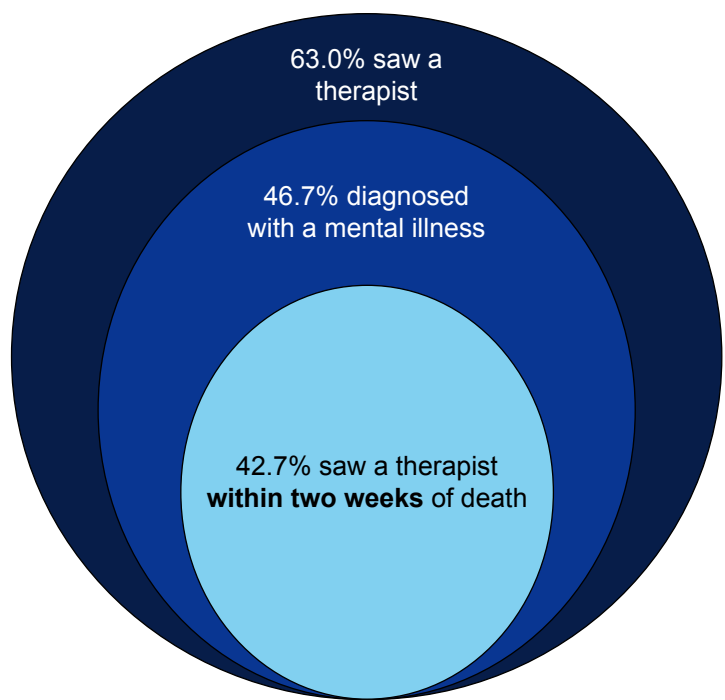
Figure 39. Diagnosed with a mental illness



48.1% of youth who died by suicide were referred to a mental health care provider by a primary care provider or some other non-mental health provider. The same proportion (48.1%) were never referred to a mental health provider (the remainder were unknown). Most of these referrals were made two or more years prior to the youth’s death.

More youth attended therapy at some point in their life than had a mental health diagnosis (63.0%). Of those who had ever seen a therapist, 55.9% were seeing a therapist at the time they died by suicide. Of those who had ever seen a therapist, 42.7% had seen their therapist within 2 weeks of their death. An additional 27.9% saw a therapist between two weeks and six months of their death; fully 70.6% of youth who died by suicide had a visit with a therapist within six months of their death.

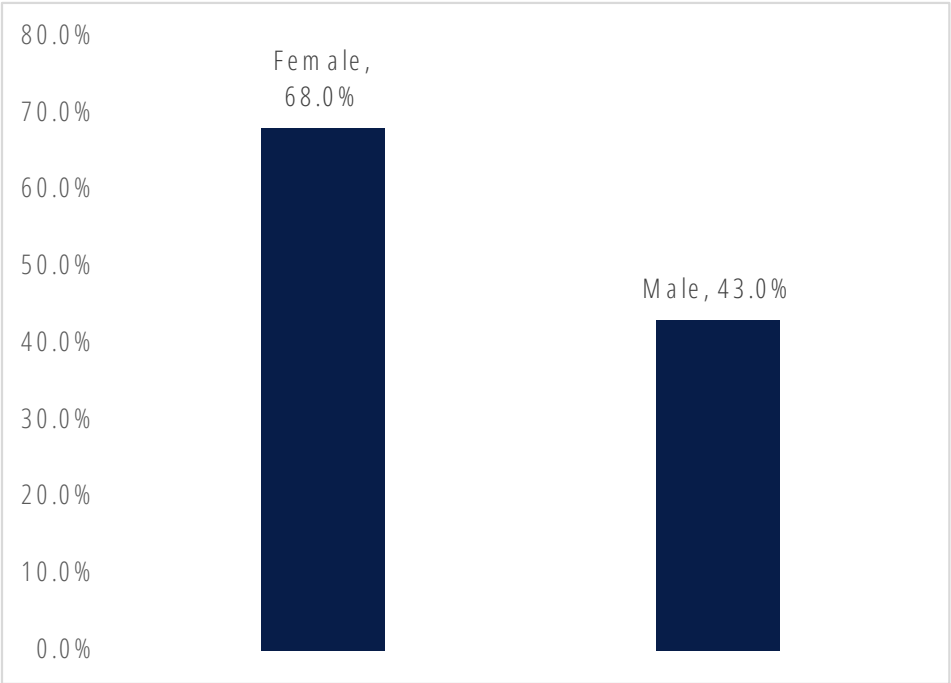
Figure 40. Nearly two-thirds of youth had a therapist at some point and almost half of those who were in therapy saw their therapist within two weeks of their death.



The plurality (38.2%) of youth who died by suicide saw their therapist weekly, 8.0% saw their therapist more frequently, and 12.0% saw them less frequently, but at least monthly. The remaining youth saw a therapist at some other interval, as needed, or the informant (parent) was not sure how frequently their child saw a therapist. We asked if youth attended their therapy sessions as frequently (or at all) as they were recommended. Most (76.5%) did; 16.2% did not attend as frequently as recommended. Of those who did not attend therapy sessions as recommended, most simply did not go—they “ditched” on sessions they were supposed to attend. Other concerns included cost of therapy, which was not covered by insurance, and availability for a specialty (e.g., LGBTQ+ specific care, care specific to trauma/PTSD).

Negative self-perception. Nearly half (48.6%) of youth who died by suicide spoke about their body in a disparaging way. 68.0% of females were known to speak of their body negatively; 43.0% of males also spoke negatively of their body. Most negative self-talk about bodies was related to body weight—either being “too fat” or “too skinny.” Other negative body talk was related to unwanted body hair, perceived disproportioned facial features, and for a small number of youth who also identified as transgender or gender non-binary, a hatred of their genitals and/or breasts.

Figure 41. While females who died by suicide were more likely to speak disparagingly of their body, males also frequently engaged in negative self-talk about their body.

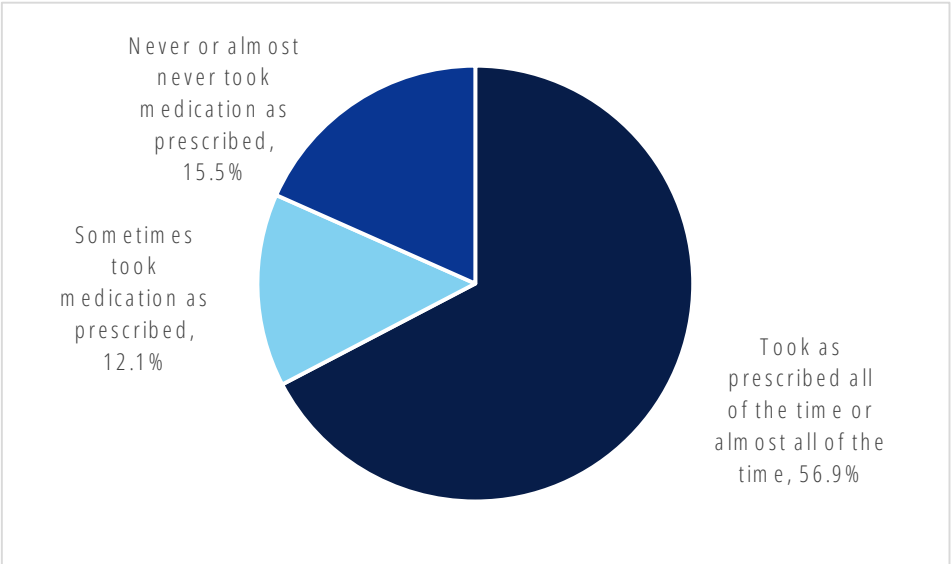


While a large proportion of both females and males who died by suicide had body dysmorphia, relatively few (10.2%) had an eating disorder. An additional 3.7% may have had an eating disorder, but informants were not sure. 27.7% of females had what informants recognized to be an eating disorder; 5.8% of males reported the same. Almost none of these instances of eating disorders were reported to or treated by a health care professional.

Interestingly, two-thirds of youth were reported to either have no change in the severity of their eating disorder or their eating disorder was improving leading up to the time the youth died by suicide. 25.0% of youth were reported to be experiencing worsening symptoms related to an eating disorder.

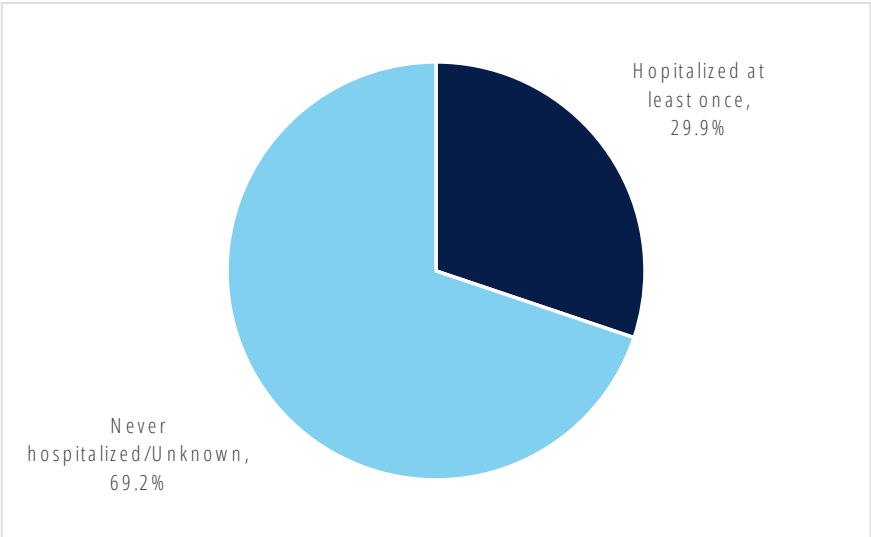
53.7% of all youth were prescribed a medication to treat a mental illness. 56.9% of those who were prescribed a medication to treat mental illness took the medication as prescribed or nearly as prescribed. 12.0% took the medication as prescribed sometimes, and 15.5% never or almost never took the medication as prescribed. 46.6% of youth stopped taking their medication prescribed to them against the prescriber’s instructions. Of the 27 youth who stopped taking medication for a mental illness, 25.9% stopped within 2 weeks of their death, and an additional 18.5% stopped with 6 months of their death. Youth most frequently stopped taking medication related to a mental illness because they felt they no longer needed to take the medication or they didn’t “like the way it made them feel.” Several parents reported that their child stopped taking the medication without their knowing, and they only found out after their child had died.

Figure 42. Proportion of youth who took medication as prescribed



29.6% of youth were hospitalized on at least one occasion for an acute or chronic mental health problem. 84.4% of youth were hospitalized on only one occasion. 18.8% were 12 or younger when they were first hospitalized, 28% were ages 13 to 15, 25% were age 16 when they were hospitalized for the first time; and 18.8% were 17 or 18 years old. A small number of youths were hospitalized within two weeks of their death, 50.0% were hospitalized within 6 months of their death. Of the 25 hospitalization events that informants expounded upon, 18 (72%) were related to suicide ideation or following a suicide attempt.

Figure 43. Proportion of youth ever hospitalized for a mental health problem



Informants identified one or more barriers to the youth receiving mental health care for 35.5% of youth who died by suicide.

Table 4. Most barriers to receiving mental health treatment were due to finding a provider that was accepting new patients or finding availability in a treatment facility.

Didn't believe in counseling or seeking help, or didn't want help	13 (22.0%)
Difficulty getting into a treatment provider or treatment facility	23 (39.0%)
Difficulty paying bills or other financial concern	7 (11.9%)
Insurance wouldn't cover treatment or would not pay enough to make treatment affordable	8 (13.6%)
Problems getting to or from appointments	5 (8.5%)
Other problem	**

34.6% of youth were reported to have taken an online survey at some point that helped them identify possible mental health problems. 35.5% of informants were unsure if the youth ever took a survey for this purpose. Of those who did take a survey, half sought out assessment from a health care provider, and most who did (12 out of 14) received treatment.

Crisis services and suicide lifelines

Most youth who died by suicide in this report died prior to the implementation of Utah's mobile crisis outreach teams, access centers, etc. Between 2016 and 2019, Utah's crisis services included the suicide prevention lifeline (800-273-TALK); individuals could text the suicide prevention lifeline using a different number during this period, but it was not well known. Another crisis service was the SafeUT application for smartphones, specifically for primary and secondary students (SafeUT was later expanded to other groups at a higher risk of suicide). SafeUT allows students to chat with a crisis worker on their phone or submit a tip about someone for whom they are concerned. Investigators did not ask specifically about SafeUT in this study, but they did ask specifically if the youth ever contacted a suicide intervention resource.

7.8% of youth were known to have contacted a suicide prevention lifeline or use some other resource, such as SafeUT. An additional 13.9% of informants were unsure if the youth had ever used the lifeline or a crisis-based service. 78.7% of informants said that they were sure that the youth had never used a crisis resource like the lifeline or an app-based service. Because these services are designed to be confidential and even anonymous, they are especially difficult to discern whether someone used them if they do not self-report their use. It's possible that more of the youth who died by suicide in this study used a crisis lifeline or app, but none of the informants knew about this instance.

Hope Squads are school-based clubs that are intended as a peer-based referral system. Youth who need to talk can find Hope Squad members who are trained in suicide prevention and know when to refer youth to school staff to get help. Between 2016 and 2019, most Utah high schools had a Hope Squad, as did some elementary, middle, and junior highs. 50.0% of youth who died by suicide knew of the Hope Squad,

according to informants. Informants were unsure if the youth knew of the Hope Squad in 18.5% of deaths. No informant recalled a circumstance when a youth who died by suicide connected with a Hope Squad member to discuss a problem; 8.4% were unsure if a youth had done so. A small number of youth who died by suicide were members of the Hope Squad; an additional 11.2% may have been members of a Hope Squad, but informants were not sure. Investigators did not explicitly request additional information about Hope Squads in the study, but several informants provided additional context. Informants most commonly spoke of Hope Squad in terms of exclusion: the youth felt that the Hope Squad was for “popular kids” and “teacher’s favorites,” others recounted feeling left out by Hope Squad members, and still others recalled that the youth felt as though they wouldn’t get the support they needed if they did seek help from Hope Squad members.

Mental health symptoms. Investigators examined whether youth who died by suicide may have exhibited symptoms of a mental health problem, regardless of their diagnosis status.

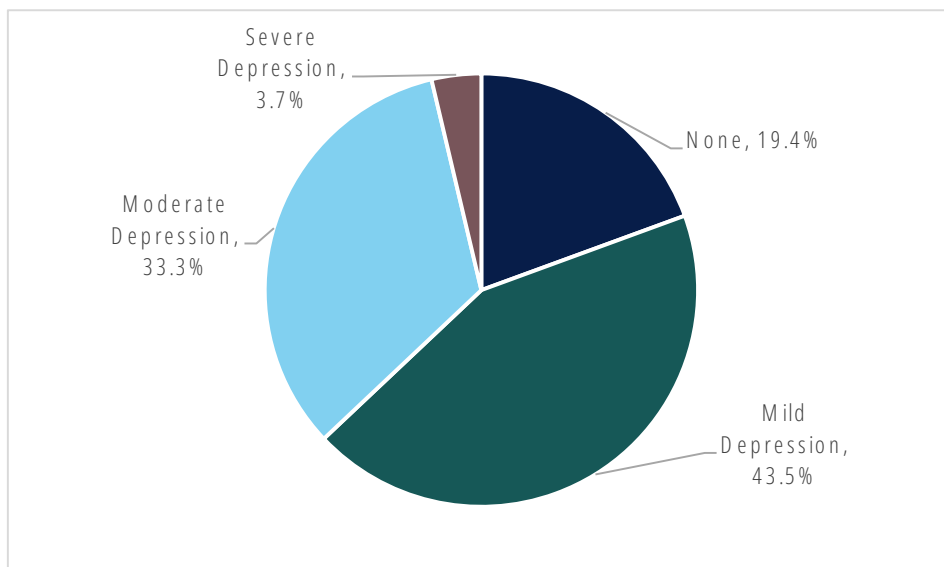
Investigators used a modified version of the Montgomery-Asberg Depression Rating Scale (MADRS), an assessment tool used widely in psychological autopsy. They asked informants if the youth exhibited the name symptom (see Table 5) within the past 30 days. If the answer was yes, the investigator coded that response into the MADRS rankings. Symptoms that are more severe or that last longer are coded into higher scores. Table 5 lists the symptoms and responses.

Table 5. Collateral responses to the Montgomery-Asberg Depression Rating Scale (MADRS).

Symptom	Severity and/or duration				Unknown
	0	2	4	6	
Apparent sadness	40	27	32	5	**
Reported sadness	57	9	17	14	10
Inner tension	51	17	23	8	9
Reduced sleep	64	13	17	6	8
Reduced appetite	77	18	5	**	**
Difficulty concentrating	83	14	7	**	**
Lassitude	73	20	11	**	**
Inability to feel	71	16	17	**	**
Pessimistic thoughts	40	28	16	11	13
Suicidal thoughts	32	5	54	17	**

MADRS defines scores that are 6 or less as no depression, 7 to 19 as mild depression, 20 to 34 as moderate depression and 35 or more as severe depression. The maximum score is 60.

Figure 44. Most youth exhibited symptoms that are consistent with mild depression.



