Suicide Education & Prevention Programs

Executive Summary

Between 2020-2021, 38 states enacted some form of legislation aimed at addressing suicide in the U.S. Suicide risk factors can include trauma, violence, abuse, familial mental health issues or substance abuse, as well as general mental health disorders. School-based education and awareness programs may play a role in identifying and addressing student mental health needs and suicide risks. Three bills, HB 2136, HB 2238, SB 1142, have been introduced in the Missouri General Assembly for the 2022 legislative session to address suicide risks by making suicide training available for educators, as well as by providing crisis prevention contact information and additional resources on student identification cards.

Highlights

- Suicide rates have risen since 2000, with more than half of states reporting a 30% increase in the overall number of suicides.
- Children in high-risk categories for suicide include rural, low-income, racial minority, and LGBTQ+ populations; males across all categories also commit suicide at higher rates than females.
    - More than half of people who die by suicide had no known mental health condition at the time of death
- State-level legislative approaches to suicide prevention are diverse, and can include strategic planning of mental health services; direct funding for school-based services, mental health education, training, and resources; and changes in school mental health policies.

Limitations

- While many methods indicate some level of effectiveness at preventing suicides, research has not determined that any single approach is optimal.
- More research is needed on both individual- and the wide variety of community-level approaches, including identifying precise roles for school staff and social workers.

Research Background

Suicide, Suicidal Ideation, and Risk Factors

According to the Centers for Disease Control and Prevention (CDC), suicide was the 10th leading overall cause of death in 2018. In 2019 the states with the highest rates of suicides were Wyoming, Alaska, Montana, and Colorado.[1,2] As of 2016, suicide was also the 2nd leading cause

of deaths in U.S. adolescents aged 15-19.[3] More than half of all U.S. states have reported at least a 30% increase in suicide deaths since the start of the 21st century.[1]

In 2018, an estimated 1.4 million suicide attempts were made in addition to those resulting in death. Family and friends report emotional and fiscal tolls related to these attempts, and suicide attempt-related medical care and work-loss costs are estimated at $70 billion a year.[1]

Suicide most often co-occurs with elevated life stressors and health issues that create an experience of hopelessness and despair. Certain risk factors that can elevate the chance for *suicidal ideation* (the contemplation of suicide) include Adverse Childhood Experiences (ACEs), which include violence, abuse, or familial mental health or substance abuse that can leave life-long trauma and altered brain development.[1] These can also coincide with general mental health disorders, with an estimated 16.5% of US children having at least one reported disorder in 2019.[1,4] Importantly, while certain risk factors may be associated with suicide, more than half of people who die by suicide had no known mental health condition at the time of death.[1]

High-Risk Youth Populations

Prolonged life stressors that can contribute to suicidal thoughts include bullying, harassment, stressful environments, relationship issues, recent deaths, or financial stress.[1] These stressors often co-occur during school years, prompting research on risk factors for youth populations.

Certain groups are particularly vulnerable to suicide, including children in rural communities (who may be exposed to difficult economic conditions and lack healthcare access), racial/ethnic minority populations (particularly American Indian or Alaskan Natives), and children who identify as LGBTQ+ (nearly 1/3 of the LGBTQ+ community has attempted suicide).[1] Males also die by suicide at much higher rates than females, with roughly 3.5-4.5 as many males dying compared to females at all age groups above age 14 (Figure 1).[5]

