



Preventing Suicide:

A Technical Package of Policy, Programs, and Practices

National Center for Injury Prevention and Control
Division of Violence Prevention

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2017

Division of Violence Prevention
National Center for Injury Prevention and Control
Centers for Disease Control and Prevention
Atlanta, Georgia

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Suggested citation:

Stone, D.M., Holland, K.M., Bartholow, B., Crosby, A.E., Davis, S., and Wilkins, N. (2017). *Preventing Suicide: A Technical Package of Policies, Programs, and Practices.* Atlanta, GA: National Center for Injury Prevention and Control, Centers for Disease Control and Prevention.

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Acknowledgements

We would like to thank the following individuals who contributed in specific ways to the development of this technical package. We give special thanks to Linda Dahlberg for her vision, guidance, and support throughout the development of this package. We thank Division, Center, and CDC leadership for their careful review and helpful feedback on earlier iterations of this document. We thank Alida Knuth for her formatting and design expertise. Last but definitely not least, we extend our thanks and gratitude to all the external reviewers for their helpful feedback, support and encouragement for this resource.

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Overview

This technical package represents a select group of strategies based on the best available evidence to help communities and states sharpen their focus on prevention activities with the greatest potential to prevent suicide. These strategies 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. The strategies represented in this package include those with a focus on preventing the risk of suicide in the first place as well as approaches to lessen the immediate and long-term harms of suicidal behavior for individuals, families, communities, and society. The strategies in the technical package support the goals and objectives of the *National Strategy for Suicide Prevention*[1] and the National Action Alliance for Suicide Prevention's priority to strengthen community-based prevention.[2] Commitment, cooperation, and leadership from numerous sectors, including public health, education, justice, health care, social services, business, labor, and government can bring about the successful implementation of this package.

What is a Technical Package?

A technical package is a compilation of a core set of strategies to achieve and sustain substantial reductions in a specific risk factor or outcome.[3] Technical packages help communities and states prioritize prevention activities based on the best available evidence. This technical package has three components. The first component is the ***strategy*** or the preventive direction or actions to achieve the goal of preventing suicide. The second component is the ***approach***. The approach includes the specific ways to advance the strategy. This can be accomplished through *programs, policies, and practices*. The ***evidence*** for each of the approaches in preventing suicide or its associated risk factors is included as the third component. This package is intended as a resource to guide and inform prevention decision-making in communities and states.

Preventing Suicide is a Priority

Suicide, as defined by the Centers for Disease Control and Prevention (CDC), is part of a broader class of behavior called *self-directed violence*. Self-directed violence refers to behavior directed at oneself that deliberately results in injury or the *potential* for injury.[4] Self-directed violence may be *suicidal* or *non-suicidal* in nature. For the purposes of this document, we refer only to behavior where suicide is intended:

- **Suicide** is a death caused by self-directed injurious behavior with any intent to die as a result of the behavior.
- **Suicide attempt** is defined as a *non-fatal* self-directed and potentially injurious behavior with any intent to die as a result of the behavior. A suicide attempt may or may not result in injury.

Suicide is highly prevalent. Suicide presents a major challenge to public health in the United States and worldwide. It contributes to premature death, morbidity, lost productivity, and health care costs.[1,5] In 2015 (the most recent year of available death data), suicide was responsible for 44,193 deaths in the U.S., which is approximately one suicide every 12 minutes.[6] In 2015, suicide ranked as the 10th leading cause of death and has been among the top 12 leading causes of death since 1975 in the U.S.[7] Overall suicide rates increased 28% from 2000 to 2015.[6] Suicide is a problem throughout the life span; it is the third leading cause of death for youth 10–14 years of age, the second leading cause of death among people 15–24 and 25–34 years of age; the fourth leading cause among people 35 to 44 years of age, the fifth leading cause among people ages 45–54 and eighth leading cause among people 55–64 years of age.[6]