Notably, MADRS is a screening tool, not a diagnostic instrument. In this study, the MADRS attempts to better understand depressive symptoms, not to posthumously diagnose individuals with depression or a depressive disorder. Medical diagnoses can only be given antemortem.

Discussion: Health care plays a fundamental role in preventing youth suicide

Health care settings and suicide prevention. Unlike adults who die by suicide, the youth in this study were more likely to be seen in a health care setting within weeks of their death. Similarly, the youth in this study were more likely to see a therapist and more likely to have at least one mental health diagnosis compared to the Utah population (KFF, 2023). Nationally, youth have a higher rate of mental illness than adults; for example, in 2021, 20.1% of adolescents (12 to 17) in the U.S. reported at least one major depressive episode compared to 8.3% among adults (SAMHSA, 2021). That these youth are being seen by health care providers and therapists is an opportunity to improve suicide assessment and intervention in care delivery settings.

Youth were seen in a variety of settings—emergency departments, clinics, etc.—for a variety of problems. This finding is consistent with other research showing that youth who died by suicide have more encounters with both mental health and non-mental health providers in the months preceding their death (Lee et al., 2021). Mental health reasons were behind recent health care provider visits more than any other reason, but two-thirds of these reasons were for a reason *not* related to mental health. Because the settings and reasons of health care visits were varied, evidence from this study points to universal suicide screening for youth. Universal screening remains controversial among resource strained health care systems because of their low positivity rates and because of critiques centered on assessment fatigue among patients. Indeed, evidence-based screening coupled with high quality, comprehensive clinical

interviews are likely to be more effective than either of these tools alone (Blasco-Fontecilla & de Leon, 2021; Schechter & Maltzberger, 2021).

Head injury. Our findings regarding head injury lend support to the body of research showing an association between head injury (including concussion) and later risk of mental health problems, suicidal ideation, and suicide mortality, especially in the context of multiple head injuries in a short timespan (Kay et al., 2023; Ledoux et al., 2022; Miller et al., 2021). This also became a salient theme in qualitative analysis, with several parents reporting they saw significant changes in their youth's mood and behavior after a head injury. One parent related:

“When she fell ... her brain was injured... [health care providers] didn’t talk to us at all about traumatic brain injury or the sometimes dramatically increased risk of suicide. And so, when we started seeing evidence of her brain injury, we have a physiological injury, but we were treating it as if it were a psychological problem that she was experiencing...We didn’t find any information about increased risk of suicide until after she was dead. And so, there is this kind of crazy train that was let loose, and we didn’t even have a chance to try to slow it down. She went, I would say, unhindered off the cliff.”

Mental health symptoms. It is not surprising that a significant number of youths in our study exhibited behaviors and symptoms associated with mental health problems, such as anxiety or depression. However, it is noteworthy that this depression was, for most youth, mild to moderate (using the MADRS). There is a robust body of previous research that explains many of the mechanisms by which these patterns of thought and behavior contribute to greater risk of death by suicide (Claudius & Axen, 2022; Krantz et al., 2024; Rufino & Patriquin, 2019; Seibel et al., 2024; Shen et al., 2024). While depression played a role in many youths' suicide death, it was not a central driver of their decision to end their life.

Our findings about body image and negative self-perception are also unsurprising given other work connecting body dissatisfaction and self-judgement to a higher risk of suicide-related thoughts and behaviors (Fan et al., 2022). And while more females who died by suicide talked about a negative self-image of their body, males also expressed these thoughts.

Our findings indicate that depression, anxiety and other mental health problems should not be equated with emotional suffering and distress. In other words, emotional suffering and emotional distress exist independent of mental health problems among youth who died by suicide. In fact, youth spoke of some emotional distress that would be appropriate: grief in the wake of the loss of someone close, sadness and hurt following the breakup with a romantic partner, etc. Yet, distress and suffering are often mislabeled as pathological, even by clinicians. We cannot assess whether youth were misdiagnosed posthumously in this study, but the comprehensive view we obtained for most youth suggest that many youth and their parents sought clinical relief for problems that were not clinical. The consequence of such discordance between a mental health diagnosis and the accompanying treatment means that the youth also does not experience any relief from the problem that took them to

their health care provider in the first place. In the face of getting no relief after seeking help, helplessness and hopelessness follow. However, it may also be true that some youth learned coping skills and resilience strategies to better handle emotionally distressing events.

As one parent said: *“I really think [her diagnoses] made her life extremely difficult to the point that she didn’t want to live it anymore. I don’t think it was one thing. I think she had a lot to overcome and she tried really hard, she worked really, really hard to overcome it and it just was too much for her. I think it was a combination of all of those things and she was just in a lot of pain She was hopeful that she would get help from the medical professionals, and she tried that, and when it was not successful she gave up hope and just couldn’t do it anymore... between not eating, not sleeping...her hallucinations, her depression, panic attacks all the time ... She was a really miserable girl.”*

Emotional suffering emerged as a most prominent theme in our qualitative analysis when we asked parents and peers why the youth died by suicide. Across the majority of interviews, participants described intense and persistent emotional suffering. Many conveyed the sense that the decedent had been “battling demons” for some time, often silently. As one parent stated,

“I think that he felt that life was not worth living, that it was too painful and too difficult... I think he had concluded that life was just too awful to live. I think some of it too was that, you know, he was a very sharp young man until his depression started to work against him. And I think he himself witnessed his own mental decline and I think that being a witness to that was a source of some hopelessness.”

A peer recalled, *“He just couldn’t see the way out. He couldn’t, just couldn’t see that things were gonna get better. He just felt like he was a total screw up.”*

Other emotional drivers such as anger, guilt, and hopelessness were also frequently mentioned.

A parent said, *“I think she was in a blind rage at the time and everything was just going through her mind of all that’s kind of been happening to her and feeling angry and sad and embarrassed at the same time”*

And another parent: *“when I read her journal, she would talk about how she felt empty, sad and dead inside”*.

Mental health treatment. Nearly two thirds of youth in this study had seen a therapist at some point in their lifetime and over half (55.6%) were being treated by a therapist around the time they died by suicide. Many youths in this study were seeing a therapist regularly. Yet, for more than half of these youth, therapy did not sufficiently treat suicidal thinking and/or suicidal behavior. A limitation of this study is that the researchers did not learn what the youth was going to therapy for, if the therapist was using treatment modalities, assessing for suicide using an evidence-based approach, etc. Therefore, the therapist may not have ever known that the youth was thinking of suicide or experiencing increased suicide risk, particularly if the youth was not forthcoming about their thoughts and experiences.

This is supported by research regarding research on youth’s experiences of mental health treatment, which

demonstrates that even when access to mental healthcare exists, there are barriers such as lack of rapport or connection with providers, concerns about confidentiality that lead some youth not to disclose thoughts of suicide to their mental health provider (McGillivray et al., 2022). Our findings about a lack of specialized mental healthcare as opposed to general therapy is consistent with other findings in studies of youth suicide mortality. Renaud et al., (2014) found specialized mental health help is often needed but less likely to be received than generalized mental health services.

Even when risk of suicide is identified, or a youth tells a mental health professional that they are thinking of a suicide, there are few suicide-specific treatment modalities available, and the ones that do exist need further development and research. Suicide-specific treatment interventions for adults are more common and more rigorously tested—yet still insufficient—should not simply be used in adolescents and youth (Ougrin et al., 2015).

Even though there are few treatment modalities that are specific to reducing risk of suicide, there are a few that show beneficial outcomes (Brent, 2021). Treatment is more likely to be effective when it is specific to suicide. Our results strongly suggest that therapists should use these suicide-specific treatment modalities when a youth is at an increased risk of suicide—not just when they endorse thinking about suicide. At the time of this report, suicide-specific intervention is not a required component of training for mental health professional as a part of their initial training.¹⁰ Mental health providers ought to be trained to recognize increasing suicide risk, even when their patient denies suicidal ideation, and respond by engaging in evidence-based interventions. Youth who are experiencing thoughts of suicide or who are at a high risk of suicide ought to be treated with evidence-based treatments aimed at reducing suicide risk, such as dialectical behavior therapy, cognitive behavior therapy, and others (Asarnow et al., 2021; Berk et al., 2022; McCauley et al., 2018; Witt et al., 2025). Second to creating safety for youth, therapists should work to reduce the underlying factors that increase suicide risk.

Additionally, parents and caregivers did not often know why their child was receiving therapy, if the therapy was helping (i.e., improving the child’s mental health), or helping to achieve their child’s therapy goals. While the confidential therapist-client relationship is foundational to effective therapy, attachment-based family therapy and other similar treatment modalities may be lifesaving for youth (van der Spek et al., 2024). Attachment-based therapy may be especially effective for youth who feel like a burden or who are sexual or gender minorities (Levy et al., 2016; Russon et al., 2022; Singer et al., 2017). There is evidence to suggest that family involvement at all stages of mental healthcare—from primary-care-based preventive screening to family-centered postvention—creates a comprehensive and systemic approach that places families in the role of active agents in fostering youth resilience and promoting recovery and wellbeing (Blossom et al., 2022; Gay, 2025).

¹⁰ Utah does require that physicians and some other health care providers participate in suicide prevention training to renew their professional license.

Frustration at the mental health treatment process emerged as a common theme in qualitative analysis. Many parents and peers referenced barriers to decedents receiving appropriate mental health care or general feelings of dissatisfaction with mental health treatment options that were available to them. These narratives often included things like long wait times and medication side effects, as with this peer describing his friend's struggle to find help:

"I think that he had some serious mental health issues that were [not] treated. He couldn't even get an appointment with a psychiatrist. So there's no resources available for him to get the serious medical attention I think he needed."

Another peer stated that even when her friend got help, the lack of instant results fed into a self-defeating cycle: *"I think that he felt like there wasn't a way out or a way to feel better. I think he felt discouraged when I told him that antidepressants sometimes don't work, that they're kind of trial and error until you figure out what's right for you, basically."*

As well, several narratives reflect frustration with the system and treatment process even when youth were able to get help. One parent expressed *"you know, it bugs me. When people say go get help, call a hotline, whatever. What help are they talking about? Because that's what frustrates me the most is we sought the help. We got the help. We did everything possible and it didn't help. So the help that's there doesn't help...maybe there are cases out there that that kind of stuff does help, maybe it does help for them. But in my son's case, the help was not enough."*

Crisis services and school-based services. As discussed previously, it is possible that reports from informants about utilization rates of crisis hotlines may be lower than actual use because the user (the youth, in this instance) never told anyone they used such a resource. However, low youth utilization rates of lifelines and other crisis-based services is consistent with national research, and it may be valuable to probe into barriers to accessing these services as well as alternatives that are more likely to appeal to struggling adolescents, especially in rural areas (Budinger et al., 2015; Thompson et al., 2018).

Our findings about Hope Squad are similar to those of other research regarding Hope Squad programs. Preliminary and observational data from Hope Squad schools in Utah during a similar period to our study (2013-2017) could provide insight into some of the gaps in help seeking behavior among youth. While the Hope Squad curriculum is effective at improving knowledge, skills, and self-efficacy of Hope Squad members in helping peers, the demographics most at risk for suicide mortality (e.g., males, older high school students) are less likely to have contact with Hope Squad peers than their female, younger counterparts (Wright-Berryman et al., 2019). The peer support model offered by Hope Squad helps bridge important gaps. Talking more openly about mental health and suicide prevention in schools reduces stigma, and encouraging students to tell a trusted adult if a peer discloses thoughts of suicide to them is a healthy and life-saving intervention. Importantly, our evidence points to less help-seeking among young males in particular; not that school-based suicide prevention programs are ineffective when they are utilized.

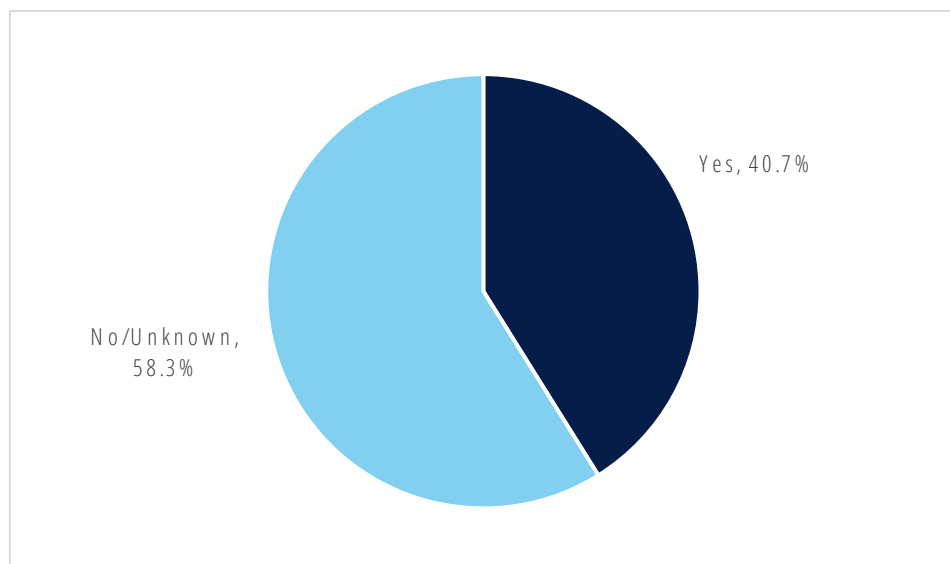
Related recommendations from the Suicide Child Fatality Review Committee:

- Hospital systems and practitioners should align with American Academy of Pediatrics' recommendations of universal screening in primary care and emergency/urgent care settings and follow up with a brief intervention after a positive screen at all encounters.
- Therapists and mental health providers should assess for suicide, create and ensure safety frequently by using evidence-based suicide-specific interventions, then address underlying factors that increase suicide risk.
- Healthcare providers should be aware that they play an outsized role in suicide prevention in youth.
- Healthcare providers should increase availability of neuropsychiatric testing and resources after brain injury.
- Policymakers, communities and schools should couple investment in mental health care with investment in population level strategies to improve social determinants of health and mental health outcomes.

Substance use

Alcohol. 40.7% of youth who died by suicide had ever drank alcohol in their lifetime. Of youth who had ever consumed alcohol, 14.0% drank alcohol within two days of their death (39.5% were unknown), and 27.9% drank alcohol within two weeks of their death (41.9% unknown). Of those who drank alcohol ever, 11.6% of youth were reported to drink more in the month leading up their death, 14.0% were reported to have been drinking less, and 27.9% were drinking “about the same” amount as they had previously. Investigators were unable to determine changes in alcohol consumption for 46.5% of youth. Peers were more likely than parents to report that youth were using alcohol.

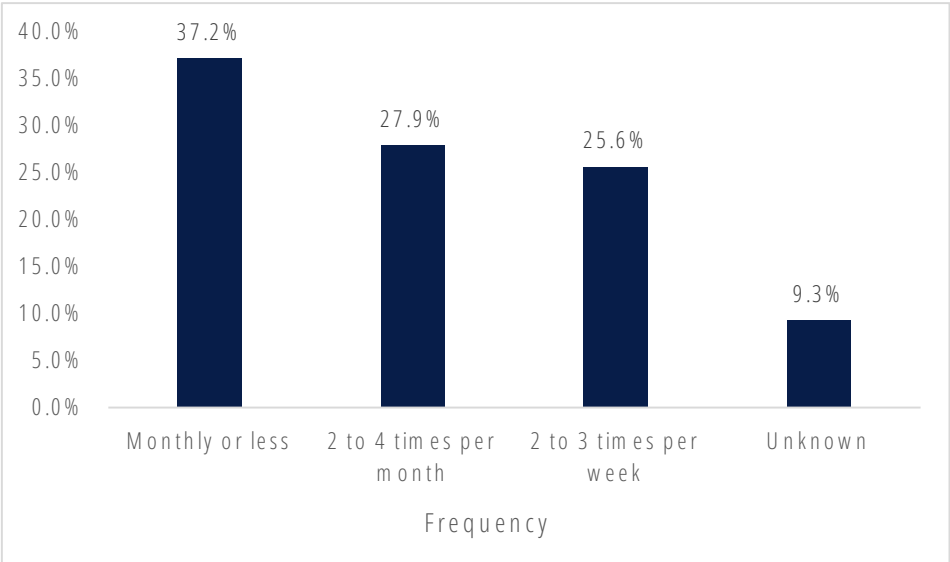
Figure 45. Youth who died by suicide were more likely to drink alcohol than the general population of youth.



Among youth who were drinking more leading up to their death, informants recounted that they were drinking to intoxication nearly every day. Fewer than 4 youth engaged in self-directed violence when they were consuming alcohol; furthermore, it was very rare that a youth consumed alcohol in order to carry out their fatal suicide attempt.

Of youth who drank alcohol ever, 37.2% of youth were reported to have consumed alcohol monthly or even less often; 27.9% drank alcohol on 2 to 4 occasions per month, and 25.6% consumed alcohol 2 to 3 times per week. No youth were reported to drink alcohol on 4 or more occasions, and the frequency with which 9.3% of youth consumed alcohol could not be determined.