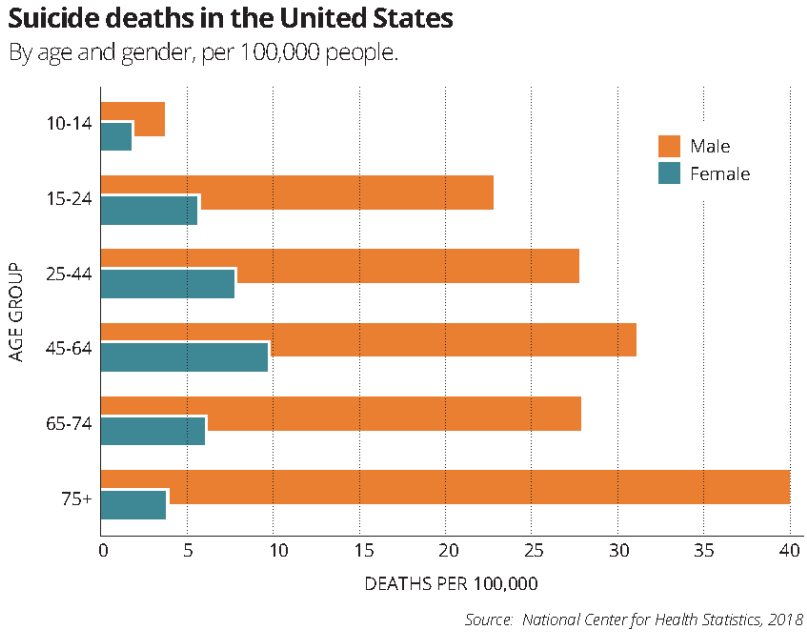

Figure 1: Breakdown of US Suicides by Age and Gender. The graph illustrates deaths per 100,000 Americans, including whether male (orange) or female (teal). Figure reproduced from 2018 data from the National Center for Health Statistics.[5]

The rate of suicide among females has been increasing, and there were increased reports of self-harm hospital admissions among young girls (aged 10-24) from 2001-2015.[6,7] One recent study has observed that frequent social media use (particularly since the start of the COVID-19 pandemic) is associated with increased suicidal ideation in adolescents.[8]

State-Level Legislation

State-level approaches to student suicide prevention are diverse, and can include[9]:

- Education and curricula in schools that teach about and reduce stigmas surrounding mental health (ex. Senate Paper 303, ME & HB 3257, SC)
- Suicide prevention programs that promote awareness, intervention, support services, and professional development (ex. SB 1731, IL & SB 52, OR & AB 1767, CA)
- Staff training that requires teachers to be trained on the impacts of trauma, and how to identify and respond to a student in need (ex. SB 205, IN & SB 211 LA)
- Mental health screenings of children (with parental consent) (ex. SB 7019, TN & HB 323 UT)
- Increased staffing ratios for school counselors and psychologists (ex. HB 1508, VA & HB 844, MD & HB 100, DE)
- School-based programs, such as telehealth, educational material access, hotlines, and comprehensive counseling (ex. HB 20-1113, CO & SB 2261, IA, & SB 5030, WA)
- Allowing excused absences during mental health emergencies (ex. SB 249, NV & SB 20-014, CO)
- Establishing working groups in educational agencies to further tailor additional services at the local level (ex. SR 45, HI, & HB 131, NH, & AB 644, WI)

Further, given the added strain the COVID-19 pandemic has had on both the mental health of students and access to comprehensive mental health services provided in schools, 38 states enacted laws that help support schools in their roles as providers of mental health services between 2020-2021 (Table 1).[4]

Finally, some states have sought to address common methods used for suicide. A 2019 CDC report showed that firearms made up 50.4% of suicide methods used, followed by suffocation (28.6%), poisonings (12.9%), and falls (2.5%).[10] To address this, North Carolina introduced a bill that provided funds for training on how to *C*ounsel people with *A*ccess to *L*ethal *M*eans (or CALM) program, including training health care providers and other professionals to counsel at-risk individuals or their families to store or restrict access to lethal means (such as medications or firearms).

Approach	Specified Population/Action	Number of States
Support & Improving the Strategic Planning of Mental Health Services	Working groups	8 states (e.g. AR, TX)
	Assessment of needs	5 states (e.g. AR, TX)
	Required standards & recommendations	7 states (e.g. LA)
Direct Funding for School-Based Mental Health Services	General Mental Health	22 states (e.g. KS, TN)
	Telehealth (behavioral & mental)	5 states (e.g. IL)
	Mental Health Providers	5 states (e.g. KY)
Mental Health Education, Training, & Resources	School staff	17 states (e.g. AR, KY, OK)
	Students	7 states (e.g. KY, IL)
	Crisis Hotlines on Student IDs	7 states (e.g. AR, TX)
Changes in School Mental Health Policies	Excused mental health absences	6 states (e.g. IL)
	Crisis response policy changes	5 states (e.g. NE)

Table 1: Summary of Laws Passed Between 2020-2021 to Support Mental Health. The table summarizes approaches that different states have taken to address mental health since the start of the COVID-19 pandemic. General approaches are listed (left column), as well as specifications regarding target groups to support or actions to take (middle column), and the number of states (right column, including relevant neighboring or close-by states to Missouri). Figure reproduced from 2022 data from the National Academy for State Health Policy.[4]

