REVISED

REPORT 03 OF THE COUNCIL ON SCIENCE AND PUBLIC HEALTH (June, 2021)
Addressing Increases in Youth Suicide
(Reference Committee D)

EXECUTIVE SUMMARY

Objective. In the United States, suicide is the 10th overall leading cause of death. Suicides are a preventable cause of death and have devastating effects on families, peers, and communities. Youth and young adult suicide rates rose 54.7 percent from 2007 to 2018 even before the major behavioral and psychological disruptions caused by the COVID-19 pandemic.[1] Despite a small decrease in suicide mortality in 2018 and 2019 data, suicide deaths in youth and young adults overall have been steadily increasing since 2007 and in 2019 suicide was the second leading cause of deaths among those 10-24 years of age.[2] Due to the alarming increase in suicide and suicide risk in youth and young adults, the Council on Science and Public Health initiated this report to further examine this issue and to provide relevant updates to American Medical Association (AMA) policy.

Methods. English-language articles were selected from a search of the PubMed database through January of 2021 using the search terms "teen," "youth," and "adolescent," coupled with "suicide," "suicide contagion," "suicidal ideation," "and "suicidal thoughts and behavior." Related search terms linked with the above were "mental health," "substance use," "trauma," "ACEs," "LGBTQ," and "bullying." Additional articles were identified from a review of the references cited in retrieved publications. Searches of selected medical specialty society and international, national, and local government agency websites were conducted to identify clinical guidelines, position statements, and reports.

Results. Increases in suicides and suicide attempts have occurred among both male and female youth, with males using more lethal means such as firearms in completed suicides. Youth and young adults in the Native American/Alaska Native demographic groups show the highest number of completed suicides and attempts. Increases in instances of cyberbullying are an important factor associated with youth suicide and requires additional attention. Increases in screen time and in the use of digital devices, the internet, and social networking sites are associated with decreases in time sleeping and increases in depression. Additionally, stresses and disruption associated with the COVID-19 pandemic, such as physical distancing and isolation, have worsened mental health for some youth and possibly increased suicidal ideation. Importantly, evidence clearly notes that when co-occurring mental illness (depression, anxiety), substance use disorder, adverse childhood experiences, or other stressors are present, the risk for suicidal thoughts or behavior increases.

Conclusions. Enhancing physician capability and capacity to screen for, identify, and respond to risk factors for youth suicide are essential to effective suicide prevention efforts. Physicians who see patients in these age groups, and not solely pediatric psychiatrists and addiction medicine physicians, should have access to the tools to identify acute risk and respond with appropriate clinical interventions, linkages to appropriate counseling services, and safety planning. They should also be able to identify and promote relevant protective factors to mitigate the impact of underlying risk factors. Collectively, physicians, parents, teachers, peers, clergy, youth ministers, social workers, counselors, and others, are critical in identifying when a young person is experiencing a period of imminent risk and assisting in preventing suicide attempts.

REVISED

REPORT OF THE COUNCIL ON SCIENCE AND PUBLIC HEALTH

CSAPH Report 03-JUN-21

Subject: Addressing Increases in Youth Suicide

Presented by: Kira A. Geraci-Ciardullo, MD, MPH, Chair

Referred to: Reference Committee D

INTRODUCTION

In the United States, suicide is the 10th overall leading cause of death. Suicides are a preventable cause of death and have devastating effects on families and communities. Suicides and suicide attempts among youth, ages 10-24 have increased steadily since 2007. Data shows that although suicides remained relatively stable in this age group from 2000 to 2007, rates started to rise in 2007 and increased 54.7 percent through 2018.[1] While we do not yet know the full impact of the COVID-19 pandemic on youth suicide, the potential mental health consequences of COVID-related stressors are of concern. As a result of the steady increase in youth suicides, the Council on Science and Public Health initiated this report to understand current risk and protective factors, examine evidence-based interventions for youth and young adult suicide, and to update American Medical Association (AMA) policy accordingly.

The focus of this report will be on children, adolescents, and young adults age 10-24, hereinafter referred to in this report as youth. Data and trends in suicide in populations beyond this age group, while important, are outside the scope of this report.

METHODS

English-language articles were selected from a search of the PubMed database through January of 2021 using the search terms “teen,” “youth,” and “adolescent,” coupled with “suicide,” “suicide contagion,” “suicidal ideation,” “and “suicidal thoughts and behavior.” Related search terms linked with the above were “mental health,” “substance use,” “trauma,” “ACEs,” “LGBTQ,” and “bullying.” Additional articles were identified from a review of the references cited in retrieved publications. Searches of selected medical specialty society and international, national, and local government agency websites were conducted to identify clinical guidelines, position statements, and reports.

Much of the literature reviewed for this report uses the term “suicidal thoughts and behavior” or “STB” as shorthand to describe suicidal thoughts, ideation, planning, and suicide attempts. Non-suicidal self-injury (NSSI) is differentiated in the literature in the United States whereas in Europe it might be included as an STB. For the purposes of this report, the abbreviation STB will be used to mean suicidal thoughts, suicidal ideation and planning, and suicide attempts.

BACKGROUND

Addressing youth suicide is a critical and growing public health issue. Suicides in the United States rose since 2000, increasing 30 percent from 2000 to 2016, with rates increasing among all age groups in the 10-24 range and across 42 states. Rates of suicide in the 10-24 age group have risen 57.4 percent from 6.8 per 100,000 in 2007 to 10.7 per 100,000 in 2018. In 2017 approximately 2.4 percent of all students in grades 9-12 reported making a suicide attempt that required treatment by a physician or nurse.[3] Suicide was the second-leading cause of death for young people ages 15 to 24, second only to accidents in 2019.[2] While more recent data suggest there was a modest decrease in youth suicide in 2018 and 2019, overall levels of suicide among youth are still significantly higher than they were ten years before. And since 2019 stress on youth as well as adults has increased in the wake of the disruption associated with the COVID-19 pandemic, such as physical distancing and social isolation[1,2,4,5]

Total mortality of youth from suicide in 2017 was 6,200 deaths in those age 10-24, with that number rising to 6,807 in 2018.[6] Centers for Disease Control and Prevention (CDC) Youth Risk Behavior Surveillance Survey (YRBSS) data from 2019 show that more high school students were contemplating suicide, rising from 13.8 percent in 2009 to 18.8 percent in 2019.[7] Of all high school students in 2019, 8.9 percent reported having attempted suicide, with prevalence estimates highest among females (11.0 percent) and black non-Hispanic students (11.8 percent).[3] Completed suicides are more common in males at rates two to four times higher than females, but suicide attempts are 3-9 times more common in females overall.[8,9] From 2009 through 2019, prevalence of suicide attempts increased overall and particularly increased among female, non-Hispanic white, non-Hispanic black, and 12th-grade students.[7,10]