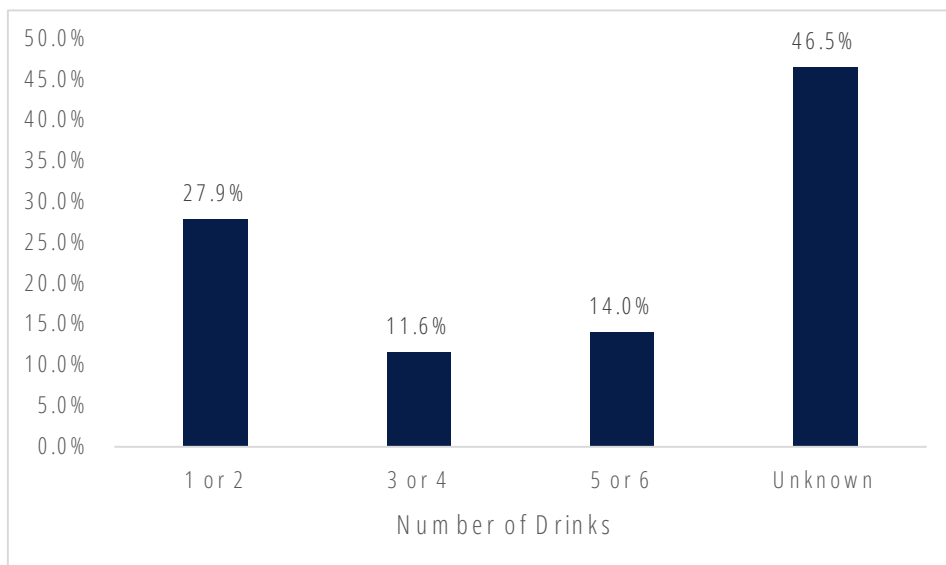
Figure 46. Several youths consumed alcohol multiple times per week.



Investigators asked how many drinks the youth consumed on any given occasion in which they were drinking alcohol. For nearly half of youth (46.5%), informants were unsure how much they drank. 27.9% of youth were reported to have 1 to 2 drinks per occasion when they were drinking; 11.6% drank 3 to 4 and 14.0% drank 5 or more drinks.

27.9% of youth were reported to have never drank heavily (consumed 6 or more drinks on one occasion), but 20.9% were reported to drink heavily monthly or less, and 11.6% drank heavily weekly. No youth were reported to drink heavily on a daily or nearly daily basis. Similar to several other measurements of alcohol use, investigators could not determine the frequency with which a youth drank heavily in 39.5% of deaths.

Figure 47. A small, but disproportionate number of youth exhibited binge drinking behavior.



55.8% of youth were reported to be able to stop drinking once they had started, but 11.6% of youth were unable to stop drinking once they had started on at least a monthly basis.

32.6% of youth were reported to experience a change in behavior when they were drinking alcohol (44.2% unknown). Most informants said the youth became more outgoing (more talkative, affable, and relaxed). Others were reported to get extremely sad or angry. 9.3% of youth were unable to complete expected tasks on a monthly or basis due to alcohol use, and 7% were unable to complete expected tasks on weekly or nearly daily basis. 27.9% were unknown. Most informants (41.9%) were unsure if a youth drank alcohol with the intention of lowering their inhibitions so that they could engage in risky behavior (e.g., driving dangerously, swimming in poor conditions, using machinery or walking into an area they perceived to be dangerous), or engaging in high-risk sexual behavior. However, 16.3% were known to drink alcohol for this reason. Anecdotally, informants recounted that the youth drank alcohol to overcome anxiety, especially in social contexts; i.e., “to chill out.”

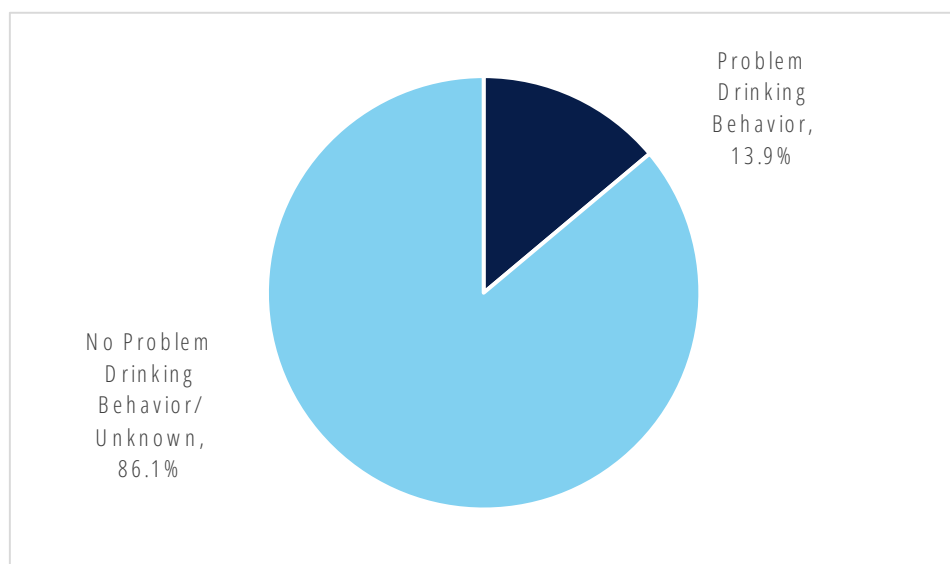
Of the youth who had consumed alcohol ever, just 14.0% were known to have ever encountered formal, legal consequences (7.0% could not be determined). Most youth, 79.1%, had no law enforcement intervention due to their alcohol consumption.

At least one informant recounted that they were concerned that the youth may be dependent on alcohol for 23.3% of youth who died by suicide, and informants added that 20.9% of youth who drank alcohol ever had someone else—a doctor, relative, friend or someone else—expressed concern over the youth’s excessive alcohol consumption.

Fewer than 4 of youth who had ever drank alcohol ever received treatment (of any kind) for alcohol use and/or misuse. These youth underwent treatment between two weeks and six months of their death by suicide and were known to have consumed alcohol after they had started treatment.

Investigators assessed problematic alcohol consumption in youth based on questions from the Alcohol Use Disorders Identification Test (AUDIT). Because some questions from the AUDIT cannot be ascertained without asking the individual themselves, some questions (6, 7, 8) were excluded. Further, informants could respond that they did not know the response to a specific question, investigators could not score the AUDIT in the same fashion that it would be scored in an antemortem clinical setting. Using a modified AUDIT assessment, 13.9% of all youth exhibited problematic alcohol consumption behaviors, and of those who ever drank (44 youth), 34.1% scored high enough to consider their drinking behaviors as an alcohol use disorder.

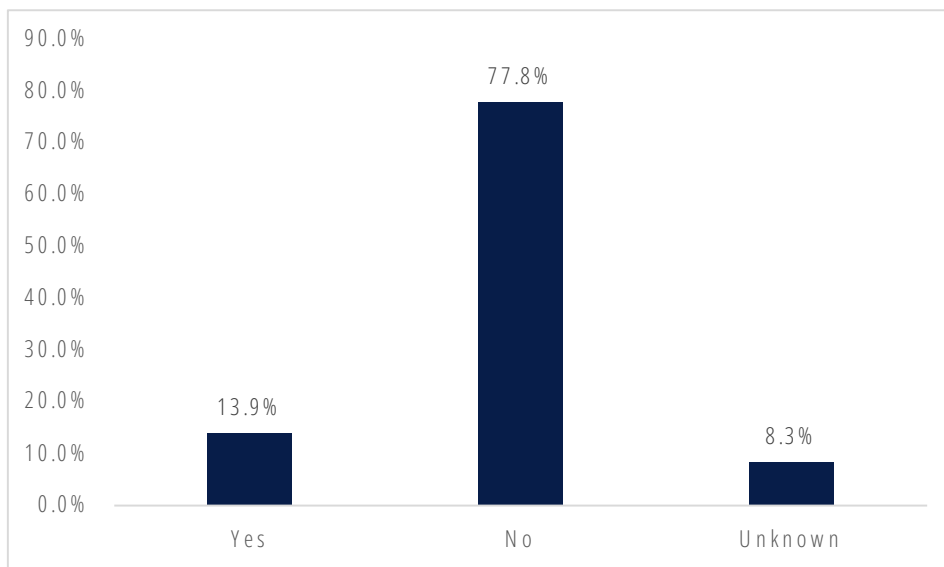
Figure 48. 1 in 7 youth exhibited behaviors that were highly indicative of alcohol dependence.



Illicitly used prescription drugs. Investigators asked about drug use and misuse by asking specifically if the youth ever took prescription drugs that were not prescribed to them, if they used non-prescription drugs (such as cocaine, heroin, party drugs, etc.), tobacco use (including vaping), and marijuana use.

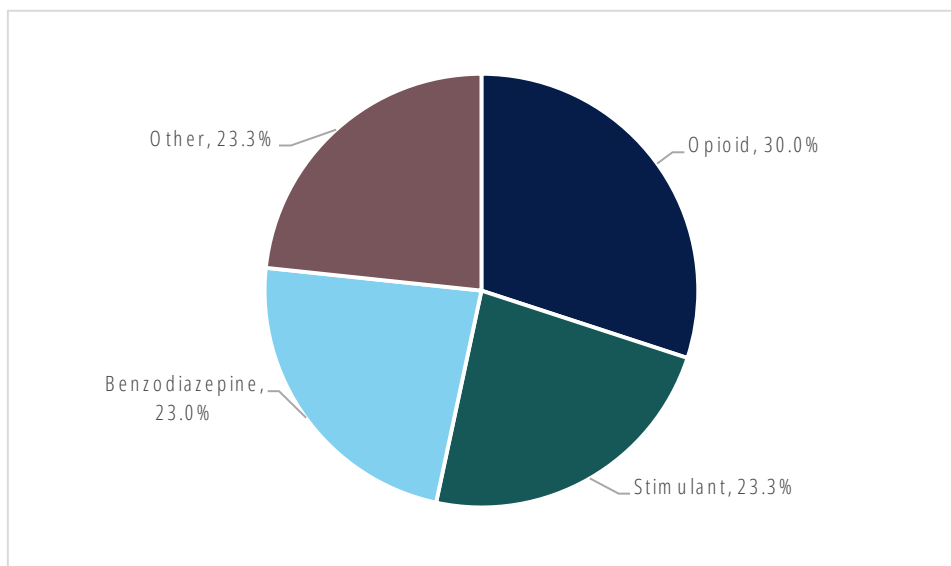
Prescription drugs not prescribed to the youth. 13.9% of youth used prescription drugs that were not prescribed to them; an additional 8% may have used this type of drug, but investigators could not determine whether that was true. Peers were more likely than parents alone to report prescription misuse.

Figure 49. 13.9% of youth who died by suicide misused prescription drugs not prescribed to them at some point in their lifetime.



The most frequently misused prescription medication type that was not prescribed to the youth were opioids (30%) followed by benzodiazepines (23.3%) and stimulants (23.3%). Opioid medications included hydrocodone, oxycodone, oxycodone and acetaminophen (i.e., Percocet®), and morphine. The most misused benzodiazepines were alprazolam (i.e., Xanax®). The only stimulant that informants identified was amphetamine-dextroamphetamine (i.e., Adderall®). Half of instances of misused prescription drugs were known to have occurred within one month of the youth’s death by suicide. Investigators did not document the frequency with which the youth took the misused prescription drug, however.

Figure 50. Opioids were the most commonly misused prescription medication, but benzodiazepines and stimulants were also misused.

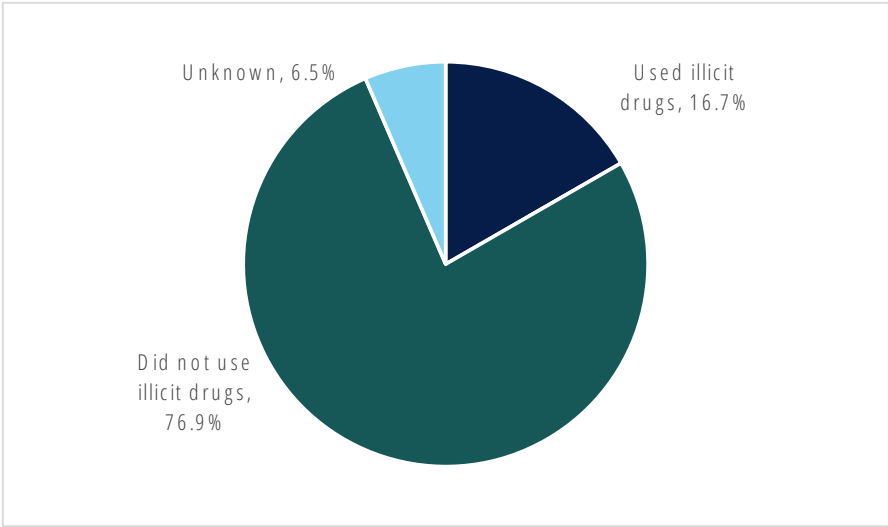


Youth obtained these prescription drugs primarily from friends (35.9%), followed by relatives (20.5%), usually from within their household. Youth also obtained medication from dealers, teammates, neighbors, and while at parties.

Illicit drugs. Illicit drugs include heroin, cocaine, crack, methamphetamine, ketamine that is illicitly sourced, gamma-hydroxybutyrate (GHB), ecstasy or molly, lysergic acid diethylamide (LSD) or acid, and ‘shrooms. After a piloting phase, investigators asked about marijuana separately.

15.7% of youth indicated that they had used illicit drugs. Informants did not know if an additional 6.5% used illicit drugs. According to findings from the 2019 SHARP survey, approximately 0.2% to 0.3% of Utah youth have ever used cocaine, methamphetamine, or heroin. 4.6% used an inhalant ever, 2.1% used a hallucinogen ever, and 0.2% used a steroid in the last 30 days (DHHS, 2019). The use of illicit street drugs among Utah youth at a population level is quite low, particularly compared to the proportion of youth who died by suicide who were reported to have ever used an illicit drug. Though the counts are small, youth in our sample were more often reported to have been using illicit drugs by peers than by parents.

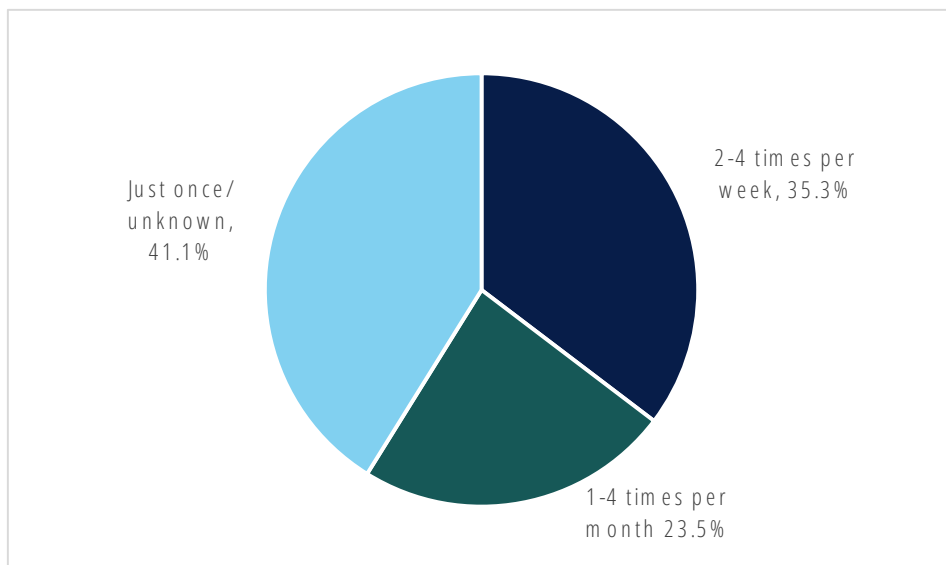
Figure 51. Youth who died by suicide were far more likely to use illicit drugs than the general population of youth.



Informants identified several substances, including methamphetamine, LSD, cocaine, molly, and ‘shrooms. Youth who used illicit drugs were more likely to be frequent users than occasional users: informants reported that, of the youth who were illicit drug users, 35.3% used drugs 2 or more times per week. 11.8% used illicit drugs just once, and 29.4% of informants were unsure how often the youth used illicit drugs.

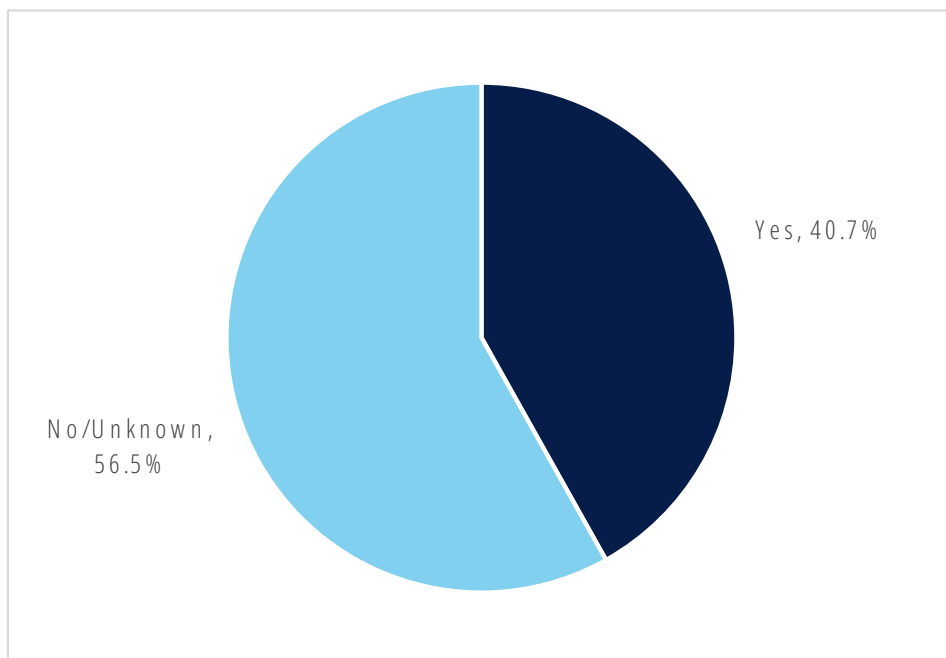
11.8% of youth who used illicit drugs were known to be heavily influenced by drugs at least once per week. Someone close to the youth had expressed worry that the youth’s drug use behaviors were problematic in 58.8% of youth who used illicit drugs and died by suicide. Fewer than four youth were known to have ever accidentally overdosed on an illicit drug.