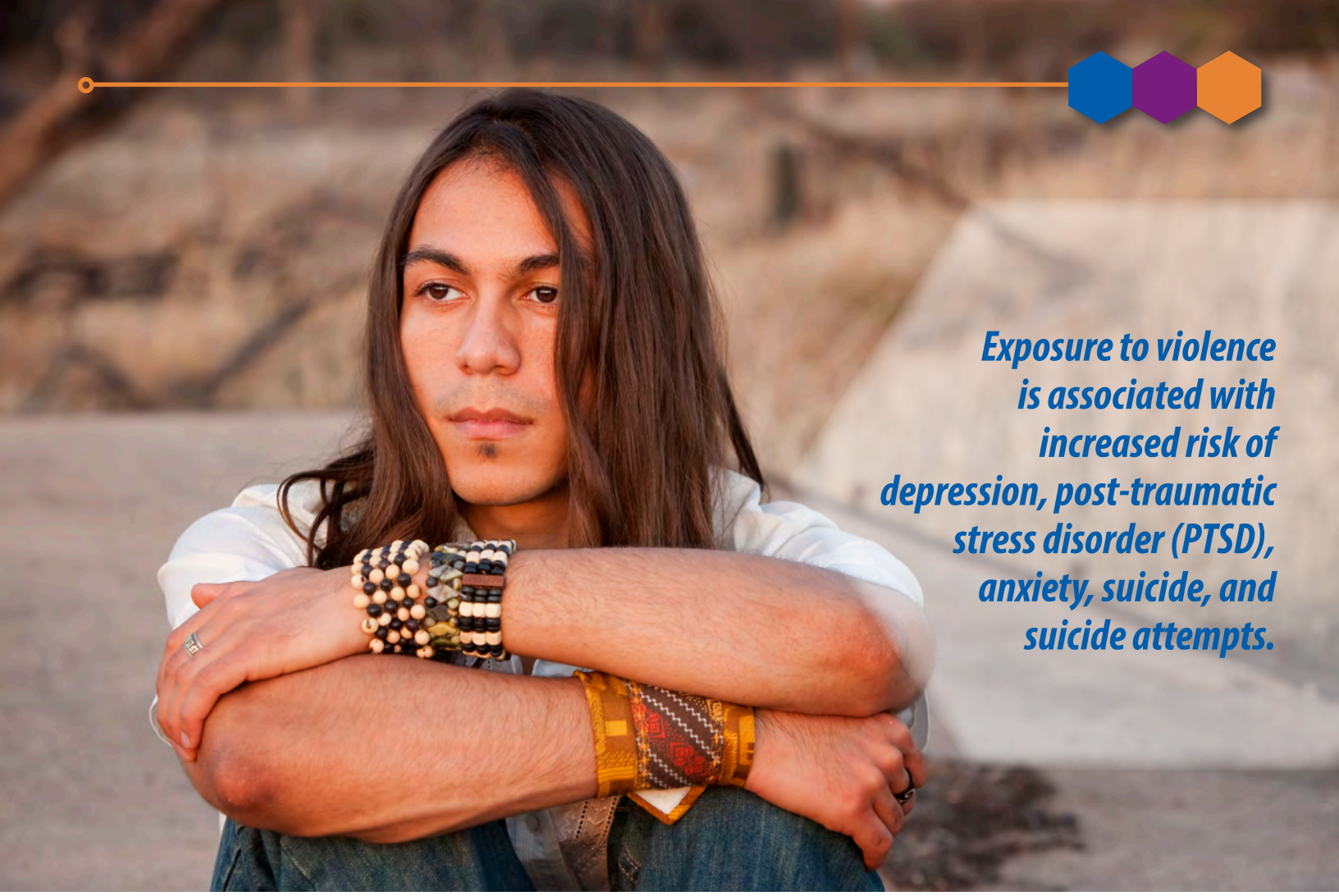
Suicide rates vary by race/ethnicity, age, and other population characteristics, with the highest rates across the life span occurring among non-Hispanic American Indian/Alaska Native (AI/AN) and non-Hispanic White population groups. In 2015, the rates for these groups were 19.9 and 16.9 per 100,000 population, respectively.[6] Other population groups disproportionately impacted by suicide include middle-aged adults (whose rates increased 35% from 2000 to 2015, with steep increases seen among both males (29%) and females (53%) aged 35–64 years[6]; Veterans and other military personnel (whose suicide rate nearly doubled from 2003 to 2008, surpassing the rate of suicide among civilians for the first time in decades)[8,9]; workers in certain occupational groups,[10,11] and sexual minority youth, who experience increased suicidal ideation and behavior compared to their non-sexual minority peers.[12-14]

Suicides reflect only a portion of the problem.[15] Substantially more people are hospitalized as a result of nonfatal suicidal behavior (i.e., suicide attempts) than are fatally injured, and an even greater number are either treated in ambulatory settings (e.g., emergency departments) or not treated at all.[15] For example, during 2014, among adults aged 18 years and older, for every one suicide there were 9 adults treated in hospital emergency departments for self-harm injuries, 27 who reported making a suicide attempt, and over 227 who reported seriously considering suicide.[6,16]

Suicide is associated with several risk and protective factors. Suicide, like other human behaviors, has no single determining cause. Instead, suicide occurs in response to multiple biological, psychological, interpersonal, environmental and societal influences that interact with one another, often over time.[1,5] The social ecological model—encompassing multiple levels of focus from the individual, relationship, community, and societal—is a useful framework for viewing and understanding suicide risk and protective factors identified in the literature.[17] Risk and protective factors for suicide exist at each level. For example, risk factors include:[1,5]

- **Individual level**: history of depression and other mental illnesses, hopelessness, substance abuse, certain health conditions, previous suicide attempt, violence victimization and perpetration, and genetic and biological determinants
- **Relationship level**: high conflict or violent relationships, sense of isolation and lack of social support, family/loved one's history of suicide, financial and work stress
- **Community level**: inadequate community connectedness, barriers to health care (e.g., lack of access to providers and medications)
- **Societal level**: availability of lethal means of suicide, unsafe media portrayals of suicide, stigma associated with help-seeking and mental illness.