STB varies by race and ethnicity among youth. Native American Indian/Alaska Natives have had the highest suicide rate over the last 20 years. While suicide rates have historically been higher among White individuals than Black individuals, data suggests that suicide risk is increasing among Black youth. One study showed higher incidence of STB for Black youth in the 5-12 age group than White counterparts.[11] There is data showing overall increase in the rate of STB among Black youth age 12-17 through the period of 1991-2017, while rates for STB among White youth in that age group have decreased.[10] Rates of STB in Hispanic/Latinx female young adults also increased between 2000 and 2015.[12,13] In addition, sexual and gender minority youth are more likely to engage in suicidal behavior than their non-LGBTQ peers. It is important to understand the impact of structural racism, historical trauma, and accumulative stress on mental health in minority and historically marginalized communities, may contribute to depression and other risk factors for STB.[14-16]

In 2019 firearms were the leading cause of suicide death in those age 15-24 and the second leading cause of suicide death for those in the 10-14 age group. Suffocation is the other leading cause of suicide death among those 10-24. Firearms as a means of suicide have trended upward for young females and deaths from poisonings have decreased.[2,5] In 2018, the Council on Science and Public Health released a report adopted by the House of Delegates on "The Physician's Role in Firearm Safety and recognized the role of firearms in suicides and encouraged physicians, as a part of their suicide prevention strategy, to discuss lethal means safety and work with families to reduce access to lethal means of suicide.[17]

CURRENT AMA POLICY

Highlights of AMA policy related to youth suicide include recognizing teen and young adult suicide as a serious health concern Policy H-60.937, "Teen and Young Adult Suicide in the United

States." Policy D-350.988, "American Indian / Alaska Native Teen Suicide" encourages significant funding for suicide prevention and intervention directed toward American Indian/Alaska Native communities. Policy H-60.927, "Reducing Suicide Risk Among Lesbian, Gay, Bisexual, Transgender, and Questioning Youth Through Collaboration with Allied Organizations," also recognizes the special risk for LGBTQ+ teens and calls for partnering with public and private organizations to help reduce suicide among these teens. Policy H-515.952, "Adverse Childhood Experiences and Trauma-Informed Care," recognizes the importance of trauma-informed care and the impact of adverse childhood experiences (ACEs) and trauma on patient health.

Policy H-60.911 "Harmful Effects of Screen Time in Children" encourages physicians to "assess pediatric patients and educate parents about amount of screen time, physical activity and sleep habits" and to advocate for education in schools about balancing screen time, physical activity, and sleep. Policy H-515.959 "Reduction of Online Bullying" addresses this urging social networking platforms to" define and prohibit electronic aggression, which may include any type of harassment or bullying, including but not limited to that occurring through e-mail, chat room, instant messaging, website (including blogs) or text messaging" as part of their Terms of Service agreements. In addition, Policy H-60.943 "Bullying Behaviors Among Children and Adolescents" addresses bullying in several ways, including urging physicians to be aware of the signs and symptoms of bullying in children and teens, to recognize the mental, emotional and physician effects of bullying and to counsel patients and parents on effective interventions and coping strategies.

RISK FACTORS FOR YOUTH SUICIDE

Various behavioral, emotional, psychological, and social risk factors for youth suicide have been well established, and include depression, anxiety, bullying, substance use disorder (SUD), trauma, family history of suicide, sexual orientation or sexual and gender minority status and other stressors.[18,19] Prior suicide attempts are one of the most serious indicators of risk for subsequent self-harm and suicidal behavior.[20] Over 30 percent of youth suicides are preceded by a prior attempt, with boys with previous suicide attempts having a 30-fold increase for risk of a subsequent attempt in comparison with boys with no prior attempts. Girls with previous suicide attempts show a 3-fold increase in risk for subsequent attempts in comparison to girls with no prior attempts.[8] The presence of multiple factors increases underlying risk. Prevention starts with a thorough understanding of risk factors. Identifying risk factors is essential but does not provide the ability to predict acute suicidality effectively and accurately. Underlying risk factors can exist for years without producing active suicidality and imminent risk of suicide, and no one risk factor alone can be an absolute predictor.[18,19,21]

Role of Mental Health Disorders

Suicide is closely linked to mental health disorders, mainly depression and other mood disorders.[22,23] Among all age groups, approximately 90 percent of people who complete a suicide have had at least one mental health disorder.[24] Risk is significantly increased for acute suicidality when there are psychotic symptoms and when there are family members who have mental health or SUD issues.[25,26]

Data shows that depression in youth has been on the rise from 2005 to 2019. The 2019 National Survey on Drug Use and Health (NSDUH) indicates that among teens aged 12-17, rates of major depressive disorder increased 52 percent during the period between 2005 and 2017, and an increase of 63 percent was seen in young adults aged 18-25. Those trends were also accompanied by increases in reports of serious psychological distress and suicide related outcomes (STB and

suicide mortality) with a dramatic increase of 71 percent for those aged 18-25.[27] More recent statistics show that reports of suicidal ideation, planning, persistent feelings of hopelessness and sadness in high school students rose consistently from 2009 to 2019. More high school aged teens were injured in a suicide attempt during that period as well.[7] Other trends from 2009 to 2019 include the rise of electronic devices and digital media as well as declines in sleep which may be contributors to depression and other mood disorders.[27] Lack of availability of mental health services is also a concern. Youth who live in urban and suburban areas have been shown to have greater access to mental health resources than teens who live in rural areas.[28] When mental health disorders are not properly addressed, the risk for suicide can increase dramatically.[19,29]

Substance Use Disorder

Substance use is a major predictor of STB in youth.[30,31] Studies have shown that youth who used substances (tobacco, alcohol, cannabis, MDMA, ketamine) exhibit more suicidal behavior. In general, historically, boys exhibit more serious substance use, for example, using alcohol and drugs in larger quantities, with more frequency, and starting at an earlier age than girls. The association between substance use and suicidal behavior, however, is consistent between males and females.[30]

Adverse Childhood Experiences (ACEs)

ACEs, including physical, mental, and sexual abuse, physical and emotional neglect, and household dysfunctions such as family mental illness, violence, incarceration, substance use, and divorce, are well documented risk factors for suicide and according to the CDC, are associated with at least five of the ten leading causes of death overall. The higher the number of ACEs experienced, the greater the risk for suicide, and for youth, the risk is greater than in adults. A 2001 study found that an ACE score of 7 or more increased the risk of suicide attempts 51-fold among youth and 30-fold among adults. The study also found that between various forms of abuse, emotional abuse in childhood was the greatest predictor of future suicide attempts and the least addressed by traditional child welfare systems. ACEs increase risk for suicide as well as negative opioid-related outcomes, including overdose. These risk factors due to ACEs are preventable and require urgent attention.[32-34]