Figure 52. Some youth who used illicit drugs did so frequently.



Tobacco. Investigators asked about all tobacco consumption, including smoking, vaping, snuff or chew, and dabs. 40.7% of youth who died by suicide had ever used tobacco (2.8% unknown).

Figure 53. 2 in 5 youth who died by suicide had used tobacco at least once.



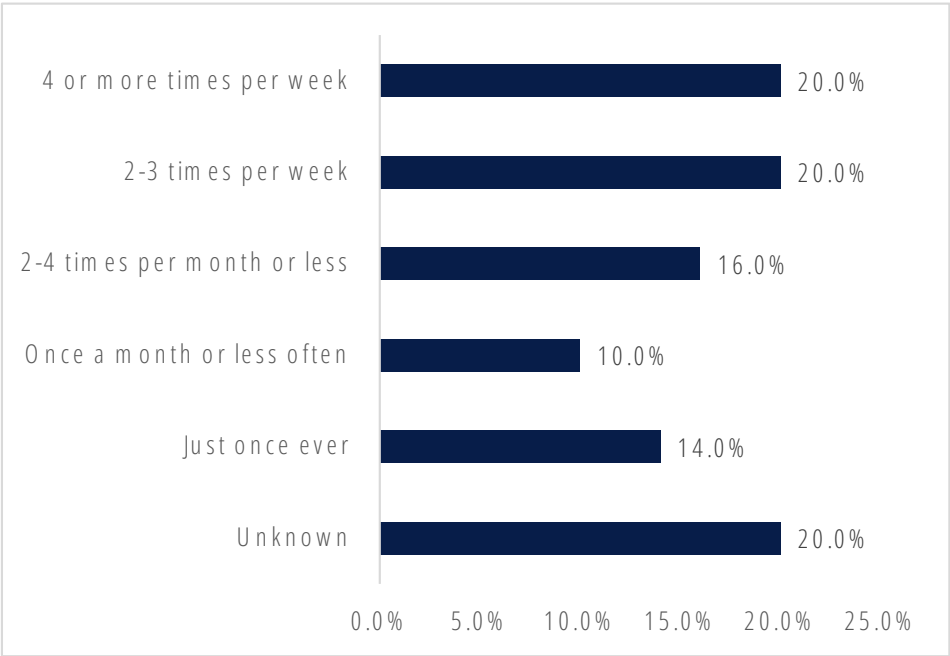
Nearly half (45.5%) of youth who used tobacco used it at least once per day in the period leading up their death; fewer than four youth had ever tried to stop using tobacco.

Interestingly, youth who used tobacco were less likely to have had a history of suicidal behavior—talking about wanting to die by suicide or having attempted suicide—but were slightly more likely to engage in non-suicidal self-injury (e.g., superficially cutting).

Marijuana. When investigators began to ask about illicit drugs, marijuana stood out because of the high frequency with which informants reported using marijuana. Because of this volume, marijuana was asked about separately and specifically. Approximately 20 primary interviews (see methodology) were completed using the original methodology, which included marijuana with illicit drugs. Regardless of the context in which marijuana use was investigated, investigators gathered similar information.

46.3% of youth who died by suicide had used marijuana. An additional 12.0% of youth may have used marijuana, but informants were unsure. No youth were reported to ever have a prescription to use marijuana (which would have applied only to 18-year-olds who resided in Utah). Compared to the other substances investigators asked about, more parents knew about their youth’s marijuana use. However, in youth who had multiple peer informants, peers were still more likely to report the use of marijuana than parents.

Figure 54. Youth who used marijuana were likely to use it multiple times per week.

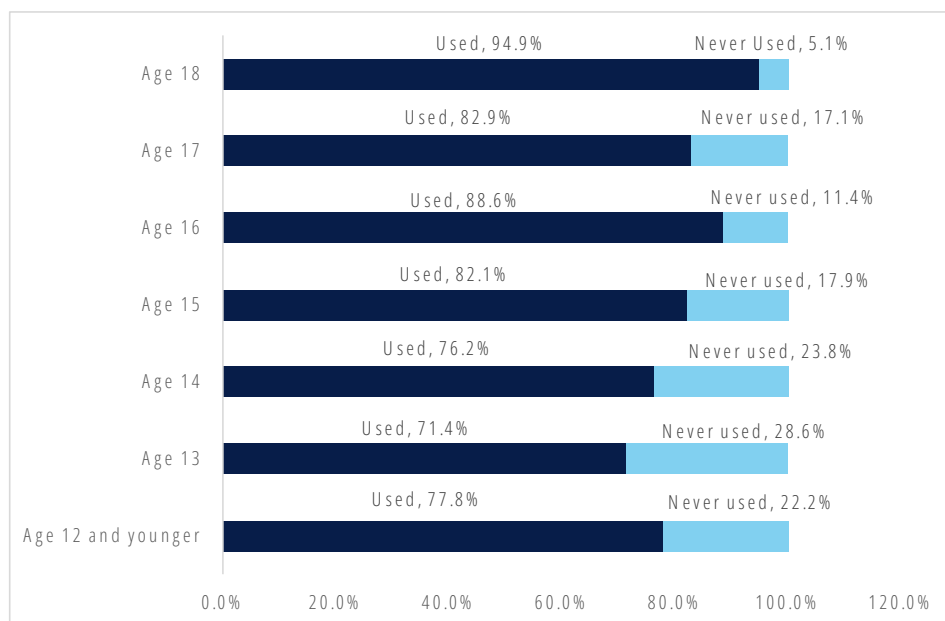


Youth who used marijuana tended to use it frequently. 20.0% used marijuana 4 days per week or more; an additional 20.0% used marijuana 2 to 3 times per week. 16.0% used marijuana 2 to 3 times per month, and 24.0% used marijuana just once or twice ever (20.0% unknown). 24.0% of marijuana users were visibly, heavily under the influence of marijuana at least 2 times per week or more. Informants were unsure how often the youth was heavily influenced by marijuana for 40.0% of youth. Most informants (64.0%) were unsure how most youth consumed marijuana, but they did report that youth smoked joints, used bongos, and vaped marijuana.

Marijuana users were more likely to disclose suicidal ideation than non-marijuana users and were slightly more likely to have a known history of suicide attempt. They were also more likely to have a history of non-suicidal self-injury. Marijuana users were also more likely to be referred to and attend therapy.

Other findings about substance use among youth who died by suicide. 39.8% of youth didn't have any reported history of substance use. Most youth who didn't use substances were younger. In other words, as youth grew older, they were more likely to have ever used any substance. Notably, however, substance use was prevalent among all ages of youth who died by suicide: 60.0% of 11-year-olds were reported to have used at least on substance in their lifetime; 100% of 12-year-olds had used a substance. 94.9% of 18-year-olds, the oldest cohort in the study, had used at least one substance. This increase is likely due to exposure and availability: as youth grow older, they have more exposure and access to substances.

Figure 55. The likelihood that youth had used a substance increased with age.



Investigators questioned whether one type of substance was linked with other types of substance use among youth who died by suicide. First, youth who used substances were likely to use multiple types of substances: 47.2% of youth used 2 or more types of substances; just 13.0% had ever used one type of substance. Among

single substance users, tobacco was the most common, followed by marijuana. Alcohol use and prescription drug misuse were the only the drugs that were correlated ($\alpha=0.318$).¹¹

Discussion: Substance use may be indicative of other behavioral health problems

Similar to other parts of the report, most of the research done on alcohol use has been connected to suicidal ideation and attempts (Armstrong et al., 2025; Bossarte & Swahn, 2011; Moon et al., 2020; O'Brien et al., 2014; Spirito et al., 2003). 20.8% of 10th graders consumed alcohol and 28.9% of 12 graders used alcohol, according to the 2019 SHARP survey (DHHS, 2019). Youth who died by suicide are far more likely to have consumed alcohol than their peers. Alcohol use of any frequency or amount among youth is unsafe (NIAA, 2025). Using alcohol before the age of 13 is associated with an increase in suicide attempts (Bossarte & Swahn, 2011). Hopelessness has been cited as a contributor to alcohol use (Spirito et al., 2003).

By comparison, 6.4% of 10th graders and 7.6% of 12th graders who responded to the 2019 SHARP survey indicated that they had used prescription drugs that were not prescribed to them (DHHS, 2019). Given that prescription opioid misuse is associated with suicide behaviors in youth, (Cance et al., 2025; Wilkins et al., 2021), our findings indicate that nearly twice the number of older youth who died by suicide (13.9%) used prescription drugs not prescribed to them compared to those who responded to the SHARP survey.

8.5% of 10th graders and 11.9% of 12th graders reported having ever smoked tobacco in the 2019 SHARP survey (DHHS, 2019). Higher proportions tried e-cigarettes (25.3% among 10th graders and 31.5% among 12th graders). Both tobacco and alcohol are most commonly used substances by middle school students; their use has been associated with an increase in suicidal ideation (Dunn et al., 2008; Jacobs et al., 2023). Furthermore, the use of multiple substances is associated with suicidal ideation (Yang, 2024).

Youth who use cannabis are at increased odds to experience suicidal ideation or an attempt (Choi et al., 2019; Jacobs et al., 2023). According to 2019 SHARP data, 16.7% of youth used marijuana, as well as 24.4% of 12th graders. By contrast, youth who died by suicide were far more likely to have ever used marijuana (46.3%).

Related Recommendations from the Suicide Child Fatality Review Committee:

- Healthcare providers should implement universal screening for substance abuse, especially alcohol and marijuana use, to identify problematic substance use related behaviors in youth and follow up on positive screen with a brief intervention.
- Substance use treatment providers for youth should incorporate screening and suicide prevention efforts in their treatment services.
- Communities should invest in strategies for better assessment and treatment of substance use and misuse, including more options for youth-specific treatment options.

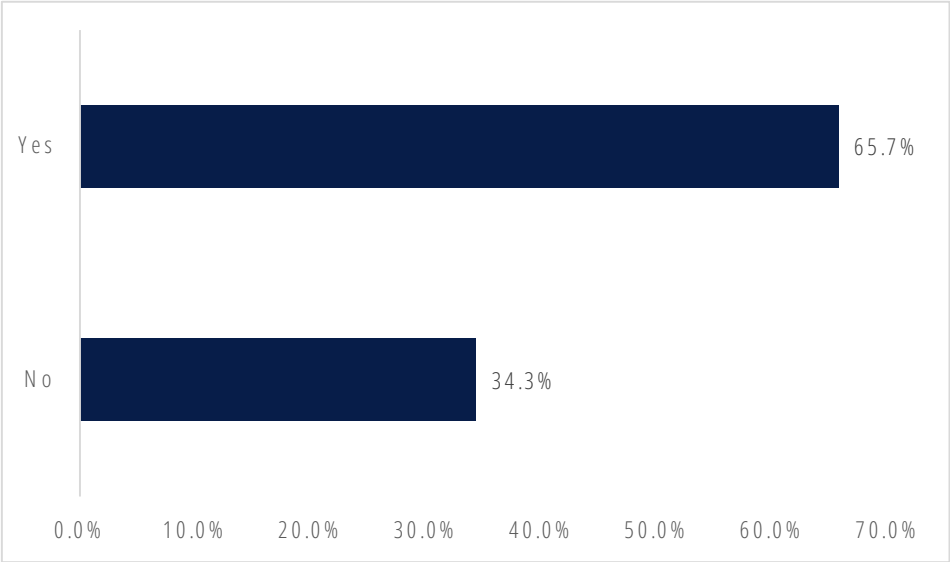
11 Investigators used an alpha coefficient with a Bonferroni correction and a basic statistical significance test.

Suicidal behavior and risk

In this section, investigators examine youth’s history of suicidal behavior, including suicidal ideation, suicide attempt, and non-suicidal self-injury. Researchers also provide results on factors associated with increased suicide risk.

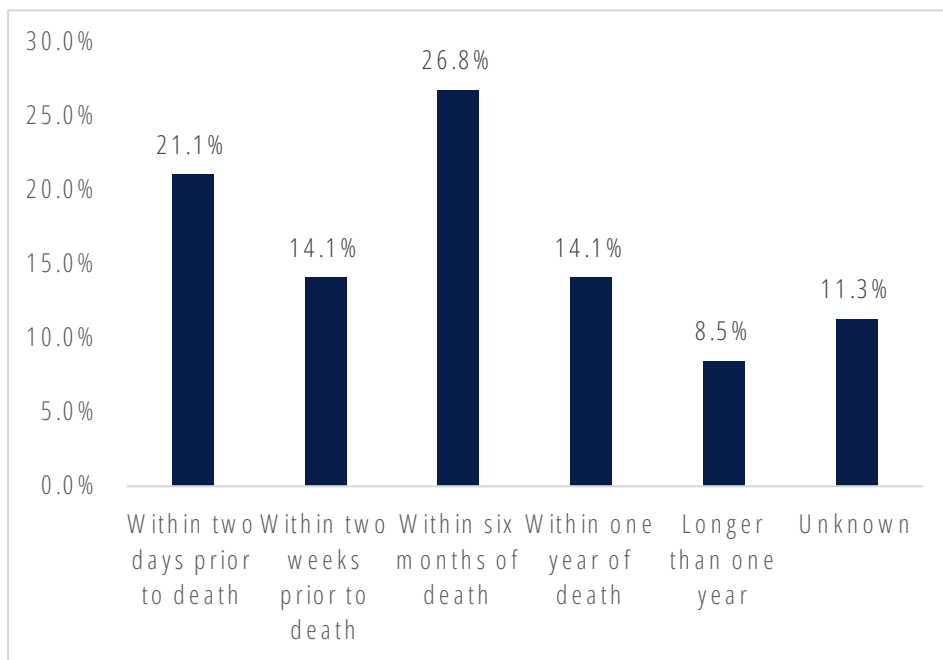
Suicide ideation. Investigators asked if the youth ever talked about suicide. Indeed, suicide ideation was common: 65.7% of youth who died by suicide had a history of talking about wanting to die by suicide. An additional 9.3% were known to joke about suicide. In total, three quarters (75.0%) of youth talked about suicide. Youth disclosed these thoughts to a number of people, including parents (both mothers and fathers), siblings, girlfriends and boyfriends, friends, and those treating the youth, such as primary care physicians and therapists. In multiple instances—but not all—when friends learned about the youth’s suicidal ideation, they informed the youth’s parents.

Figure 56. Most youth who died by suicide spoke of dying by suicide previously.



Speaking of suicide in proximity to the youth’s death by suicide was also common: 21.0% spoke of suicide within two days of their death. An additional 40.8% spoke of suicide in the month prior to their death. Most informants were unsure if the frequency and/or intensity of suicidal ideation was increasing or changing in the period leading up to the death by suicide (45.1%), but 32.4% indicated that these disclosures were becoming more frequent or intense.

Figure 57. Nearly 62.0% of youth who died by suicide spoke of suicide in the month prior to their death.

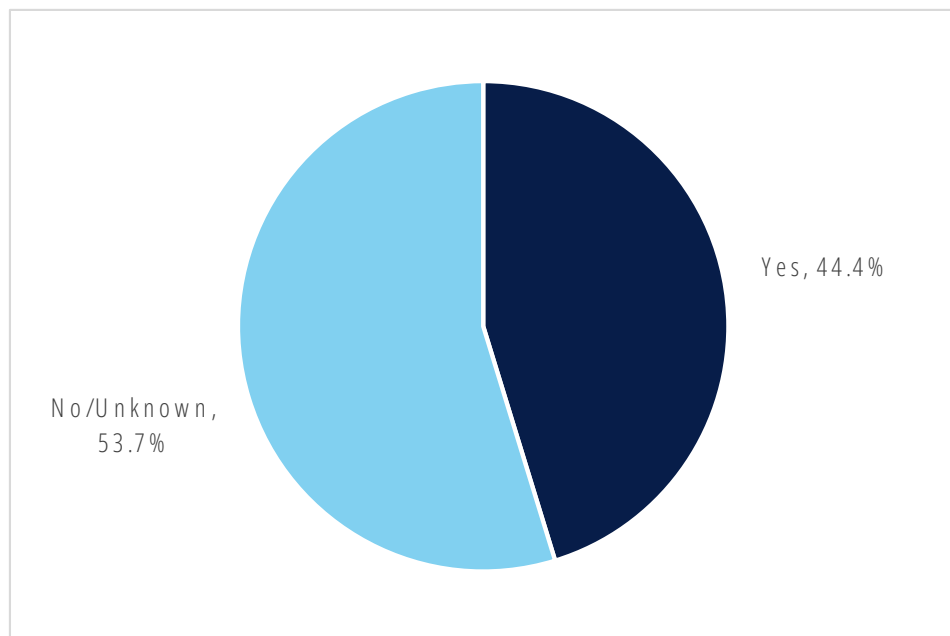


Investigators asked informants to describe the youth’s suicidal ideation. Most of this suicidal ideation was made in a serious context (19 instances). Ideation was expressed in the course of talking about someone else’s suicidal behavior or death by suicide (12 instances). The next most common theme was language that could be considered gaslighting, either by someone else or by the youth themselves (7 instances). For example, “suicide is cowardly,” “suicide is selfish,” or “suicide is stupid.” In every instance of this gaslighting behavior, informants mentioned that the youth never brought up suicide again. Other themes with two or more instances included joking about suicide, using suicide as a manipulation tactic (“if you break up with me, I’ll kill myself”), in the context of a suicide pact with a peer, in the context of expressing low self- worth (“I can’t do anything right”), and in discussions about media, such as music.