Missouri Legislative Approach

In the 2022 Missouri legislative session, three bills (HB 2136, HB 2238, SB 1142) have been introduced in both chambers of the General Assembly that amend current law to add various suicide prevention resources in schools. These include: 1) that school districts may provide two-hours of in-service, virtual, or self-review instruction on youth suicide awareness and prevention (which can count as professional development) to those in the practicing teacher assistance program each year, 2) to add suicide prevention hotlines and contacts (including local) on student identification cards, and 3) requiring public institutions of higher learning to also provide the suicide prevention contacts on identification cards (as well as campus security and resources), in addition to existing programs in crisis intervention, mental health, multimedia resources, communication, and anonymous reporting.

Similar bills have also been passed in neighboring states. In 2019, HB 1905 in Oklahoma required candidates in the teacher preparation system to study and respond to trauma, and SB 21 required the Board of Education to adopt biennial suicide awareness and drug abuse training, allowed the teaching of certain student grades about suicide awareness, and provided some civil liability immunities for teachers acting in good faith to report or refer an at-risk student. Twenty states (including KY & IL) have also chosen to adopt an eight-hour training module for educators, first responders, and health care professionals, known as the Mental Health First Aid program, provided by the National Council for Mental Wellbeing.

Studies on Mental Health Prevention Programs

Much of the research focus on suicide prevention techniques have focused on schools and social work programs as a crucial venue for identifying suicide risk. **School social workers can also be effective** in **aiding students to identify support resources**, and can use screening tools to determine risk. **However, standardized risk assessments are inconsistent**, and differentiating between risk factors (such as mental health disorders) versus warning signs (active suicidal ideation and expression) often confound screening standards.[12]

School nurses may provide interventions beyond those offered by mental health/counseling personnel in schools. One study has found that when nurses conducted mental health screenings of at-risk youth (such as during a physical exam), early detection of risk for suicide could be achieved. In particular, these outreach efforts were most effective when nurses were part of a coordinated, interdisciplinary team of members (including counseling staff, teachers, parents, and community-based professionals) to increase awareness of the students' needs. However, in many schools, **barriers to nurse participation exist**, such as lack of defined roles for nurses within mental health care, lack of competence in mental health care, and lack of training in how to screen for risks.[13]

School-based awareness programs can reduce suicide attempts and suicidal ideations, and interventions that may reduce access to lethal means, such as medications, firearms, and jump barriers may prevent suicide.[14] For example, since 2005 barriers to firearm access have demonstrated a 43% reduction in suicides and jump barriers have resulted in an 81% reduction. Psychiatric medications also play a role, although their effect on suicide is less specific.[14]

Certain personal circumstances and resources may also help prevent suicide. For example, strong family bonds may help cultivate resilience that can help protect children from the effects of Adverse Childhood Experiences (ACEs). These also extend to safe, stable, and nurturing relationships with family or community that build resilience, prevent violence, improve mental health in the short and long term.[1] Other resources may also reduce suicidal ideation. One study of the National Suicide Prevention Hotline found that callers were significantly less likely to report being depressed, overwhelmed, suicidal, and more likely to feel hopeful by the end of crisis calls when counselors were trained in Applied Suicide Intervention Skills (ASIST).[11]

Given the diversity of communities and techniques to address suicide risk, and the recency of more comprehensive approaches, no single strategy has been identified as a guaranteed preventative measure.[14] As such, more data is needed in both individual- and population-level approaches, including skills and awareness training, mental health education of physicians, and internet/hotline support systems, to make firm conclusions about what interventions (and combinations of interventions) are most effective at preventing suicide.

COVID-19 and Suicide

The number of mental health-related difficulties reported in children and adolescents, particularly those already diagnosed with a mental health disorder, has increased during the

COVID-19 pandemic. During the Fall of 2021 (referred as the second wave of the pandemic), increased reports of suicidal attempts and ideation have been documented.[15] Despite the increase in suicidal ideation, rates of actual suicide in the US have remained stable based on data from the first year of the pandemic.[16]

Changes in mental health service delivery in the early months of the pandemic correlated to a roughly ~1% increased rate in positive suicide risk screening assessments at a children's hospital.[17] Symptoms of psychiatric, neurological and physical illnesses, as well as inflammatory damage to the brain among patients with post-COVID long-haul syndrome may be associated with an increased risk of suicidal tendencies. However, given the ongoing nature of the pandemic, long-term health effects are yet to be studied, and total rates of suicide as a result of the pandemic may not be known for years.[16]

For more information on the health and mental effects that COVID-19 has had on children and their education, please see these science notes: COVID-19 & K-12 Education; COVID-19, Mental Health & Substance Abuse; COVID-19 Delta Variant and Vaccine Efficacy.