COVID-19 Pandemic

The COVID-19 pandemic has impacted youth STB and mental health. According to CDC data, from April 2020, the proportion of youth mental health-related emergency department (ED) visits increased and remained elevated through October of 2020. Compared with 2019, the proportion of mental health-related visits for youth aged 12-17 years increased approximately 31 percent. Studies have also identified increased rates of suicide ideation and suicide attempts in 2020 during the COVID-19 pandemic as compared with 2019 rates. The increases correspond to times when COVID-related stressors and community responses were heightened. This increase was seen across demographics in the 11-21 age group and based on routine suicide risk screens in a pediatric ED setting.[35,36]

Stigma

Ample evidence exists related to the negative impact of stigma on mental health. Youth learn stigmatizing attitudes from many sources including parents, peers, and media and start to concretize their attitudes in adolescence. Recognition of mental health stigma as a barrier to care for youth is essential for targeted suicide prevention efforts. In addition, myths around suicide

contribute to stigma. Characterization of people who experience STB as "weak" or "cowardly" perpetuate stigma and can inhibit youth from asking for help.[37-39]

Increased Screen Time and Use of Digital Devices Linked to Depression

The increased use of digital devices and social media can be linked to increases in mental health symptoms, including depression, among youth grades 8-12. Use of social media and digital devices also have an association with increases in youth suicides from 2010 to 2015. A review of several studies on social media/internet use and suicide attempts found consistent associations between heavy internet/social media use and suicide attempts of those under the age of 19.[40] Depressive symptoms, which have a strong correlation with STB, increased together with screen time and social media use. Moreover, youth who spent less time onscreen and on smartphones and more time on non-screen activities (in person visiting, sports, religious activities, reading) reported fewer depression symptoms and suicidal thoughts.[40,41]

Bullying and Cyberbullying

Although cyberbullying is a new area of research, several investigators report associations with both emotional and physical variables, including loneliness, anxiety, depression, suicidal ideation, and somatic symptoms. Also linked to cyberbullying is an increased risk of STB and self-harm for victims, and an increased risk of STB for perpetrators.[42-45]

The effects of bullying can be magnified and intensified by youths' access to social media, where the typical number of peers in a school and community circle is now expanded to any youth who has access to the internet and social networking sites. Several examples of tragic stories exist in the media of cases where victims experienced repeated instances of bullying that that were widely spread over the internet and social media. Teens left behind messages indicating they felt hopeless that the bullying would stop.[46]

A 2013 review of resources for cyberbullying examined interventions and prevention strategies acknowledge that many resources have been developed, but that there must be more research to determine effectiveness and how best to tailor programs to various school settings.[47] An online cyberbullying information clearinghouse, The Cyberbullying Research Center, provides guides to state laws on cyberbullying, research, and resources for parents, educators, youth and health care providers on addressing cyberbullying.[48]

Suicide Contagion/Clusters

Suicide clusters consist of episodes of multiple suicides that are greater than what would be typical in a specific location, many times in quick succession, and are more common in young people (<25 years) than adults. Approximately 1-5 percent of youth suicides occur in a cluster after a youth dies by suicide. Suicide contagion, which is triggered by exposure to a death by suicide, can increase the risk of suicide in another and has been shown to be a significant factor in youth STB.[49] The colloquial term often used for this phenomenon is "copy-cat suicide." Suicide contagion can result from direct exposure such as a suicide of a family member, friend, or classmate or indirect exposure through media or online reports. Youth are especially sensitive to peers' thoughts and expressions and may be more impacted by media reporting on suicide, suicide clusters, and exposure to a suicidal peer. A study showing a 28.9 percent spike in youth (ages 10-17) suicide across the United States in the months following the release of the fictional Netflix series "13 Reasons Why," is an example of the influence of media; the show follows a fictional character who ultimately dies by suicide.[50]

Media depictions or social networking posts that romanticize youth suicide may result in suicide contagion and clusters.[51-56] Guidelines for the media on responsible reporting on suicides for media are available including a collaboratively produced guide called "Recommendations for Suicide Reporting" and the International Association for Suicide Prevention's (IASP) guide "Preventing Suicide: A Resource for Media Professionals" outlining numerous "dos and don'ts" for media in reporting on suicide. Among the points of guidance are not using language which sensationalizes or normalizes suicide; not presenting suicide as a constructive solution to problems; avoiding explicit descriptions of the method(s) used in a completed suicide; and using sensitivity when interviewing family and friends of suicide victims.[57,58]

Developmental Characteristics of Adolescence That Increase Vulnerability

Impulsivity in young people is typical and has been shown to be a factor in their vulnerability to suicidal impulses. Research has found that emotion-relevant impulsivity as well as poor control over emotional reactions are more prevalent in adolescence. A type of emotion-relevant impulsivity, negative urgency, which is a strong and immediate need to avoid unpleasant emotions or physical sensations, is a distinct form of impulsivity and is a strong predictor of problem behaviors and STB.[59] Underdevelopment of the prefrontal areas of the brain and discordant development in the prefrontal and limbic systems are thought to be linked to teen risk taking and impulsivity. The drive to reward seeking without effective inhibitory controls results in a variety of negative outcomes driven by impulsive behaviors, including STB.[60,61]

PROTECTIVE FACTORS

Enhancing resiliency and identifying protective factors are important ways to mitigate risks for youth suicide. Protective factors include connectedness to supports such as peers, family, community and social institutions, life skills, coping skills access to behavioral and mental health care, and cultural, religious, or personal beliefs that discourage suicide. There are many resources on ways to enhance resiliency in youth that help mitigate suicide risk including developing a positive identify, and age-appropriate empowerment. The Interagency Working Group on Youth Programs composed of representatives from 21 Federal agencies, has a multitude of web-based resources designed to support positive youth development.[62-64]

PREVENTION

School Based Suicide Prevention Programs

School based suicide prevention programs fall generally into several categories; suicide awareness and prevention trainings for school personnel, universal suicide prevention curriculum for all students, and targeted or selected interventions for students who are identified as at risk.