One key element included in many suicide assessment screeners is talking about death or wanting to be asleep forever. 35.3% of youth reported speaking in this manner, including some (13.5%) who never disclosed any other form of suicide ideation.

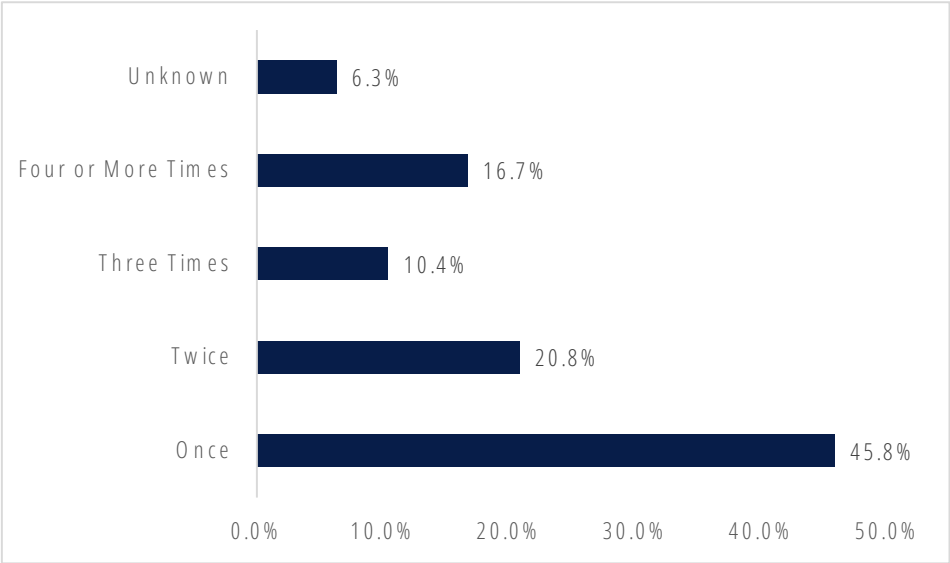
Suicide attempt. 44.4% of youth who died by suicide had at least one known, prior suicide attempt in their lifetime. An additional 1.9% may have attempted suicide in the past, but informants were unsure.

Figure 58. 2 out of 5 youth had a history of at least one non-fatal suicide attempt.



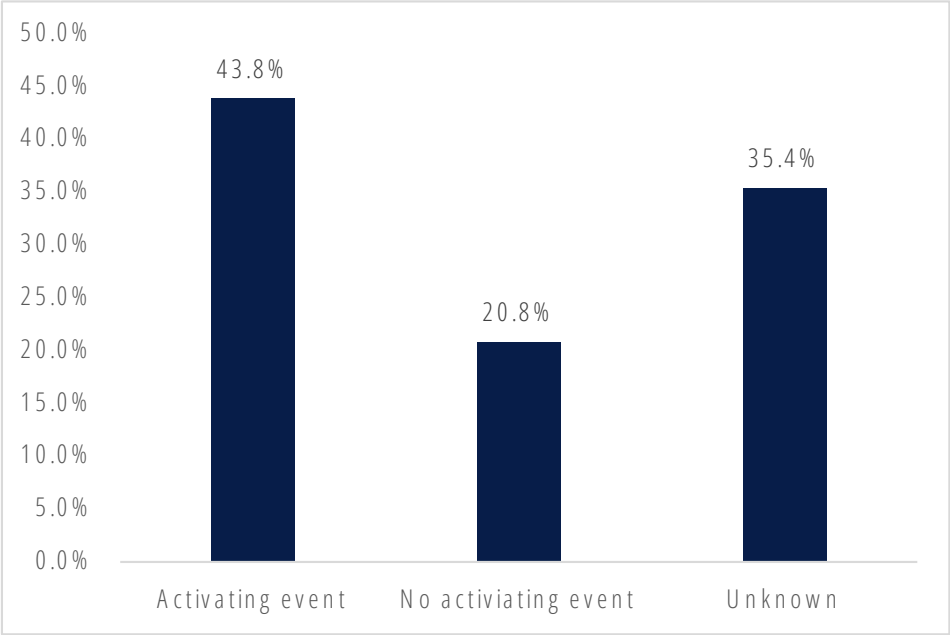
Of youth who had a history of suicide attempt, 45.8% had attempted once ever; 20.8% had attempted suicide twice, and 27.1% attempted three times or more (6.3% had an unknown number of suicide attempts). 12.0% of youth had attempted suicide non-fatally within 2 weeks of their death by suicide; an additional 40.0% attempted suicide between 2 weeks and one year of their death.

Figure 59. Of those who attempted suicide, most had attempted more than once.



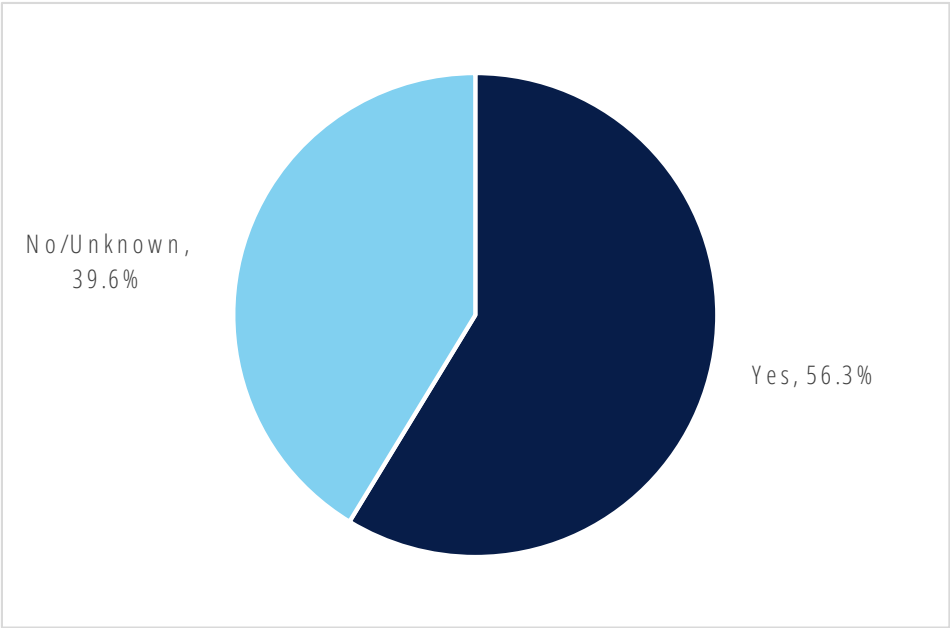
43.8% of youth who attempted suicide had a known activating event prior to their attempt. For example, an argument, breakup, or some other intensely emotional event. Informants weren’t sure about whether there was an activating event in 35.4% of youths with a history of non-fatal suicide attempt.

Figure 60. 43.8% of youth had an activating event, like an argument, break up, or something else they perceived as catastrophic just before they died by suicide.



39.6% of youth were never treated following their non-fatal suicide attempt. And additional 4.2% of youth with a history of attempt may have received treatment, but informants could not be sure. Investigators did not directly ask why youth were not treated, but some informants indicated that they learned about the non-fatal attempt days, weeks or longer after it had happened and thought that the crisis had passed. A suicide attempt is a very serious event, even when it is discovered well after the imminent threat of death has passed. Given that suicide attempt is the single greatest risk factor of suicide death, all suicide attempts are opportunities—obligations—to seek out and obtain effective, suicide-specific care.

Figure 61. 39.6% of youth who attempted suicide weren’t treated by a health care professional.

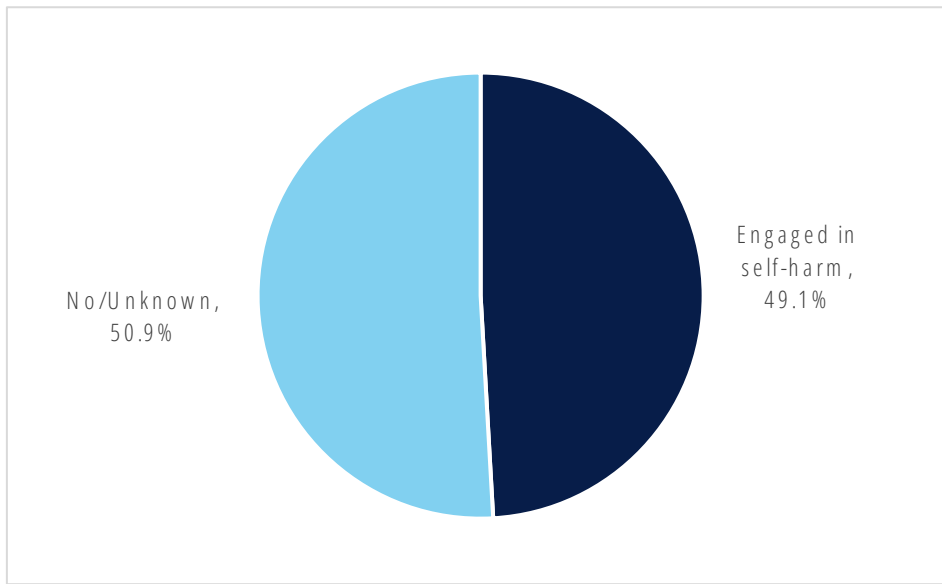


Youth who attempted suicide and who did receive treatment were treated mostly in emergency departments and transferred to inpatient hospital settings (67.8%), but some were treated in non-emergent clinical settings as well (25.9%). Informants reported that they didn’t think the treatment helped for 44.4% of youth who received treatment after attempting suicide; 48.2% said that treatment helped, and 7.4% indicated that they were unsure.

In their most recent non-fatal attempt, youth were most likely to have attempted by overdose (45.8%), followed by hanging (25.0%). Of those who attempted suicide by overdose, 59.1% attempted using over-the counter medication or medication that was not prescribed to them; 40.9% attempted using their own prescription medication. Other methods included cutting, jumping from a height, crashing a motor vehicle at a high rate of speed, drowning, and using a poison. In their fatal attempt, very few youths (5) used the same method that they did in their previous non-fatal attempt.

Non-suicidal self-injury (NSSI). Neary half of all youth (49.1%) who died by suicide had a history of engaging in non-suicidal self-injury. 1.9% of youth may have engaged in NSSI, but informants were unsure. NSSI includes superficial cuts to the skin, usually on the wrists or upper thigh, although these cuts can be anywhere on the body. Other forms of NSSI, or self-harm, include burning or finding other ways to inflict mild to moderate pain on oneself.

Figure 62. Proportion of youth engaged in non-suicidal self-injury



53.9% of youth were treated for NSSI, according to informants (5.8% were unsure). 82.7% of parents were aware of a youth's engagement in NSSI.

Other findings on suicidal behavior and NSSI. 21.3% of youth who died by suicide had no history of suicidal behavior, either talking about or attempting suicide. However, of this group with no suicidal history, 47.8% did engage in NSSI. Of the 108 youth in this study, 11.1% had no history of any suicidal behavior or NSSI; and 17 had expressed suicide ideation, attempted suicide, and engaged in NSSI.

Pain. 38.0% of youth who died by suicide complained of being in pain. Of youth who reported to be in pain, 43.9% ranked that pain at a 4 out of 4, meaning the most intense pain on the scale. 29.3% ranked the pain as a 3, and 14.6% ranked it as a 2 or a 1. No informants ranked the youth's pain as a 0 (slight or no pain). 53.7% of youth were reported to be in pain frequently: at least daily. 26.8% were reported to be in pain at least once per week. 65.0% of youth were reported to be in emotional pain, 17.1% in physical pain, 9.8% in both physical and emotional pain, and 7.3% had pain, but informants were unsure if it was physical, emotional or both.

Warning signs of suicide

Behaviors. Investigators examined a number of risk factors and warning signs identified in previous suicide research and commonly used in psychological autopsy studies. Because this study examines youth who died by suicide, investigators anticipated that these youth would exhibit a number of these features. Table 6 details the number of youths who died by suicide who exhibited these risk factors these risk factors and warning signs.

Table 6. Risk and warning signs of suicide, their frequency and proximity to death

Risk Factor/Warning Sign	Count	%	Count of youth who exhibited risk factor/ warning sign within 2 weeks of death	%
Burdensomeness	53	49.1	24	22.2
Feeling trapped	49	45.4	25	23.1
Purposelessness	42	38.9	15	13.9
Hopelessness	51	47.2	25	23.1
Frequent mood changes	65	60.2	30	27.8
Increasing anger	33	30.6	18	16.7
Increasing recklessness	37	34.3	14	13.0
Increasing cognitive rigidity	47	43.5	35	32.4
Increasing lack of motivation	46	42.6	22	20.4
Increasing irritability	43	39.8	20	18.5
Increasing loneliness	50	46.3	25	23.1
Acted confused or disoriented	15	13.9	8	7.4
Inflated sense of self	24	22.2	-	-
Wanted to be reunited with someone who died	12	11.1	-	-
Unwanted flashbacks	12	11.1	-	-
Experiencing hallucinations, delusions, or trouble recognizing friends or family	11	10.2	6	5.6
Experiencing poor judgement, such as not understanding what is going on socially	19	17.6	8	7.4

Most youth who died by suicide exhibited a warning sign at some point prior to their death, but these warning signs, taken individually, were rather low frequencies, particularly in terms of their proximity to the youth's death by suicide. However, when these risk factors are taken collectively, they may be a better indicator of increased suicide risk. 25.0% of all youth in the study exhibited 10 or more of these behaviors and/or warning signs. 34.3% exhibited 7 to 9 of these features or behaviors, 18.5% exhibited 4 to 6, and 39.6% exhibited 1 to 3. 5.6% showed none of these 17 risk behaviors or features. Additional analysis on the combination or constellation of these behaviors and features may show unique patterns but this analysis is beyond the scope of this report.¹²

When comparing responses across informant types, peers were far more likely than parents to report subtle or indirect warning signs of suicide. These included both verbal and behavioral signs. Peers were more likely to report indirect verbal warning signs such as stating that youth felt like a burden or felt trapped, that youth felt they had no purpose or hopeless, expressing that they felt more lonely, joking about suicide, and experiencing thoughts of guilt, remorse, or ruin. Peers were also more attuned to changes in behavior and mood and were more likely than caregivers to report that youth had more frequent mood changes, experienced increased anger, or were more reckless or impulsive. Peers were also significantly more likely to report that the youth were in pain that they found unbearable, either physically or emotionally

Other characteristics. 62.7% of youth were reported to be impulsive. Investigators asked if the youth often engaged in activities without planning them or without thinking about the consequences or result of the activity. Some examples informants provided related to impulsive behaviors were blurred with high risk taking, such as cliff jumping at night or driving fast. Youth who were impulsive, however, were no more or less likely to disclose a suicide plan. Youth who were reported to be impulsive (62.7%) were more likely to die by suicide after an activating event—an argument, break up with a significant other, or being disciplined. Youth who were not impulsive were as likely to have died by suicide after an activating event as they were in the absence of an activating event. In other words, impulsive youth were more likely to die by suicide following an activating event than youth who were not reported to be impulsive. Impulsivity ought to be further explored in tandem with other risk factors identified in this study.

Controlling behaviors, such as perfectionism (i.e., the desire or need for everything to be perfect) or having an inflexible personality (i.e., unable to “go with the flow”) are associated with higher suicide risk. Nearly half (46.3%) of the youth in this study were reported to be perfectionists. 22.0% were reported to have inflexible personality types. 17.0% had both inflexible personality types and were described as a perfectionist.

¹² Rather, investigators view this set of common behaviors as validating measures of the rest of the data in this study. In other words, investigators discovered levels of each of these indicators that were expected. If all youth who died by suicide were complaining of unwanted flashbacks, for example, that may indicate a problem with the data or how it is collected. That 10.2% of youth in the study—a relatively low number compared to other behaviors or features—were reported to complain of unwanted flashbacks suggests the data in this report is accurate.