References

1. Severance-Medaris, C. *Reversing the Rising Tide of Suicide*, (2020). <https://www.ncsl.org/research/health/reversing-the-rising-tide-of-suicide.aspx>.
2. *Mental Health and Substance Use State Fact Sheets*, (2021). <https://www.kff.org/statedata/mental-health-and-substance-use-state-fact-sheets/>.
3. *Underlying Cause of Death 1999-2014*, (2016). <http://wonder.cdc.gov/ucd-icd10.html>.
4. Randi, O. G., Z. *States Take Action to Address Children's Mental Health in Schools*, (2022). <https://www.nashp.org/states-take-action-to-address-childrens-mental-health-in-schools/>.
5. Hedegaard, H., Curtin, S. C. & Warner, M. (2018). *Suicide rates in the United States continue to increase*. Vol. 309 (US Department of Health and Human Services, Centers for Disease Control and …, 2018).
6. Mercado, M. C., Holland, K., Leemis, R. W., Stone, D. M. & Wang, J. (2017). Trends in Emergency Department Visits for Nonfatal Self-inflicted Injuries Among Youth Aged 10 to 24 Years in the United States, 2001-2015. *Jama* **318**, 1931-1933, doi:10.1001/jama.2017.13317 .
7. Miron, O., Yu, K.-H., Wilf-Miron, R. & Kohane, I. S. (2019). Suicide Rates Among Adolescents and Young Adults in the United States, 2000-2017. *Jama* **321**, 2362-2364, doi:10.1001/jama.2019.5054 .
8. Schluter, P. J. *et al.* (2022). Patterns of Suicide Ideation Across Eight Countries in Four Continents During the COVID-19 Pandemic Era: Repeated Cross-sectional Study. *JMIR Public Health Surveill* **8**, e32140, doi:10.2196/32140.
9. Rivera, A. *Student Mental Health Legislative Trends*, (2021). <https://www.ncsl.org/research/education/student-mental-health-legislative-trends-magazine2021.aspx>
10. *Web-based Injury Statistics Query and Reporting System (WISQARS)*, (2021). <www.cdc.gov/injury/wisqars>.
11. Gould, M. S., Cross, W., Pisani, A. R., Munfakh, J. L. & Kleinman, M. (2013). Impact of Applied Suicide Intervention Skills Training on the National Suicide Prevention Lifeline. *Suicide Life Threat Behav* **43**, 676-691, doi:10.1111/sltb.12049 .
12. Joe, S. & Bryant, H. (2007). Evidence-Based Suicide Prevention Screening in Schools. *Child Sch* **29**, 219-227, doi:10.1093/cs/29.4.219 .
13. Pestaner, M. C., Tyndall, D. E. & Powell, S. B. (2019). The Role of the School Nurse in Suicide Interventions: An Integrative Review. *The Journal of School Nursing* **37**, 41-50, doi:10.1177/1059840519889679.
14. Zalsman, G. *et al.* (2016). Suicide prevention strategies revisited: 10-year systematic review. *Lancet Psychiatry* **3**, 646-659, doi:10.1016/s2215-0366(16)30030-x .
15. Bera, L., Souchon, M., Ladsous, A., Colin, V. & Lopez-Castroman, J. (2022). Emotional and Behavioral Impact of the COVID-19 Epidemic in Adolescents. *Curr Psychiatry Rep*, 1-10, doi:10.1007/s11920-022-01313-8.
16. Efstathiou, V. *et al.* (2022). Suicidality and COVID-19: Suicidal ideation, suicidal behaviors and completed suicides amidst the COVID-19 pandemic (Review). *Exp Ther Med* **23**, 107-107, doi:10.3892/etm.2021.11030.
17. Lantos, J. D. *et al.* (2022). Suicide Risk in Adolescents During the COVID-19 Pandemic. *Pediatrics* **149**, doi:10.1542/peds.2021-053486.