Reviews of research in these areas show that there are some benefits in all these approaches, but there is wide variability in methodology and outcome measurements. Research shows that effectiveness of school-based programs has not been well established yet in terms of impact on primary outcomes (numbers of suicides). More recent reviews of studies on school-based programs literature calls for continued and better research to determine which interventions or which combination of interventions are most effective in preventing suicides.[65,66]

Screening

The U.S. Preventive Services Task Force (USPSTF) examined the evidence to determine whether asymptomatic youth should be screened for suicide risk in their 2013 report and found the evidence to clearly establish risks and benefits to be insufficient.[67] However, the USPSTF does recommend that primary care clinicians screen youth for depression when appropriate systems are in place to ensure adequate diagnosis, treatment, and follow-up. USPSTF also recommends primary care clinicians provide increased focus for their patients during periods of high suicide risk, such as immediately after discharge from a psychiatric hospital or after an emergency department visit for deliberate self-harm. Recent evidence suggests that interventions during these high-risk periods are effective in reducing suicide deaths.[68-70] Experts in youth suicide prevention note that effective screening can be a simple conversation beginning with the question: "Are you OK?"[69]

Currently, there is no recommendation from the American College of Emergency Physicians to institute widespread screening for suicide in Emergency Departments (ED). Some evidence notes that EDs are an ideal place for expanding screening since many youths visit an ED at some point during adolescence. A study using a computerized screening tool, the Computerized Adaptive Screen for Suicidal Youth (CASSY), designed for teens aged 12-17 having an ED visit, accurately predicted a suicide attempt within a three-month period following the ED visit.[71]

The Joint Commission

The Joint Commission has developed seven new and revised elements of performance in accreditation surveys applicable to hospitals, behavioral health care organizations, and accredited critical access hospitals. These new elements are designed to "improve the quality and safety of care for those who are being treated for behavioral health conditions and those who are identified as high risk for suicide." The revised elements involve environmental risk assessment, use of validated screening tools, evidence-based screening for suicide risk, documentation of overall risk for suicide and mitigation plans, written policies (staff training, reassessment, monitoring high-risk individuals), follow up care, and monitoring whether procedures are effective. It is important to note however, that the new elements of performance for accreditation surveys do not explicitly require that all patients in hospital settings be screened. Despite the allowance for selective screening, some hospital care settings have instituted universal screening of patients and the feasibility of this is an ongoing debate. Other accrediting bodies, specifically the Council on Accreditation (COA) and Commission on Accreditation of Rehabilitation Facilities (CARF), have also made changes to their standards for facilities related to suicide prevention. The movement in this direction will eventually require some adaptation in health care facilities to these new elements.[72]

The Joint Commission recommends several evidence-based screening tools for assessing suicide risk in accredited organizations. They include the Columbia Suicide Severity Rating (C-SSR), the Ask Suicide-Screening Questions (ASQ), and the Suicide Behaviors Questionnaire-Revised (SBQ-R). The Patient Health Questionnaire (PHQ-9) is also recommended as a depression screening tool and scale to determine severity. [73,74]

Targeted Prevention Efforts

Statistics note that special attention to targeted prevention efforts could be important for sub-populations of youth that are showing higher risk than others for STB. This includes Native American and Native Alaskan males, Black youth, LGBTQ+ teens, and Latina youth. The National Suicide Prevention Lifeline website devotes a page to resources for Native American and Alaskan

populations. All these youth sub-populations could benefit from targeted prevention efforts that are culturally sensitive and community based.[75-77]

INTERVENTIONS

Access to Mental Health Care

Reportedly, less than half of young people who have died by suicide had received psychiatric care. Increased access to mental health services is needed in addition to community supports, peer supports, school-based programs, college counseling services and social services designed to prevent youth and young adult suicide.[23] Substance Abuse and Mental Health Services Administration (SAMHSA) has developed a suicide prevention resource list of guides, crisis lines, and prevention programs for children and youth.[78]

Medications

Medications used to treat mental health conditions can alleviate symptoms and hopefully mitigate risk of STB. Evidence exists that treatment with antidepressants can result in lower suicide rates overall.[79,80] Evidence is also available that indicates lithium and clozapine can directly lower suicidal behavior, however the use of these medications is limited because of the time needed to reach therapeutic levels and the narrow therapeutic index of each of these agents. Anxiolytics, sedative-hypnotics, and some antipsychotic medications can be utilized to decrease agitation, anxiety, distress, insomnia, and other symptoms of psychological distress in an acute situation.[79,81]

An esketamine nasal spray for depression was recently approved by the US Food and Drug Administration (FDA) for use in adult patients who are contemplating suicide and shows promise for relieving acute suicidality and rapidly improving depressive symptoms. Esketamine can relieve symptoms within 24 hours, as opposed to typical antidepressants which can take up to 3-4 weeks to relieve symptoms. This medication is approved for use in adults only. The American Academy of Child and Adolescent Psychiatry (AACAP) has made a statement reiterating that it is not approved by the FDA for use in pediatric patients and cautioning physicians about off-label use.[82-84] Recently, the National Institute of Mental Health (NIMH), released a research update stating that they are supporting multiple new research projects on ketamine and esketamine as well as transcranial magnetic stimulation (TMS) for safety, efficacy and feasibility in youth and young adults who are acutely suicidal. TMS uses magnets to stimulate specific parts of the brain. Both these interventions could produce rapid decrease in severe suicidal thoughts and feelings.[85]

Specific Psychotherapies

Among psychotherapeutic models, cognitive behavioral therapy (CBT) has the most evidence of effectiveness in youth and adults for a variety of disorders, particularly anxiety and depression.[86] Internet based CBT (iCBT) has also been studied and consistently shows some efficacy in reducing suicide attempts. iCBT has also shown some efficacy in reducing both SUD and STB in youth and is potentially a highly scalable intervention.[87,88] Additionally, YST-II, a social support program, shows promise in reducing suicidal ideation in youth following a suicide attempt.[89] A 2018 report of two independent trials on Dialectical Behavioral Therapy (DBT), showed promise for effectiveness with youth experiencing STB.[90] More research is needed to fully understand the utility of psychotherapies.

FEDERAL EFFORTS TO REDUCE YOUTH SUICIDE

US Department of Health and Human Services

Office of the Surgeon General. Efforts to prevent adult and youth suicide at the federal level in the United States have been led by the U.S. Surgeon General going back to 2001. The National Strategy for Suicide Prevention (NSSP) was the first organized and comprehensive effort on suicide prevention, with the latest revision done in 2012. The NSSP contains four strategic directions that each include a set of goals and objectives: (1) Create supportive environments that promote healthy and empowered individuals, families, and communities (4 goals, 16 objectives); (2) Enhance clinical and community preventive services (3 goals, 12 objectives); (3) Promote the availability of timely treatment and support services (3 goals, 20 objectives); and (4) Improve suicide prevention surveillance collection, research, and evaluation (3 goals, 12 objectives). The NSSP's four strategic directions are meant to work together in a synergistic way to prevent suicide in the nation.