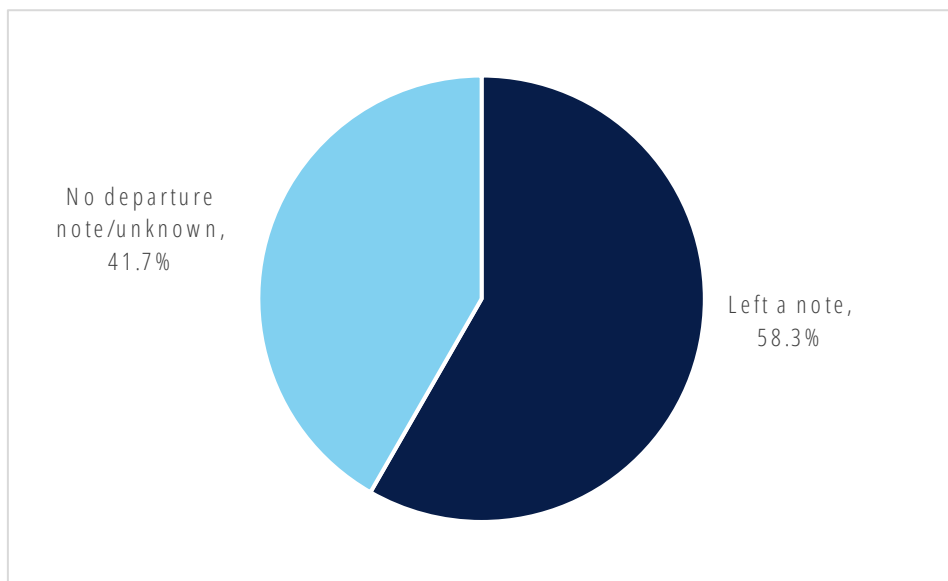
Coping skills and their failure. Investigators asked informants how youth typically dealt with stressful events. Responses ranged from positive coping mechanisms, such as exercise, reading, or engaging in an activity; to negative coping mechanisms, including drugs, alcohol, engaging in risky sex, becoming angry and violent, and engaging in non-suicidal self-injury. Positive or negative, investigators queried informants about whether the youth stopped engaging in coping behaviors prior to their suicide: 23.4% indicated that they had stopped doing the things they used to do to cope. 34.6% were reported to engage more in these coping behaviors. Key to understanding engagement in coping mechanisms is whether they changed: 56.5% of youth changed their behaviors relative to their usual coping mechanisms leading up to death.

Preparatory behaviors for suicide. 81.5% of youth who died by suicide were known to have prepared in some way for their death by suicide or shown signs of resolve of its apparent inevitability. 20.4% gave away a prized possession. 42.7% called, visited, or texted at least one person to say goodbye. While much this behavior—both giving things away and saying goodbye—were viewed as strange to most parents and friends, most of these gestures were not viewed as preparatory behaviors for suicide until after the youth had died.

15.7% divulged a suicide plan to someone else. In 25% of deaths, there was evidence—usually discovered after the youth had died—of rehearsal. Rehearsal includes tying knots to prepare for hanging, or practicing loading a gun, or placing an unloaded gun to the head. Rehearsal behavior is often difficult to discern from a suicide attempt postmortem because the youth’s intent behind the action has to be transparent. For example, someone who holds an unloaded gun to their head may be attempting to overcome fear about pointing a gun at themselves, but because the gun is unloaded, it is clear that their intent is not to die by pointing a gun to their head.

58.3% of youth left a departure note. Notes included lengthy handwritten or typewritten notes that attempted to explain why they had chosen to end their life, or brief, hastily written messages. Some youth wrote multiple notes to individual people. These notes generally distilled into three themes: apologetic (e.g., “I’m sorry”), anger toward a parent or significant other (e.g., “You did this), or exasperation (e.g., “I can’t do this anymore”). Some provided instructions on what to do with their possessions or pertained to their memorial service.

Figure 63. Nearly 3 in 5 youth left a departure note



Other circumstances leading up to suicide death. Over half (56.5%) of youth were reported by informants to be happier or in a lighter mood in the weeks leading up to their death. Many informants reported that the youth was a “different person” in the days or even weeks leading up to the death. Consequently, the death came as more of a shock to family and friends because they interpreted this lighter mood as a sign that the youth was coming out of a difficult period behaviorally.

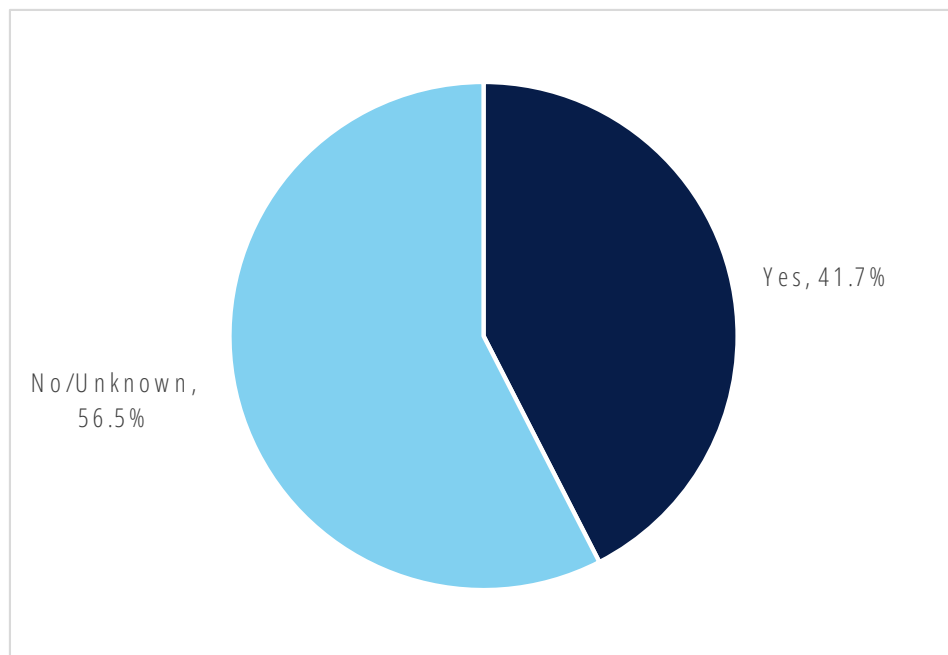
Investigators explored many specific aspects of events and circumstances surrounding youth leading up to their death by suicide. Even so, informants added additional information about other significant events in the youth’s home life that occurred leading up to the death. 51.9% of youth in the study had some other life event or circumstances beyond what was captured elsewhere in the interviews. The most common of these was family conflict between the youth and their siblings and/or parents (48.2%), followed by parental conflict between parents (14.3%), and a recent move (7.1%).

Investigators also explored if there were additional circumstances at school or work that were causing the youth distress leading up their death: 28.7% reported such distress. Most of the nature of this conflict was unknown (55.2%), followed by a recent romantic rejection (13.8%), and conflict with friends (10.3%).

Suicide diffusion and contagion

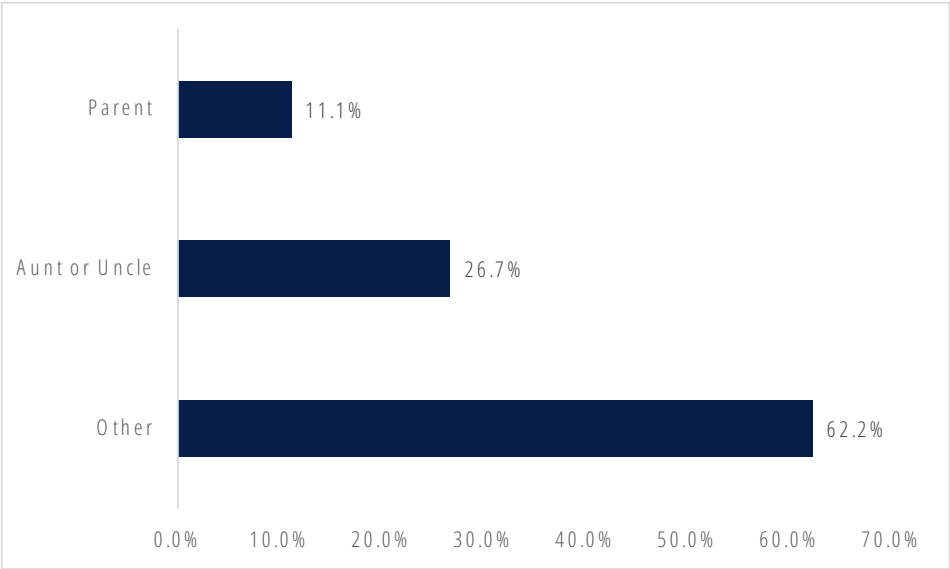
Investigators examined whether youth knew others who had died by suicide or attempted suicide and lived.

Figure 64. Two out of five youth who died by suicide lost a family member to suicide prior to their own death by suicide.



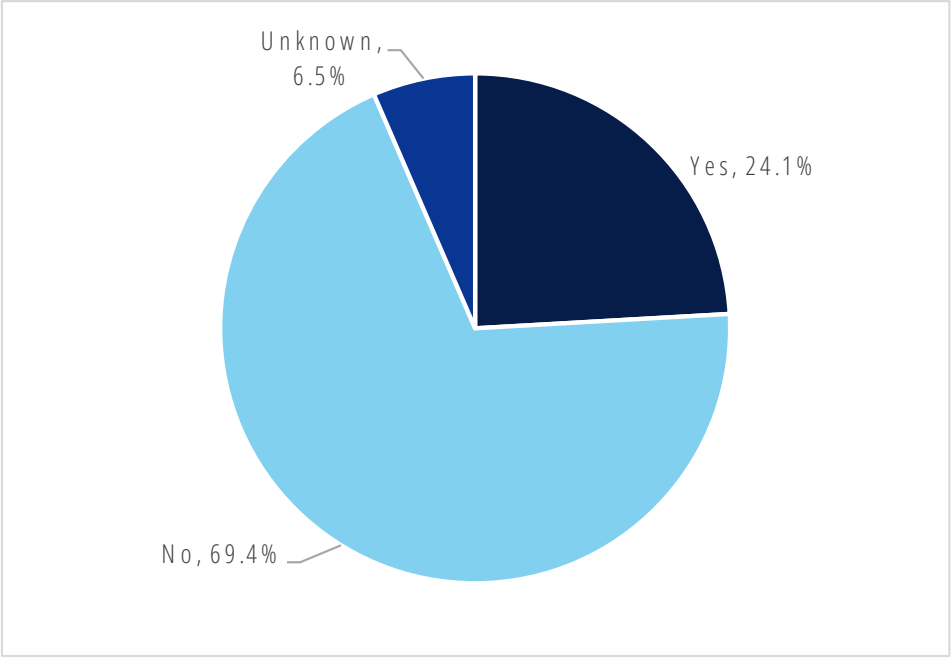
41.7% of youth had a family member die by suicide; 71.1% of these family members who died were genetically connected to the youth, meaning they shared common ancestry as opposed to a family member who married into or was adopted into a family. 11.1% of youth lost a parent to suicide prior to their own death, 27% lost an aunt or an uncle. The remainder of family members included siblings—both of these siblings were included in this study—cousins, grandparents, great grandparents, and distant relatives. Most of these family deaths (82.2%) occurred more than 2 years prior to the youth's death by suicide.

Figure 65. Family members of youth who died by suicide included, parents, aunts and uncles and others. This figure shows the relationship of person who died by suicide to the youth.



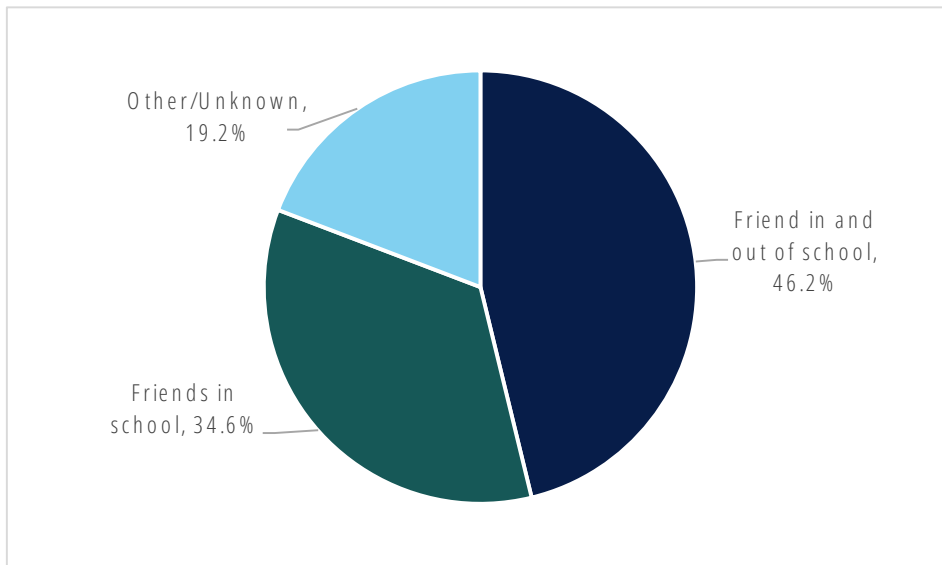
A third (33.3%) of youth had family members who attempted suicide who did not die. These included parents (16.7%), siblings (22.2%), and the remainder were cousins, aunts or uncles, grandparents (27.8%) or other distant relatives (33.3%). 58.0% of attempts by family members of youth who had a family member attempt suicide but not die occurred more than 6 months prior to the youth’s death. 33.0% of these non-fatal attempts occurred within one year, and the remainder occurred at an unknown time (8.3%).

Figure 66. Almost a quarter of youth lost a friend to suicide prior to their own death by suicide.



Nearly a quarter (24.0%) of youth had a friend die by suicide; an additional 6.5% of informants reported that the youth may have had a friend die by suicide, but they weren't sure. The relationship between the youth who died by suicide and the friend who died by suicide was described as a best friend or friend the youth saw both in and out of school for 46.1% of youth who lost a friend by suicide; 34.6% of friends who died by suicide were individuals the youth in this study only saw at school. 19.2% were described as friends of the family or friends from a time bound experience, like summer camp or a residential treatment facility.

Figure 67. Nearly half of friends who died by suicide were a member of the youth's friend group or best friend to the youth who died by suicide.

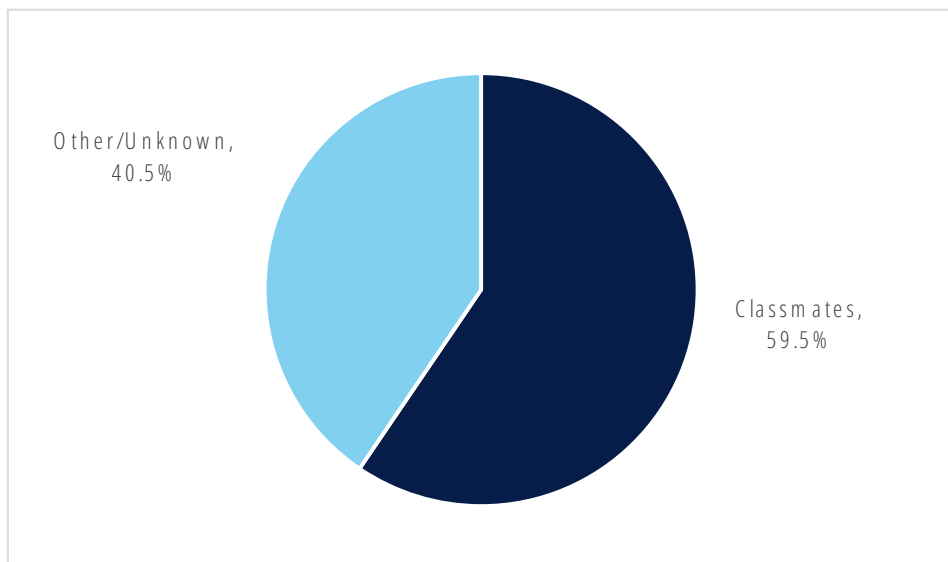


34.6% of these friends' deaths occurred within 6 months of the youth's death by suicide; an additional 38.5% occurred between 6 months and a year of the death of a friend by suicide, the remainder (15.4%) occurred longer than a year before the youth's death, or informants did not know when the friend died. Some informants reported that more youths died by suicide after the death of the youth investigators were asking about. Peers were more likely than parents to recount friends dying by suicide.

20.4% of youth had a friend attempt suicide, but not die. 22.7% of these attempts occurred within 6 months of the youth's death, 22.7% occurred between 6 months and a year, and the rest occurred sometime more than a year prior to the youth's death by suicide. Peers were similarly more likely to report non-fatal attempts of youth's friends than were parents.

In addition to friends and family members who died by suicide, investigators asked informants if there was anyone else who attended the same school, belonged to the same community group or the same religious congregation where someone died by suicide. Informants reported a suicide in this group for 48.2% of youth who died by suicide. Of these 51 instances, 43.1% were described as having attended the same school, but the youth in this study did not personally know the youth who died by suicide before them. Other relationships included neighbors, members of the same support or therapy group, through a friend of a friend and others.

Figure 68. Youth who died by suicide were often preceded in death by a classmate.



Investigators reported 15.7% of youth who died by suicide had a role model or someone they looked up to that they didn't know personally who died by suicide. An additional 3.7% were unsure.