In January of 2021, the Surgeon General released a "Call to Action to Implement the National Strategy for Suicide Prevention," an effort to broaden perceptions of suicide, who is affected, and recognition of the environmental factors as well as individual factors related to suicide risk.[91,92]

SAMHSA. The National Suicide Prevention Lifeline has been in operation since 2005 and is funded by SAMHSA in partnership with the National Action Alliance for Suicide Prevention (Action Alliance[93]), The National Suicide Prevention Lifeline is a network of over 160 independently operated crisis call centers nationwide that are linked to a series of toll-free numbers, the most prominent of which is 800-273-TALK. In July 2020, the Federal Communications Commission (FCC) designated the three-digit number 988 for the National Suicide Prevention Lifeline to aid rapid access to suicide prevention and mental health services.[75,93]

Additionally, SAMHSA recently released an evidence-based guide, "Treatment for Suicidal Ideation, Self-Harm, and Suicide Attempts Among Youth." This guide is targeted to healthcare professionals and a broad range of stakeholders and details the strategies for addressing suicidal ideation, self-harm, and suicide attempts among youth. The guide highlights psychotherapeutic models that have shown evidence of effectiveness in reducing one or more of the outcomes of suicidal ideation, self-harm (non-suicidal), self-harm (unknown intent), and completed suicides.[75,89,93]

CDC. The CDC has created a comprehensive technical package of strategies that can be implemented by communities and states that include strengthening economic supports; strengthening access and delivery of suicide care; creating protective environments; promoting connectedness; teaching coping and problem-solving skills; identifying and supporting people at risk; and lessening harms and preventing future risk. Also, the CDC has recently released information showing the increased risk for suicide and negative opioid related outcomes (including overdose) associated with ACEs.[33,62]

FEDERATION OF MEDICINE EFFORTS

Several medical specialty societies have addressed youth suicide. The American Academy of Pediatrics (AAP) has developed web-based downloadable targeted at teens and their parents/caretakers on mental health as well as identifying suicide risk and creating emotional well-being in teens and children.[94] Other societies including the American College of Emergency Physicians (ACEP), American Association of Family Physicians (AAFP), the American

Psychiatric Association (APA) and the American Academy of Child and Adolescent Psychiatry (AACAP) all have patient resources, policies, clinical guidance, or public statements addressing depression and identifying imminent risk for STB in youth and adults.[50,94-97]

A 2021 joint summit on teen suicide co-hosted by the AAP, the American Foundation for Suicide Prevention (AFSP), and the National Institute for Mental Health (NIMH), brought forth several recommendations including the need for early identification of suicide risk, screening/assessment, follow up, and counseling. Other recommendations included the importance of widespread screening for youth seen in the ED for any reason and using a strengths-based and culturally sensitive approach to help youth disclose possible suicidal thoughts and ideation. A focus on prevention efforts, along with better data on their effectiveness for sub-populations (Black, Indigenous/Alaska natives, and LGBTQ youth) was also highlighted. A suicide prevention blueprint document from the summit is scheduled to be available later in 2021.[98]

EMERGING AREAS OF RESEARCH

Medications

New medications for acute STB are being developed and experts have called for increased utilization of existing medications. Leading experts encourage continued research to understand the neurobiology of suicide, including the identification of biomarkers and neuropsychological vulnerabilities associated with acute suicidality.[79,99] A better understanding of the neuropathophysiology of suicide can assist in the development of new medications for treatment.

Digital Technology and Machine Learning

The National Institutes of Health is funding research into the Mobile Assessment for the Prediction of Suicide (MAPS) as a way of using machine learning to detect suicide risk. These risk prediction algorithms can be embedded in digital devices such as smartphones, tablets, and laptops, and show promise in detection of near and imminent risk.[100]

Imminent Risk-Warning Signs

One of the most significant challenges of reducing suicides in youth, as in all demographics, is detecting windows of acute and imminent risk. While many of the risk factors for suicide in young people are understood, the ability to predict imminent risk effectively is lacking. Signs of imminent risk include talking about wanting to die, asking how one will be remembered, seeking out means of suicide, talking about feeling hopeless, expressing feelings of being trapped in unbearable pain, increased misuse of alcohol or drugs, increased agitation, withdrawal, mood dysregulation, and giving away treasured items and belongings.[19,69]

CONCLUSION

Suicides are increasing among both male and female adolescents, with males using more lethal means such as firearms in completed suicides and attempts. The young Native American/Alaska Native demographic group has the highest number of completed suicides and attempts among all youth. Increases in instances of cyberbullying are an important factor that are associated with youth suicide and require additional attention. Increases in screen time and use of digital devices, internet, and social networking sites have been associated with decreases in time sleeping and increased depression. Additionally, stress and disruption associated with the COVID-19 pandemic, such as physical distancing and isolation, have worsened mental health for all cohorts, including young

people and increased suicidal ideation in some cases. Importantly, evidence clearly notes that when co-occurring mental illness (depression, anxiety), SUD, ACEs, or other stressors are present, risk for STB increases. [29,41,70]

Enhancing physician ability and capacity to screen, identify and respond to risk factors are an important feature of effective suicide prevention for youth, especially for those physicians who are more likely to encounter these patient populations. Physicians should have access to the tools to identify acute and imminent risk and respond with appropriate treatments, linkages to appropriate counseling services, collaboration, and safety planning. Collectively, parents, teachers, peers, physicians, social workers, faith communities, counselors, and others, are critical in identifying when an individual is experiencing a period of imminent risk and assisting in preventing suicide attempts.

RECOMMENDATIONS

The Council on Science and Public Health recommends that the following be adopted, and the remainder of the report be filed:

1. That Policy H-60.937 be amended to read as follows:

~~Teen~~ Youth and Young Adult Suicide in the United States

Our AMA:

(1) Recognizes ~~teen~~ youth and young adult suicide as a serious health concern in the US;

(2) Encourages the development and dissemination of educational resources and tools for physicians, especially those more likely to encounter youth or young adult patients, addressing effective suicide prevention, including screening tools, methods to identify risk factors and acuity, safety planning, and appropriate follow-up care including treatment and linkages to appropriate counseling resources;

(3) Supports collaboration with federal agencies, relevant state and specialty medical societies, schools, public health agencies, community organizations, and other stakeholders to enhance awareness of the increase in youth and young adult suicide and to promote protective factors, raise awareness of risk factors, support evidence-based prevention strategies and interventions, encourage awareness of community mental health resources, and improve care for youth and young adults at risk of suicide;

(4) Encourages efforts to provide youth and young adults better and more equitable access to treatment and care for depression, substance use disorder, and other disorders that contribute to suicide risk;

(5) Encourages continued research to better understand suicide risk and effective prevention efforts in youth and young adults, especially in higher risk sub-populations such as Black, LGBTQ+, Latino, and Indigenous/Native Alaskan youth and young adult populations;

(6) Supports the development of novel technologies and therapeutics, along with improved utilization of existing medications to address acute suicidality and underlying risk factors in youth and young adults; and

(7) Supports research to identify evidence-based universal and targeted suicide prevention programs for implementation in middle schools and high schools. (Modify Current HOD policy)

2. That Policy H-515-952, "Adverse Childhood Experiences and Trauma-Informed Care" be amended by addition to read as follows:

1. Our AMA recognizes trauma-informed care as a practice that recognizes the widespread impact of trauma on patients, identifies the signs and symptoms of trauma, and treats patients by fully integrating knowledge about trauma into policies, procedures, and practices and seeking to avoid re-traumatization.