Investigators examined the number of types of exposures to other suicides youth who died by suicide encountered. The four types of exposure include: exposure to the suicide death of a family member, exposure to the suicide death of a friend, exposure to the suicide death of a community member, and exposure to the suicide death of a role model. 46.3% of youth were exposed to only one type of suicide loss, 24.1% were exposed to two types, 9.3% to 3 types, and 1.9% to all 4 types. This grouping of types does not account for dosing; that is, the number of deaths within each type the youth may have been exposed to. Investigators did not systematically gather the number of exposures within each suicide loss type, but some youth were exposed to as many as 3 suicide deaths within a specific suicide loss type.

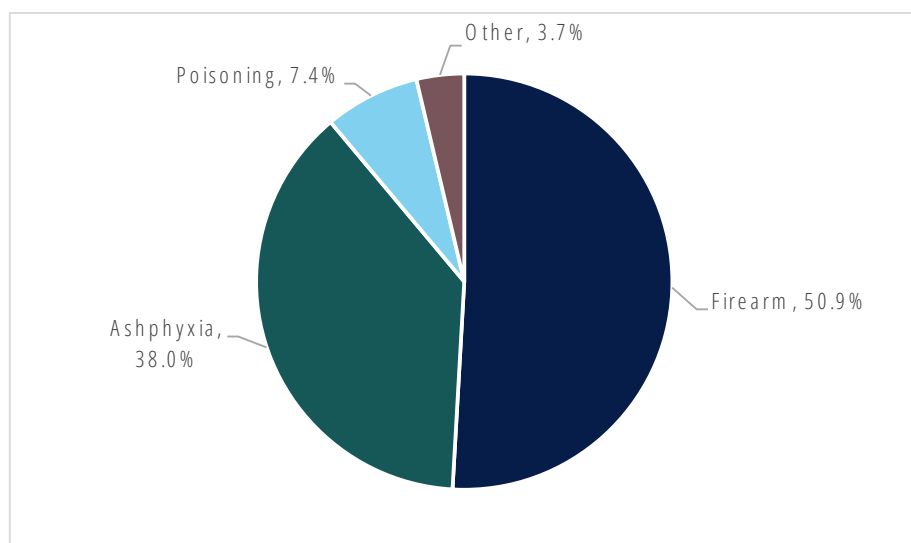
Investigators also examined the importance of these preceding suicide deaths to the youth who died. Of those who lost a family member, friend, community member, or role model, 16.1% were reported to have obsessed over the death of the person they lost.

Firearms

If the youth died by suicide using a firearm, we used a specific set of questions regarding those circumstances. If the youth died by suicide using some other method, we asked abbreviated questions about their access to firearms.

Of the 203 youth who died between 2016 and 2019, 48.8% died by suicide using a firearm. Of the 108 youth whose families agreed to participate in this study, 50.9% died by suicide using a firearm; the use of a firearm among youth is common and offers unique opportunities to create safety for youth who are experiencing a suicidal crisis.

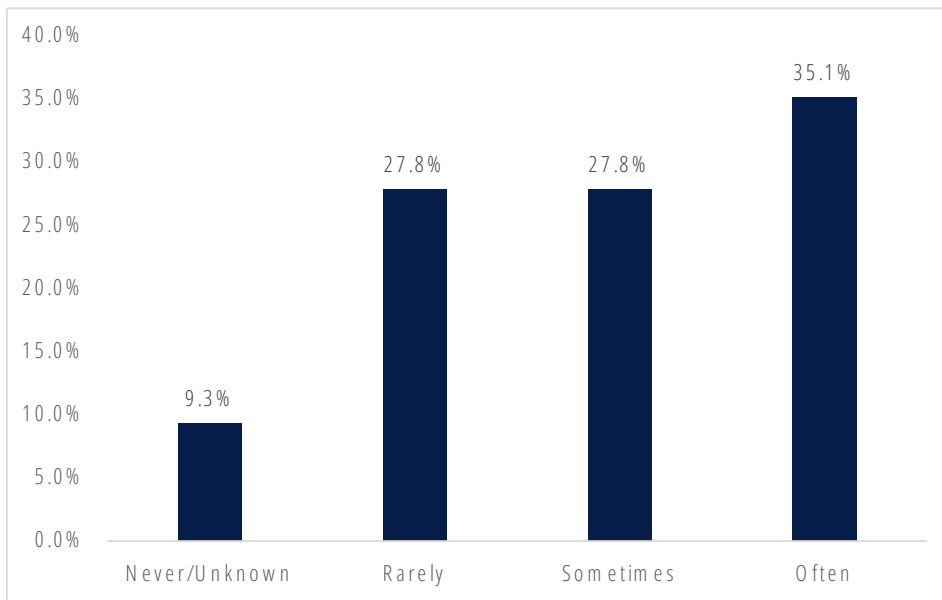
Figure 69. Half of youth died by suicide using a firearm.



The vast majority (88.9%) of firearms used by youth in this study were from their home. Just 11.0% used a firearm that they obtained from outside of their home. 87.0% of these firearms were owned by either the youth or their parents. 11.1% were owned by a relative who lived out of the home, typically a grandparent. There were fewer than 4 instances in which a youth used a firearm at a friend or acquaintance's house. Most (75.9%) of these firearms were a usual part of the home; that is, the firearm was not recently purchased, borrowed or otherwise obtained. We asked informants if the youth had ever played Russian Roulette—a possibly reckless and suicidal act in which only one of several chambers of a revolver has a live round of ammunition. The person spins the cylinder, places the gun to their head, then pulls the trigger knowing that the live round could discharge and result in their death.

Most youth who died by suicide using a firearm were familiar with how to use them. 35.0% were reported to have used firearms often, 27.8% used firearms sometimes, and 27.8% used firearms rarely (the remaining 9.3% used firearms rarely or informants did not know how often they used them). 45.5% of firearms used by youth were kept for sport shooting and hunting, 40.0% were primarily for protection. The remaining 14.5% were for some other reason, such as a gift, or informants did not know the primary reason for owning the gun.

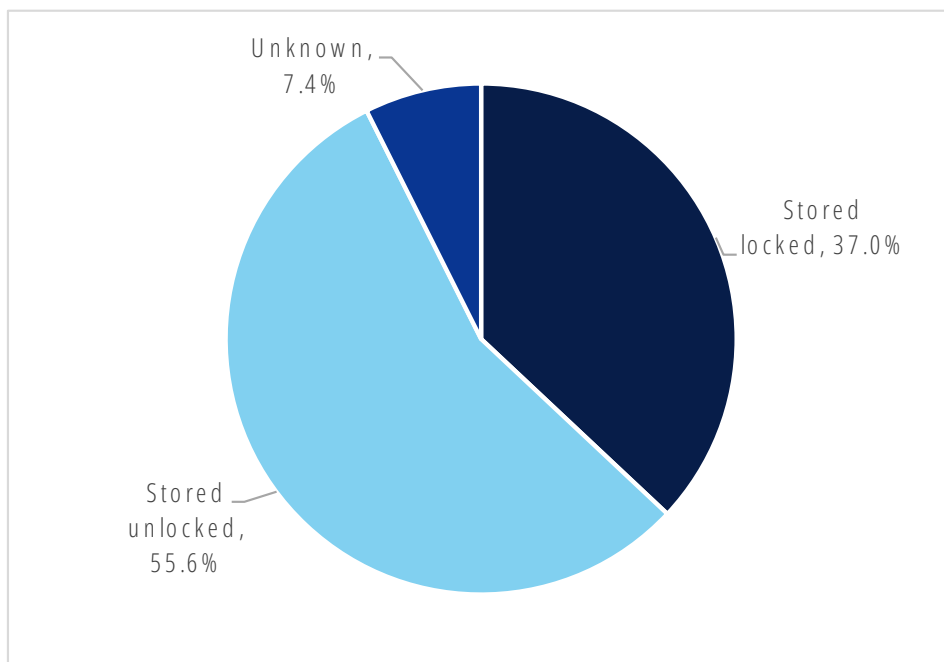
Figure 70. Youth who died by suicide using a firearm were familiar with firearms and used them frequently.



55.6% of the firearms used by youth who died by suicide were stored locked; 7.4% may have been stored locked, but informants were unsure. Despite being reported by informants as “locked,” 20 youth did indeed gain access to a firearm and subsequently died.

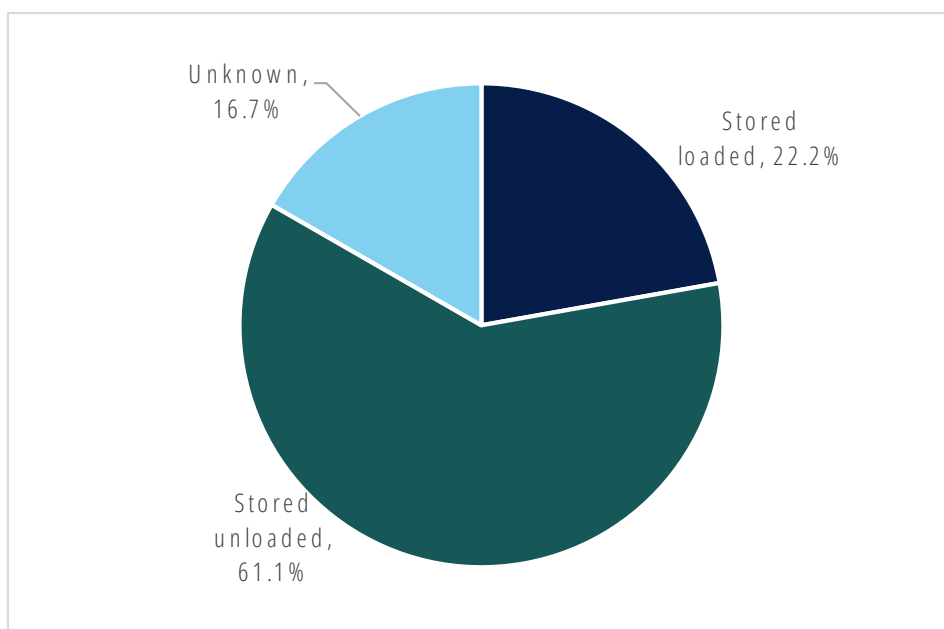
Of the locked firearms, 40.0% were used by teens who had access to them (e.g., they knew the code to the gun safe or had access to a key to the device that was restricting the gun, or they asked to borrow it from a locked location and were given access). An additional 40.0% obtained access to the firearm by defeating a gun lock or gun safe and gaining entry, or they stole the firearm when they were provided an opportunity (i.e., they did not have permission to access the firearm). 20.0% of circumstances regarding how a teen obtained a locked firearm were unknown. While nearly half (48.2%) of youth who died by suicide using a firearm had access for longer than a month prior to their death, 9.3% had been given access within a day of their death, and an additional 7.4% had access for a week to a month (the remainder, 35.2%, were unauthorized to use the firearm or there were some other circumstances related to when the youth obtained the firearm).

Figure 71. Most firearms used by youth who died by suicide using a firearm were stored unlocked.



22.2% of guns subsequently used in a youth suicide were stored loaded. Most of these loaded guns (9, or 75.0%) were also stored unlocked. Of guns that were stored unlocked, at least half (50.0%) were stored in the same location as the ammunition for that firearm (10.0% unknown). 50.0% of firearms stored locked were also stored with the corresponding ammunition.

Figure 72. Of the guns that were stored loaded, most were unlocked.



Of the 54 youth who died by suicide using a firearm, just 6 of these firearms were stored locked with the intention that the youth could not access the firearm (investigators could not determine how a youth obtained access to a firearm in 4 additional suicides by firearm). That 11.1% of firearms were reportedly inaccessible to youth who died by suicide using a firearm presents an opportunity for prevention.

Firearms were reported to be present in 35.9% of the households who died by suicide using a method other than a firearm. 64.2% of youth who died by suicide not using a firearm did not have access to a firearm; 24.5% of informants were unsure of the youth had access to a firearm. 11.3% reported that the youth did have access to a firearm, but used some other method. The majority of firearms in these households (62.3%) were restricted, mostly in a gun safe (68% of restricted guns). Informants reported that youth who died by suicide using a method other than a firearm were less likely to use a firearm frequently (48%; 39.6% were unsure how often the youth handled firearms). Investigators did not ask whether youth who died by suicide not using a firearm had access to locked firearms, as many of the youth who died by suicide using a firearm did.

Nearly half of youth in this study died by suicide by some other method than using a firearm (49.1%).

Discussion: Suicidal risk and behavior, self-harm, and access to lethal means

A previous suicide attempt is a major risk factor for a future suicide attempt—a finding that has been confirmed in multiple studies of suicide (Mendez-Bustos et al., 2013). And, individuals who attempt suicide more than once have an increased likelihood of attempting suicide again in the future (Miranda et al., 2008). 44% of youth who died by suicide in this study had one previous suicide attempt. Of youth with a history of attempt, many attempted just once ever prior to their fatal attempt, but about an equal proportion of youth had a history of two or more attempts. According to SHARP data from 2019, 6.9% of students in 6th, 8th, 10th and 12th grade had attempted suicide in the previous 12 months (DHHS, 2019). It's not surprising that, among youth who died by suicide, a higher proportion had attempted suicide non-fatally at least once than the general population of students. Our findings confirm findings from previous meta-analyses of suicide attempters. Additionally, our data add to the literature that a previous, non-fatal suicide attempt is among the highest risk factors for a future suicide attempt.

It's also notable, however, that 53.7% of youth who died by suicide had no history of a previous suicide attempt; i.e., their first attempt was fatal. These youth may present different risk and protective profiles, clinically, genetically and possibly by sex (Coon et al., 2024). We recommend more research on youth with and without a history of suicidal behavior using UYSRP and other data sources.

Non-suicidal self-injury (NSSI)—behavior that typically includes cutting, burning and other methods to inflict pain but not attempt suicide—is widely understood as a risk factor for a future suicide attempt (Brunner et al., 2021; Glenn & Klonski, 2013). Data from the 2019 SHARP survey show that 15.4% of youth engaged in self-harm in the previous 12 months. And, students who attempted suicide within the previous 12 months

were also more likely to engage in NSSI—and with greater frequency (DHHS, 2019). Half of the youth who died by suicide in this study engaged in self-harm. Youth who engaged in NSSI were also twice as likely to have attempted suicide previously. Because NSSI is strongly linked to anxiety, depression, and other psychiatric disorders (Brunner et al., 2021), this evidence again suggests that there are clinical differences between youth with a history of suicide attempt compared to youth without a history of attempt (Coon et al., 2024). In any case, youth who are known to be engaged in NSSI should be assessed for suicidal behavior regularly, and even in the absence of suicidal thinking or planning, parents, educators and clinicians should consider creating a safety plan and revisiting that safety plan regularly.

Pain is understudied in youth as it relates to suicide risk. However, in older adults, physical pain is a well-known, yet often misunderstood or discounted, risk factor for suicide (Coon et al., 2022; Li et al., 2023). In this study, however, we asked about pain broadly, including emotional and physical pain, and then asked informants to describe the pain. While several informants described physical pain—often gastrointestinal pain—most described deep, sustained emotional pain. As we discussed previously regarding mental health, many youth who died by suicide were experiencing emotional anguish. Our study calls for more research on emotional distress (i.e., pain) as its own risk factor for suicide—separate from psychopathology.

Peers were more likely than parents to identify warning signs of suicide. These findings indicate that peers are a critical point of contact for youth experiencing thoughts of suicide and mental health crises, and it is imperative that peer education programs address these indirect statements and behaviors as important warning signs of suicide and equip youth to respond by enlisting help from trusted adults.

Recognizing one of these behaviors or features may be enough to prompt a parent, educator, or health care professional to investigate further; recognizing multiple of these concerning behaviors or exhibiting these features may be cause to create and sustain safety and seek help from a mental health professional. Many of these youth, particularly those who exhibited between 4 and 9 of these behaviors never spoke about wanting to die by suicide. On the other hand, most of the children (4 out of 6) exhibited none of these 17 warning signs or behaviors but did tell someone they were thinking about suicide prior to their death. Just as we do for earthquakes, structure fires, and mass shootings—all of which are low frequency events for which many people will never experience—talking openly about suicidal thoughts and what to do if they arise is an imperative for all parents, educators and health care professionals.

One previous epidemiological investigation found that 1 in 5 youth who died by suicide in Utah left a note (Annor et al., 2017). We discovered that 58.3% of youth who died by suicide left a departure note. The presence of a departure note can sometimes provide a window into the thinking of the suicidal person, which may help some loss survivors get a better understanding behind the motive—the why—of the death. For suicide prevention advocates, however, suicide notes are an indicator of premeditation and planning. In some circumstances, the presence of a note offers an alternative explanation to impulsivity. And, to suicide prevention experts, the presence of a note may indicate when the youth resolved to end his or her own

life relative to the time they died. Some notes in this study were written months ahead of time, while most appeared written immediately preceding the death.

Investigators heard repeatedly that families and friends discovered notes weeks and months after the death of the youth to suicide, and some families who cannot access their child's electronic device suspect that there may be departure notes on those devices that they cannot retrieve. Investigators believe that the high proportion of youth who left notes in this study is due to the interval between the death and the timing of the interview itself, in most cases a year or longer.

We did not study the actual content of suicide notes as part of the scope of this study, investigators did ask about the content of the notes and they were summarized in interview notes. Most notes had an apologetic tone and conveyed messages of love and affection to parents, siblings and friends.