2. Our AMA supports:
   a. evidence-based primary prevention strategies for Adverse Childhood Experiences (ACEs);
   b. evidence-based trauma-informed care in all medical settings that focuses on the prevention of poor health and life outcomes after ACEs or other trauma at any time in life occurs;
   c. efforts for data collection, research, and evaluation of cost-effective ACEs screening tools without additional burden for physicians.
   d. efforts to educate physicians about the facilitators, barriers and best practices for providers implementing ACEs screening and trauma-informed care approaches into a clinical setting; ~~and~~
   e. funding for schools, behavioral and mental health services, professional groups, community, and government agencies to support patients with ACEs or trauma at any time in life; and
   f. increased screening for ACEs in medical settings, in recognition of the intersectionality of ACEs with significant increased risk for suicide, negative substance use-related outcomes including overdose, and a multitude of downstream negative health outcomes. (Modify Current HOD policy)

3. That Policy H-145.975, "Firearm Safety and Research, Reduction in Firearm Violence, and Enhancing Access to Mental Health Care," which recognizes the role of firearms in suicides; encourages the development of curricula and training for physicians with a focus on suicide risk assessment and prevention as well as lethal means safety counseling; and encourages physicians, as a part of their suicide prevention strategy, to discuss lethal means safety and work with families to reduce access to lethal means of suicide, be reaffirmed. . (Reaffirm Current HOD Policy).

4. That Policy H-170.984, "Healthy Living Behaviors," encouraging state medical societies and physicians to promote physical and wellness activities for children and youth and to advocate for health and wellness programs for children and youth in schools and communities, be reaffirmed. (Reaffirm Current HOD Policy)

Fiscal note: Less than $500

REFERENCES

1. Curtain S, MA. *State Suicide Rates Among Adolescents and Young Adults Aged 10–24: United States, 2000–2018.* CDC-National Center for Health Statistics;2020.
2. WISQARS. 10 Leading Causes of Death, United States. In: Control NCfIPa, ed. Atlanta GA: CDC; 2019.
3. Ivey-Stephenson AP, et al. *Suicidal Ideation and Behaviors Among High School Students —Youth Risk Behavior Survey, United States, 2019.* 2020.
4. Administration SAaMHS. *2019 National Survey on Drug Use and Health.* Washington DC2019.
5. Hedegaard H CS, Warner M. Suicide Mortality in the United States, 1999–2019. In: Statistics NCfH, ed. Vol NCHS Data Brief, no 398. Hyattsville, MD: Centers for Disease Control; 2021.
6. Services DoHaH. *Increase in Suicide Mortality in the United States, 1999–2018.* Washington DC: Centers for Disease Control;2020.
7. CDC. *Youth Risk Behavior Survey Data Summary and Trends 2000-2019.* 2019.
8. Wunderlich U, Bronisch T, Wittchen HU, Carter R. Gender differences in adolescents and young adults with suicidal behaviour. *Acta Psychiatr Scand.* 2001;104(5):332-339.
9. Hedegaard H, Curtin SC, Warner M. Suicide Rates in the United States Continue to Increase. *NCHS data brief.* 2018(309):1-8.
10. Lindsey MA, Sheftall AH, Xiao Y, Joe S. Trends of Suicidal Behaviors Among High School Students in the United States: 1991–2017. *Pediatrics.* 2019;144(5):e20191187.
11. Bridge JA, Horowitz LM, Fontanella CA, et al. Age-Related Racial Disparity in Suicide Rates Among US Youths From 2001 Through 2015. *JAMA pediatrics.* 2018;172(7):697-699.
12. Centers for Disease C, Prevention. Web-based Injury Statistics Query and Reporting System (WISQARS). *wwwcdcgov/ncipc/wisqars.* 2002.
13. Zayas LH, Lester RJ, Cabassa LJ, Fortuna LR. Why do so many latina teens attempt suicide? A conceptual model for research. *Am J Orthopsychiatry.* 2005;75(2):275-287.
14. Edwards KM, Banyard VL, Charge LL, Kollar LMM, Fortson B. Experiences and Correlates of Violence Among American Indian and Alaska Native Youth: A Brief Report. *J Interpers Violence.* 2020:886260520983273.
15. Assari S, Moghani Lankarani M, Caldwell CH. Discrimination Increases Suicidal Ideation in Black Adolescents Regardless of Ethnicity and Gender. *Behavioral Sciences.* 2017;7(4):75.
16. Silva C, Van Orden KA. Suicide among Hispanics in the United States. *Curr Opin Psychol.* 2018;22:44-49.
17. Health ACoSaP. *Physicians Role in Firearm Safety.* 2018.
18. Franklin JC, et al. Risk Factors for Suicidal Thoughts and Behaviors: A Meta-Analysis of 50 Years of Research. *Psychological Bulletin.* 2017(2):187-232.
19. Bilsen J. Suicide and Youth: Risk Factors. *Frontiers in psychiatry.* 2018;9(540).
20. Cooper J, et al. Suicide After Deliberate Self-Harm: A 4-Year Cohort Study. *Am J of Psychiatry.* 2005;162(2):297-303.
21. CDC. *Youth Risk Behavior Survey Data Summary and Trends Report 2000-2017.* Atlanta, GA2018.
22. Bridge JA, Goldstein TR, Brent DA. Adolescent suicide and suicidal behavior. *Journal of Child Psychology and Psychiatry.* 2006;47(3-4):372-394.
23. Pelkonen M, Marttunen M. Child and Adolescent Suicide. *Pediatric Drugs.* 2003;5(4):243-265.
24. Brådvik L. Suicide Risk and Mental Disorders. *International journal of environmental research and public health.* 2018;15(9):2028.