Researchers have identified compelling evidence to suggest that suicide is a behavior that can be transmitted through social networks, particularly adolescents (Abrutyn & Mueller, 2014; Mueller & Abrutyn, 2015; Mueller, Abrutyn, & Stockton, 2015; Mueller & Abrutyn, 2016). These social connections can be direct, meaning the youth knew the other person who died by suicide, or indirect, meaning the youth did not know the person who died by suicide.

Suicide can be socially transmitted in the media when suicide is not discussed safely, even when a person who did not know the other person who died by suicide. This phenomenon was observed after the deaths of Robin Williams and Kurt Cobain. Dosing—the number of exposures, especially among friends—may be important to understanding contagion and diffusion among youth who die by suicide. Several national suicide prevention organizations have released guidelines for reporting on media.

These findings strongly suggest that youth who lose someone close to suicide—or even within their community—would benefit greatly from access to suicide-specific bereavement care, known as postvention. Because youth who are exposed to suicide are at a higher risk than their non-exposed peers (Abrutyn & Mueller, 2014), ensuring access to quality, appropriate bereavement care in the wake of a suicide death is a key strategy to suicide prevention. Indeed, postvention is not simply a nice thing for schools and communities to do in the wake of a suicide death, but a lifesaving, public health intervention that could potentially disrupt patterns of suicidal behavior in entire social networks and families.

Following a report commissioned by the Utah legislature on the role of firearms in Utah's high rate of suicide (Barber et al., 2018; Barber et al., 2019), investigators in this study asked informants about the youth's access and familiarity with firearms. Storing firearms in a locked location, from a suicide prevention perspective, is a fundamental strategy to prevent suicide.

While our data does not tell us how many youths could not access firearms and subsequently did not die

(i.e., thwarted suicide attempts because a gun was not available) it does tell us that for youth who are experiencing distress, the safest place for a gun is away from the youth's residence. Gun safes and gun locks can be defeated and are of little to no barrier when a youth has access to the safe or key to disable a gun lock, despite them being stored locked. While many families stored their firearms in a gun safe or locked in some way, most youth who used firearms knew how to gain access to the firearm (e.g., knew where the key was kept to the safe or knew the code to disarm a lock).

Reducing access to firearms cannot be the only strategy to preventing youth suicide, but ought to be a primary objective of suicide prevention advocates. Firearms are far more lethal than other methods of suicide. Using a case fatality rate (CFR), which divides the number of deaths by the total number of attempts by any given method, Barber et al. (2018) determined that, in Utah, 86.5% of firearm related attempts ended in a death. Comparatively, 44.1% of deaths by asphyxia—the next most lethal method—resulted in death. 2.2% of suicide attempts by overdose or poisoning ended in death. If the 55 youth who died by suicide using a firearm in this study had attempted by an asphyxia method—and not attempted again—fewer (24 to 25 youths) of them would have died. Preventing suicide attempts from ever happening is ideal but acknowledging that some youth may attempt suicide despite these efforts means that suicide prevention must work to reduce the lethality of the methods available to youth experiencing a suicidal crisis.

The Utah Suicide Prevention Committee and Coalition strongly recommends safe storage of firearms, including removing firearms from homes where vulnerable youth reside, belongs in the domain of health care, education, faith communities, and peers. Talking about storing firearms in ways that youth cannot access them can have significant impact in reducing youth suicide.

Related Recommendations from the Suicide Child Fatality Review Committee:

- Everyone should participate in gatekeeper training to build skills to recognize individuals at increased risk of suicide and intervene appropriately
- Utah leaders should fund research to explore familial risk of suicide and ensure continued funding and support through code and policy.
- Mental health and prevention professionals should collaborate to create and distribute grief literacy materials in every sector of the community.
- School administrators, community leaders, and prevention professionals should collaborate to create and maintain comprehensive postvention plans and prepare a coordinated response to a death by suicide in a school and community grounded in the best available practices.
- Media companies should follow safe messaging guidelines when reporting about suicide to ensure community safety.

- Firearms should be stored away from the home when there is someone within the home who is experiencing a difficult time or suicidal thoughts. If firearms cannot be stored away from the home, they should be stored locked or disabled and teens should not know how to access them.
- Policymakers and law enforcement should collaborate to bolster Utah’s Safe Harbor laws, making storing firearms away from homes of vulnerable youth easier and more accessible.

Why suicide? Reflections from parents, family members, and friends

While many of the major themes found in the qualitative analysis of informant interviews are included in previous sections, a few unique themes emerged from the question asked to informants about why, in their opinion, the youth ended their life. Despite the comprehensive nature of the research protocol investigators used during these semi-structured interviews, open ended questions were still posed at the end of the interview to ensure investigators didn’t miss any component that was important. In the subsequent section, we discuss these themes.

These narratives, particularly those of parents and peers who didn’t know why their youth died by suicide, are powerful and accurately portray parents and friends desperately seeking answers to questions that may not be able to be answered. It is also important to know that these opinions can be driven by a multitude of factors and are deeply rooted in the realities of these individuals and families—but may not always reflect every youth or even most youth who died by suicide.

When there is no clear ‘why’? Informants’ perspectives.

Investigators asked informants at the end of the interview, “In your opinion, why did [Name] end [his] life?” Many parents and friends recounted reasons they had stated previously in response to specific questions, but several others felt that they had no answers.

One parent answered, *“It’s a million-dollar question. And I don’t have a damn clue. I wish I did.”* A peer said, *“Oh, I don’t know. There’s not even something I could make up a scenario for in my head. There’s really no reason.”*

Several narratives expanded on this theme to indicate that they felt that the youth who died did not exhibit typical warning signs for suicide or did not fit the profile or stereotypes associated with suicidal thoughts and behaviors.

“I mean, there’s, there’s a lot of kids that are bullied or, you know, do drugs or that attempt [suicide] or whatever. But he just didn’t fit the bill on that. Like, nobody knew; he didn’t show signs really. And it was just all of a sudden and everybody’s been shocked. Not one person thought for one second that it would have ever happened to him.”

“[It’s] scary to think that, you know, it’s not the kids with the big red flags all the time.

That it could just be just every day happy, normal kids and you just don’t know and maybe there were signs but they’re so hidden, but I didn’t see [the warning signs]. I didn’t know to see them.”

“[If] it could happen to us, it could happen to anybody because it wasn’t supposed to happen to us. Because everything you do as a parent, you have a laundry list of how you’re gonna be the best parent in the world. Everything you have on this little list about how you’re gonna be perfect. We checked off every item on that list. We were supposed to be the perfect parents, and it still happened. I mean, we talked to this kid. He, he knew us, we talked to him. We never just shuffled him off or anything.”

It is plausible that these responses are connected to another theme uncovered in the interviews: concealment. Some youth did not disclose that they were struggling or thinking of suicide. As one parent stated:

“[It] was a total shock to us. It was the last thing on any of our minds that something like that was even a possibility [...] I mean, we knew she was struggling a little bit, but we had no idea she was struggling to the extent that she was struggling because she never really let on to us.”

Peer informants disclosed that their friends concealed their thoughts of suicide and severity of their problems, even when they were otherwise emotionally close:

“[Yeah], not telling anyone, keeping it all to himself and not reaching out. He knew he had outlets. We would all talk to him all the time about things. He would just never really reciprocate. I think that it kind of always just seemed like he was doing good because we would always ask him if something was up and we would talk about things and he’d just be like, yeah, nothing’s wrong.”

A few narratives in this vein elaborated more on some of the barriers to disclosure, such as fear of judgement, feeling that they did not deserve help, or feeling the need to project an image of a person without problems:

“[He] just decided that he had to get out of this situation with this anxiety. It had built up too much. And so that’s why he made his decision and [suicide] was easier than talking.”

“If I had to guess I’d say he was suffering with depression for a long time, suffering with it silently and he just kind of let everything add up. He tried to create the illusion that I feel a lot of people try to create nowadays, especially with the social media era, which is they try to put forth this version of themselves where everything is good all the time. Because it’s what they see on social media [...] because of that, it can create this pressure of, well, if everybody else’s life is so great, why isn’t mine? It causes people to not realize that life is a struggle for everyone and can often make them feel trapped and out of options. Especially when you are somebody with depression, because I feel like a lot of people with depression refuse to seek help for that depression–

not because they don't feel that people should seek help for depression, but because they don't feel that they personally deserve it. Despite the fact that they do [...] So I feel like to some degree, he just didn't feel like there was anywhere he could turn... He probably struggled to some degree to communicate his emotions as well. Like I said, I knew him basically his entire life and he mentioned the fact that he was depressed [to] me maybe three or four times."

Impulsivity and Misconceptions of Lethality

Some narratives, largely from parents, indicate that impulsivity played a role in youth dying by suicide.

"[He] was just impulsive, he was impulsive and he made a mistake and it cost him his life. That's my opinion. I think maybe he just had some temporary feelings of not being good enough [...] I think it just got too deep, too fast and he couldn't get out of it."

"I think a lot of it was just impulsive. I think that night was really hard for him and I think something happened that day, or maybe he just got into his own head that night. [...] And I think for one brief second, he felt like the suicide was the only way to end all of it and he acted on that bleeding second."

Additionally, a subset of narratives related to impulse decisions indicate some parents and peers did not believe the youth understood the finality of their decision or believed that they would be rescued mid-attempt.

"I think that he was just not happy [...] he didn't really know how to address his emotions. He had a really hard time expressing the way he was feeling or something that really upset him. He made a decision that I want to think he didn't really think through. I don't think he understood the magnitude of the consequences that would have."

"I think he had a supremely bad day and made a bad decision [...] You know, I don't believe that he understood the finality of what he was doing."

"I honestly don't think she meant for it to work. I think she just kind of wanted to, like, scare [her parents] and like, show them and I think she thought somebody would find her sooner than they did [...]. And so, I honestly think it was just an impulse decision. Like she didn't even think about it or like, the consequences and she was just really upset [...]. I don't think she ever had any intention of dying for real, if that makes sense."

Developmental Transitions, Expectations, and Pressure

The theme of the pressures of adolescence and fear surrounding the future was also a unique finding that investigators did not uncover in other parts of informant interviews. Many parents and peers recalled that youth were stressed about the future—going to college or starting a career, living on their own, and other features of emerging adulthood. These developmental strains often existed in the background of more acute struggles and stressors was a contributing factor in the landscape at the end of their life:

“I think it was just the stress of moving out on his own, going to a new school and, um, going to college, which is, can be very difficult and he just wasn’t prepared for that part of his life.”

“I think he seemed unsettled in his career path, you know, after high school life choices. I think he didn’t know what he wanted to do with his life and I think that was pressure on himself. I don’t know that it’s ever openly discussed but you have to know what you wanna do [...]. And I think he was too impatient. He just needed one more day and then maybe he would have figured something out. But I think he just didn’t know what to do.”

Closely related to these narratives were others that expressed a “pressure cooker” situation of expectations, whether the youths’ own or those of others, that these youth felt they could not meet:

“I think a lot of it had to do with social expectations that he just felt like he wasn’t measuring up to and that I think a lot of it also had to do with him feeling bad that he wasn’t meeting the expectations.”

“I think that [he] just allowed himself to get trapped in this idea of what should be and who he was that didn’t give him a lot of freedom of movement. Like he was holding up these expectations for himself that nobody could meet [...] and it just felt to him like too much was coming apart.”

Future directions

A lot has changed for youth since the last youth who died by suicide was included in this study (December 2019). The COVID-19 pandemic fundamentally changed secondary education—more youth are attending school online or in hybrid formats than ever before. While social media and virtual life existed between 2016 and 2019, the years youth died in this study, online environments have continued to occupy larger shares of the lives of young people. At the same time, crisis services in Utah have expanded and more people are trained on how to respond to someone experiencing thoughts of suicide—all protective factors that prevent suicide. Researchers speculate that, while many of the findings in this study will remain true in future iterations of research on youth suicide mortality, some nuances will change, and research will continue to uncover opportunities for prevention, intervention, and better postvention in the future.

With generous support from the Huntsman Mental Health Institute, the Utah Department of Health and Human Services (DHHS) Office of the Medical Examiner will continue this research to include youth who died by suicide between 2020 and 2025. Using an iterative approach, the research questions address critical gaps in knowledge—like belongingness—among youth who died in this period. The next generation of the Utah Youth Suicide Research Project will also include more robust measures of protective elements, not just risk. This research is set to commence in the spring of 2026.

Alongside psychological autopsy data, secondary data collected prior to death can shed light on common themes among youth. As resources allow, researchers intend to de-silo this data to sharpen our collective understanding of youth—particularly system-involved youth—to improve services from assessment to intervention and beyond.

Recommendations

The following recommendations were made by the Suicide Child Fatality Review Committee. These recommendations were detailed in previous sections of this report and are compiled here in one list:

Recommendations related to demographic factors

- Court-approved providers should include suicide prevention training as part of the mandatory education required for parents seeking a divorce.
- Academic and government institutions should increase cultural competence in suicide and prevention research, including recruiting more researchers and staff from minority communities.
- Leaders and decision makers should promote public policy that reduces risk of suicide for LGBTQ+ youth

Recommendations related to adversity:

- DCFS and other child abuse prevention leaders should include a suicide prevention assessment and intervention protocol in child abuse investigations to identify youth who are seriously considering suicide and then intervene, even in unsubstantiated claims.
- Educate bystanders to recognize child maltreatment and how to report suspected child maltreatment.
- Parents and schools should promote healthy relationships and teach skills to deal with adversity and promote resilience.
- Schools should utilize social skills training to address skill deficits and model healthy peer to peer relationships.

Recommendations related to social connection:

- Religious leaders and communities should engage in deliberate strategies to promote acceptance and connectedness even in times of conflict or disagreement.
- Religious organizations should increase resources for youth experiencing a faith transition and promote ways to resolve conflict in a family if youth desire to participate differently or not participate in religious activities.
- Parents, schools and communities should promote education for parents and students on healthy dynamics in romantic relationships and dating as well as friendships and general peer interactions.
- Families, schools, policymakers, and communities should collaborate to design and implement programming and solutions to address urgent issues related to internet safety, including sexting and sextortion.
- School mental health professionals and healthcare providers should use validated screening tools in

the appropriate settings to identify youth who are having difficulty connecting to their peers and community and then work with youth and families to engage youth with their communities.

- Mental health professionals, suicide prevention advocates, and community leaders should work with youth and families to increase awareness and recognition of signs of suicide on social media and provide strategies to respond and help.

Recommendations related to system interactions:

- School districts and administrators should create structural transition programs in schools at the local education authority level and charter schools to support students transitioning from school to school within a local education authority. Similarly, the Utah State Board of Education should facilitate a program that ensures structured, supported transitions for youth who are moving from one school district to another, or to or from a charter school, or to or from another state.

- Educate school staff, including teachers and coaches, to recognize social withdrawal, a risk factor that increases the likelihood of suicide. Withdrawal may look like a student's attendance changing or the student becoming less socially engaged.

- Local education authorities should expand suicide assessment and provide services that reduce suicide risk, especially in alternative schools.

- Policymakers, schools and local behavioral health leadership should invest in increased wraparound services for vulnerable youth in all schools.

- Schools should increase fidelity of implementation of suicide prevention programs. Additionally, school administrators should engage in multiple evidence-based suicide prevention programs concurrently and utilize multiple modes of prevention and intervention for students.

- Educators and juvenile justice professionals should adhere to restorative accountability practices in school discipline and discipline in other settings.

Recommendations related to health care:

- Hospital systems and practitioners should align with American Academy of Pediatrics' recommendations of universal screening in primary care and emergency/urgent care settings and follow up with a brief intervention after a positive screen at all encounters.

- Therapists and mental health providers should assess for suicide, create and ensure safety frequently by using evidence-based suicide-specific interventions, then address underlying factors that increase suicide risk.

- Healthcare providers should be aware that they play an outsized role in suicide prevention in youth.

- Healthcare providers should increase availability of neuropsychiatric testing and resources after brain injury.

- Policymakers, communities and schools should couple investment in mental health care with investment in population level strategies to improve social determinants of health and mental health outcomes.

Recommendations related to substance use prevention and intervention:

- Healthcare providers should implement universal screening for substance abuse, especially alcohol and marijuana use, to identify problematic substance use related behaviors in youth and follow up on positive screen with a brief intervention.
- Substance use treatment providers for youth should incorporate screening and suicide prevention efforts in their treatment services.
- Communities should invest in strategies for better assessment and treatment of substance use and misuse, including more options for youth-specific treatment options.

Recommendations related to warning signs and known suicide risk:

- Everyone should participate in gatekeeper training to build skills to recognize individuals at increased risk of suicide and intervene appropriately
- Utah leaders should fund research to explore familial risk of suicide and ensure continued funding and support through code and policy.
- Mental health and prevention professionals should collaborate to create and distribute grief literacy materials in every sector of the community.
- School administrators, community leaders, and prevention professionals should collaborate to create and maintain comprehensive postvention plans and prepare a coordinated response to a death by suicide in a school and community grounded in the best available practices.
- Media companies should follow safe messaging guidelines when reporting about suicide to ensure community safety.
- Firearms should be stored away from the home when there is someone within the home who is experiencing a difficult time or suicidal thoughts. If firearms cannot be stored away from the home, they should be stored locked or disabled and teens should not know how to access them.
- Policymakers and law enforcement should collaborate to bolster Utah's Safe Harbor laws, making storing firearms away from homes of vulnerable youth easier and more accessible.

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