25. Kelleher I, Corcoran P, Keeley H, et al. Psychotic symptoms and population risk for suicide attempt: a prospective cohort study. *JAMA psychiatry.* 2013;70(9):940-948.
26. Portzky G, Audenaert K, van Heeringen K. Suicide among adolescents. *Social Psychiatry and Psychiatric Epidemiology.* 2005;40(11):922-930.
27. Twenge JM, Cooper AB, Joiner TE, Duffy ME, Binau SG. Age, period, and cohort trends in mood disorder indicators and suicide-related outcomes in a nationally representative dataset, 2005-2017. *J Abnorm Psychol.* 2019;128(3):185-199.
28. Graves JM, Abshire DA, Mackelprang JL, Amiri S, Beck A. Association of Rurality With Availability of Youth Mental Health Facilities With Suicide Prevention Services in the US. *JAMA Network Open.* 2020;3(10):e2021471-e2021471.
29. Orri M, Galera C, Turecki G, et al. Association of Childhood Irritability and Depressive/Anxious Mood Profiles With Adolescent Suicidal Ideation and Attempts. *JAMA psychiatry.* 2018;75(5):465-473.
30. Wang P-W, Yen C-F. Adolescent substance use behavior and suicidal behavior for boys and girls: a cross-sectional study by latent analysis approach. *BMC Psychiatry.* 2017;17(1):392-392.
31. Mars B, Heron J, Klonsky ED, et al. Predictors of future suicide attempt among adolescents with suicidal thoughts or non-suicidal self-harm: a population-based birth cohort study. *Lancet Psychiatry.* 2019;6(4):327-337.
32. Ports KA, Merrick MT, Stone DM, et al. Adverse Childhood Experiences and Suicide Risk: Toward Comprehensive Prevention. *American journal of preventive medicine.* 2017;53(3):400-403.
33. CDC. Adverse Childhood Experiences, Overdose, and Suicide. Injury Prevention & Control Web site. https://www.cdc.gov/injury/priority/index.html. Published 2021. Accessed2021.
34. CDC. Adverse Childhood Experiences (ACEs) Preventing early trauma to improve adult health. In: Signs CV, ed. Atlanta, GA2019.
35. Hill R, et al. Suicide Ideation and Attempts in a Pediatric Emergency Department Before and During COVID-19. *Pediatrics.* 2021;147(3).
36. Leeb RT BR, Radhakrishnan L, Martinez P, Njai R, Holland KM. Mental Health–Related Emergency Department Visits Among Children Aged <18 Years During the COVID-19 Pandemic — United States, January 1–October 17, 2020. In. Vol MMWR CDC; 2020.
37. Aggarwal S, Borschmann R, Patton GC. Tackling stigma in self-harm and suicide in the young. *The Lancet Public Health.* 2021;6(1):e6-e7.
38. Olson R. Suicide and Stigma. In. Vol InfoExchange 12. Calgary, Alberta, Canada: Centre for Suicide Prevention; 2013.
39. Corrigan PW, Watson AC. Understanding the impact of stigma on people with mental illness. *World psychiatry : official journal of the World Psychiatric Association (WPA).* 2002;1(1):16-20.
40. Sedgwick R, Epstein S, Dutta R, Ougrin D. Social media, internet use and suicide attempts in adolescents. *Current Opinion in Psychiatry.* 2019;32(6):534-541.
41. Twenge JM, Joiner TE, Rogers ML, Martin GN. Increases in Depressive Symptoms, Suicide-Related Outcomes, and Suicide Rates Among U.S. Adolescents After 2010 and Links to Increased New Media Screen Time. *Clinical Psychological Science.* 2018;6(1):3-17.
42. Nixon CL. Current perspectives: the impact of cyberbullying on adolescent health. *Adolesc Health Med Ther.* 2014;5:143-158.
43. Sourander A, Brunstein Klomek A, Ikonen M, et al. Psychosocial Risk Factors Associated With Cyberbullying Among Adolescents: A Population-Based Study. *Archives of General Psychiatry.* 2010;67(7):720-728.

44. John A, Glendenning AC, Marchant A, et al. Self-Harm, Suicidal Behaviours, and Cyberbullying in Children and Young People: Systematic Review. *J Med Internet Res.* 2018;20(4):e129.
45. Kowalski RM, Giumetti GW, Schroeder AN, Lattanner MR. Bullying in the digital age: a critical review and meta-analysis of cyberbullying research among youth. *Psychol Bull.* 2014;140(4):1073-1137.
46. Chuck E. Is Social Media Contriuting to Rising Teen Suicide Rates? NBC News. https://www.nbcnews.com/news/us-news/social-media-contributing-rising-teen-suicide-rate-n812426. Published 2017. Accessed.
47. Notar C PS, Roden J. Cyberbullying: Resources for Intervention and Prevention. *Universal Journal of Educational Research.* 2013;1:133-145.
48. Cyberbullying Research Center. https://cyberbullying.org/. Published 2005. Accessed April 20, 2021.
49. Gould M, Ph.D., M.P.H., Lake, A, M.A. THE CONTAGION OF SUICIDAL BEHAVIOR. In: Press NA, ed. *Contagion of Violence: Workshop Summary: Forum on Global Violence Prevention; Board on Global Health; Institute of Medicine; National Research Council.* . Washington DC2013.
50. ACEP. The Suicide Contagion in Adolescents: What's Emergency Medicine's Role? In: ACEP Now; 2019.
51. Scott Poland RLMN. Suicide Contagion and Clusters—Part 1: What School Psychologists Should Know. *National Association of School Psychologist-Communique.* 2019;47:21-23.
52. Gould MS. Suicide and the media. *Ann N Y Acad Sci.* 2001;932:200-221; discussion 221-204.
53. Abrutyn S, Mueller AS. Are Suicidal Behaviors Contagious in Adolescence?: Using Longitudinal Data to Examine Suicide Suggestion. *Am Sociol Rev.* 2014;79(2):211-227.
54. Hawton K, Hill NTM, Gould M, John A, Lascelles K, Robinson J. Clustering of suicides in children and adolescents. *The Lancet Child & Adolescent Health.* 2020;4(1):58-67.
55. Beal JA. 13 Reasons Why: A Trigger for Teen Suicide? *MCN: The American Journal of Maternal/Child Nursing.* 2018;43(1):55.
56. Bridge J, PhD , et al Association Between the Release of Netflix's 13 Reasons Why and Suicide Rates in the United States: An Interrupted Time Series Analysis. *Journal of Child and Adolescent Psychiatry.* 2020;59(2):246-243.
57. IASP. Preventing Suicide: A Resource Guide for Media Professionals-Update 2017. In: WHO; 2017.
58. Recommendations for Reporting on Suicide. https://reportingonsuicide.org/. Accessed.
59. Auerbach RP, Stewart JG, Johnson SL. Impulsivity and Suicidality in Adolescent Inpatients. *J Abnorm Child Psychol.* 2017;45(1):91-103.
60. Ernst M, Pine DS, Hardin M. Triadic model of the neurobiology of motivated behavior in adolescence. *Psychological medicine.* 2006;36(3):299-312.
61. Forbes EE, Dahl RE. Neural systems of positive affect: relevance to understanding child and adolescent depression? *Dev Psychopathol.* 2005;17(3):827-850.
62. Stone D, Holland,, K, Bartholow, B, Crosby, A, Davis, S, Wilkins, N. Preventing Suicide: A Technical Package of Policy, Programs, and Practices. In. Atlanta GA: CDC; 2017.
63. The Search Institute. https://www.search-institute.org/our-research/development-assets/developmental-assets-framework/. Accessed.
64. Youth.gov. Suicide Prevention. 2020.
65. Calear AL, Christensen H, Freeman A, et al. A systematic review of psychosocial suicide prevention interventions for youth. *European Child & Adolescent Psychiatry.* 2016;25(5):467-482.

66. Cusimano MD, Sameem M. The effectiveness of middle and high school-based suicide prevention programmes for adolescents: a systematic review. *Injury prevention : journal of the International Society for Child and Adolescent Injury Prevention.* 2011;17(1):43-49.
67. USPSTF. Suicide Risk in Adolescents, Adults and Older Adults: Screening-Final Recommendation Statement. https://www.uspreventiveservicestaskforce.org/uspstf/recommendation/suicide-risk-in-adolescents-adults-and-older-adults-screening. Published 2013. Accessed2021.
68. USPSTF. *Screening for Depression, Anxiety, and Suicide Risk in Children and Adolescents.* 2020.
69. Health NIo. Teen Suicide-Understanding the Risk and Getting Help. In. *NIH News in Health.* Vol September, 2019. Bethesda MD2019.
70. Wu P, Hoven CW, Liu X, Cohen P, Fuller CJ, Shaffer D. Substance use, suicidal ideation and attempts in children and adolescents. *Suicide Life Threat Behav.* 2004;34(4):408-420.
71. King CA, Brent D, Grupp-Phelan J, et al. Prospective Development and Validation of the Computerized Adaptive Screen for Suicidal Youth. *JAMA psychiatry.* 2021.
72. Goldstein Grumet J H, M, Chu A, Covington D, Johnson K. Compliance Standards Pave the Way for Reducing Suicide in Health Care Systems. *J Health Care Compliance.* 2019;21(January-February):17–26.
73. Commission TJ. *National Patient Safety Goal for Suicide Prevention.* Oakbrook Terrace, IL2018.
74. Commission TJ. *Suicide Prevention Resources to support Joint Commission Accredited organizations implementation of NPSG 15.01.01.* November 2018 2018.
75. National Suicide Prevention Lifeline. https://suicidepreventionlifeline.org/. Accessed.
76. youth.gov. Increased Risk Groups. https://youth.gov/youth-topics/youth-suicide-prevention/increased-risk-groups. Published 2020. Accessed.
77. Goldston DB, Molock SD, Whitbeck LB, Murakami JL, Zayas LH, Hall GCN. Cultural considerations in adolescent suicide prevention and psychosocial treatment. *The American psychologist.* 2008;63(1):14-31.
78. Administration-SAMHSA SAaMH. Resources for Suicide Prevention. Department of Health and Human Services. https://www.samhsa.gov/childrens-awareness-day/event/resources-suicide-prevention. Published 2019. Accessed.
79. Griffiths JJ, Zarate CA, Jr., Rasimas JJ. Existing and novel biological therapeutics in suicide prevention. *American journal of preventive medicine.* 2014;47(3 Suppl 2):S195-S203.
80. Nischal A, Tripathi A, Nischal A, Trivedi JK. Suicide and antidepressants: what current evidence indicates. *Mens Sana Monogr.* 2012;10(1):33-44.
81. Pompili MM, PhD; Goldblatt M, MD. Psychopharmacological Treatment to Reduce Suicide Risk. In. *Psychiatric Times*: MJH Life Sciences; 2012.
82. Canuso CM, et al. Efficacy and Safety of Intranasal Esketamine for the Rapid Reduction of Symptoms of Depression and Suicidality in Patients at Imminent Risk for Suicide: Results of a Double-Blind, Randomized, Placebo-Controlled Study. *American Journal of Psychiatry.* 2018;April 2018(7):620-630.
83. FDA approves new nasal spray medication for treatment-resistant depression; available only at a certified doctor's office or clinic [press release]. Washington DC: FDA2019.
84. AACAP. Psychopharmacology Committee Statement on Ketamine. https://www.aacap.org/AACAP/Latest_News/statement_ketmamine.aspx#:~:text=Therefore%2C%20esketamine%20is%20not%20proven,View%20full%20prescribing%20information. Published 2018. Accessed March 31, 2021.
85. NIMH. Research Highlight: NIMH Addresses Critical Need for Rapid-Acting Interventions for Severe Suicide Risk. https://www.nimh.nih.gov/news/research-

highlights/2021/nimh-addresses-critical-need-for-rapid-acting-interventions-for-severe-suicide-risk.shtml. Published 2021. Accessed April 20, 2021.
86. Dirks A. Treatment for the Suicidal Adolescent: A Critical Analysis of the Cognitive-Behavioral Approach. *Acta Psychopathologica.* 2017;03.
87. Büscher R, Torok M, Terhorst Y, Sander L. Internet-Based Cognitive Behavioral Therapy to Reduce Suicidal Ideation: A Systematic Review and Meta-analysis. *JAMA Network Open.* 2020;3(4):e203933-e203933.
88. Esposito-Smythers C, Spirito A, Kahler CW, Hunt J, Monti P. Treatment of co-occurring substance abuse and suicidality among adolescents: a randomized trial. *J Consult Clin Psychol.* 2011;79(6):728-739.
89. National Mental Health and Substance Use Policy Laboratory SAaMHSA. Treatment for Suicidal Ideation, Self-Harm, and Suicide Attempts Among Youths. In: Administration SAaMHS, ed. Maryland2020.
90. McCauley E, Berk MS, Asarnow JR, et al. Efficacy of Dialectical Behavior Therapy for Adolescents at High Risk for Suicide: A Randomized Clinical Trial. *JAMA psychiatry.* 2018;75(8):777-785.
91. 2012 National Strategy for Suicide Prevention: Goals and Objectives for Action-Overview. In. Rockville, MD: National Action Alliance for Suicide Prevention; Substance Abuse and Mental Heatlh Services Adminstration; 2012.
92. Prevention USSGaotNAAfS. *The Surgeon General's Call to Action: TO IMPLEMENT THE NATIONAL STRATEGY FOR SUICIDE PREVENTION.* Washington DC2021.
93. Designating 988 for the National Suicide Prevention Lifeline [press release]. Washington DC2020.
94. Pediatrics AAo. Suicide Prevention. https://www.aap.org/en-us/advocacy-and-policy/aap-health-initiatives/child_death_review/Pages/Suicide-Prevention.aspx. Published 2020. Accessed.
95. Ting SA, Sullivan AF, Boudreaux ED, Miller I, Camargo CA, Jr. Trends in US emergency department visits for attempted suicide and self-inflicted injury, 1993-2008. *Gen Hosp Psychiatry.* 2012;34(5):557-565.
96. Psychiatry GftAo. *Adolescent Suicide.* American Psychiatric Association Publishing; 1996.
97. Behaviors APA-WGOS. PRACTICE GUIDELINE: Assessment and Treatment of Patients With Suicidal Behaviors. In:2003.
98. Wyckoff A. 'It's everybody's problem': Goal to end youth suicide unites experts, organizations. American Pediatric Association. https://www.aappublications.org/news/2021/03/03/suicide-summit-030321. Published 2021. Accessed 3-8-21, 2021.
99. Prevention NAAfS. A Prioritized Research Agenda for Suicide Prevention: An Action Plan to Save Lives. In. Rockville, MD2014.
100. Servick K. Suicide attempts are hard to anticipate. A study that tracks teen cellphone usage aims to change that. In. *Science*: American Association for the Advancement of Science-AAAS; 2019.