It is important to recognize that the vast majority of individuals who are depressed, attempt suicide, or have other risk factors, do *not* die by suicide.[18,19] Furthermore, the relevance of each risk factor can vary by age, race, gender, sexual orientation, residential geography, and socio-cultural and economic status.[1,5]



Exposure to violence is associated with increased risk of depression, post-traumatic stress disorder (PTSD), anxiety, suicide, and suicide attempts.

Protective factors, or those influences that buffer against the risk for suicide, can also be found across the different levels of the social ecological model. Protective factors identified in the literature include: effective coping and problem-solving skills, moral objections to suicide, strong and supportive relationships with partners, friends, and family; connectedness to school, community, and other social institutions; availability of quality and ongoing physical and mental health care, and reduced access to lethal means.[1,5] These protective factors can either counter a specific risk factor or buffer against a number of risks associated with suicide.

Suicide is connected to other forms of violence. Exposure to violence (e.g., child abuse and neglect, bullying, peer violence, dating violence, sexual violence, and intimate partner violence) is associated with increased risk of depression, post-traumatic stress disorder (PTSD), anxiety, suicide, and suicide attempts.[20-26] Women exposed to partner violence are nearly 5 times more likely to attempt suicide as women not exposed to partner violence.[26] Exposure to adverse experiences in childhood, such as physical, sexual, emotional abuse and neglect, and living in homes with violence, mental health, substance abuse problems and other instability, is also associated with increased risk for suicide and suicide attempts.[22,27] The psychosocial effects of violence in childhood and adolescence can be observed decades later, including severe problems with finances, family, jobs, and stress—factors that can increase the risk for suicide. Suicide and other forms of violence often share the same individual, relationship, community, and societal risk factors suggesting that efforts to prevent interpersonal violence may also prove beneficial in preventing suicide.[28-30] CDC has developed technical packages for the different forms of interpersonal violence to help communities identify additional strategies and approaches (https://www.cdc.gov/violenceprevention/pub/technical-packages.html). Further, just as risk factors may be shared across suicide and interpersonal violence, so too may protective factors overlap. For example, connectedness to one's community,[31] school,[32] family,[33] caring adults,[34,35] and pro-social peers[36] can enhance resilience and help reduce risk for suicide and other forms of violence.

The health and economic consequences of suicide are substantial. Suicide and suicide attempts have far reaching consequences for individuals, families, and communities.[37-40] In an early study, Crosby and Sacks[41] estimated that 7% of the U.S. adult population, or 13.2 million adults, knew someone in the prior 12 months who had died by suicide. They also estimated that for each suicide, 425 adults were exposed, or knew about the death.[41] In a more recent study, in one state, Cerel et al[42] found that 48% of the population knew at least one person who died by suicide in their lifetime. Research indicates that the impact of knowing someone who died by suicide and/or having lived experience (i.e., personally have attempted suicide, have had suicidal thoughts, or have been impacted by suicidal loss) is much more extensive than injury and death. People with lived experience may suffer long-term health and mental health consequences ranging from anger, guilt, and physical impairment, depending on the means and severity of the attempt.[43] Similarly, survivors of a loved one's suicide may experience ongoing pain and suffering including complicated grief,[44] stigma, depression, anxiety, post-traumatic stress disorder, and increased risk of suicidal ideation and suicide.[45,46] Less discussed but no less important, are the financial and occupational effects on those left behind.[47]

The economic toll of suicide on society is immense as well. According to conservative estimates, in 2013, suicide cost $50.8 billion in estimated lifetime medical and work-loss costs alone.[47] Adjusting for potential under-reporting of suicide and drawing upon health expenditures per capita, gross domestic product per capita, and variability among states in per capita health care expenditures and income, another study estimated the total lifetime costs associated with nonfatal injuries and deaths caused by self-directed violence to be approximately $93.5 billion in 2013.[48] The overwhelming burden of these costs were from lost productivity over the life course, with the average cost per suicide being over $1.3 million.[48] The true economic costs are likely higher, as neither study included monetary figures related to other societal costs such as those associated with the pain and suffering of family members or other impacts.

Suicide can be prevented. Like most public health problems, suicide is preventable.[1,5] While progress will continue to be made into the future, evidence for numerous programs, practices, and policies currently exists, and many programs are ready to be implemented now. Just as suicide is not caused by a single factor, research suggests that reductions in suicide will not be prevented by any single strategy or approach.[1,49] Rather, suicide prevention is best achieved by a focus across the individual, relationship, family, community, and societal-levels and across all sectors, private and public.[1,5]

Assessing the Evidence

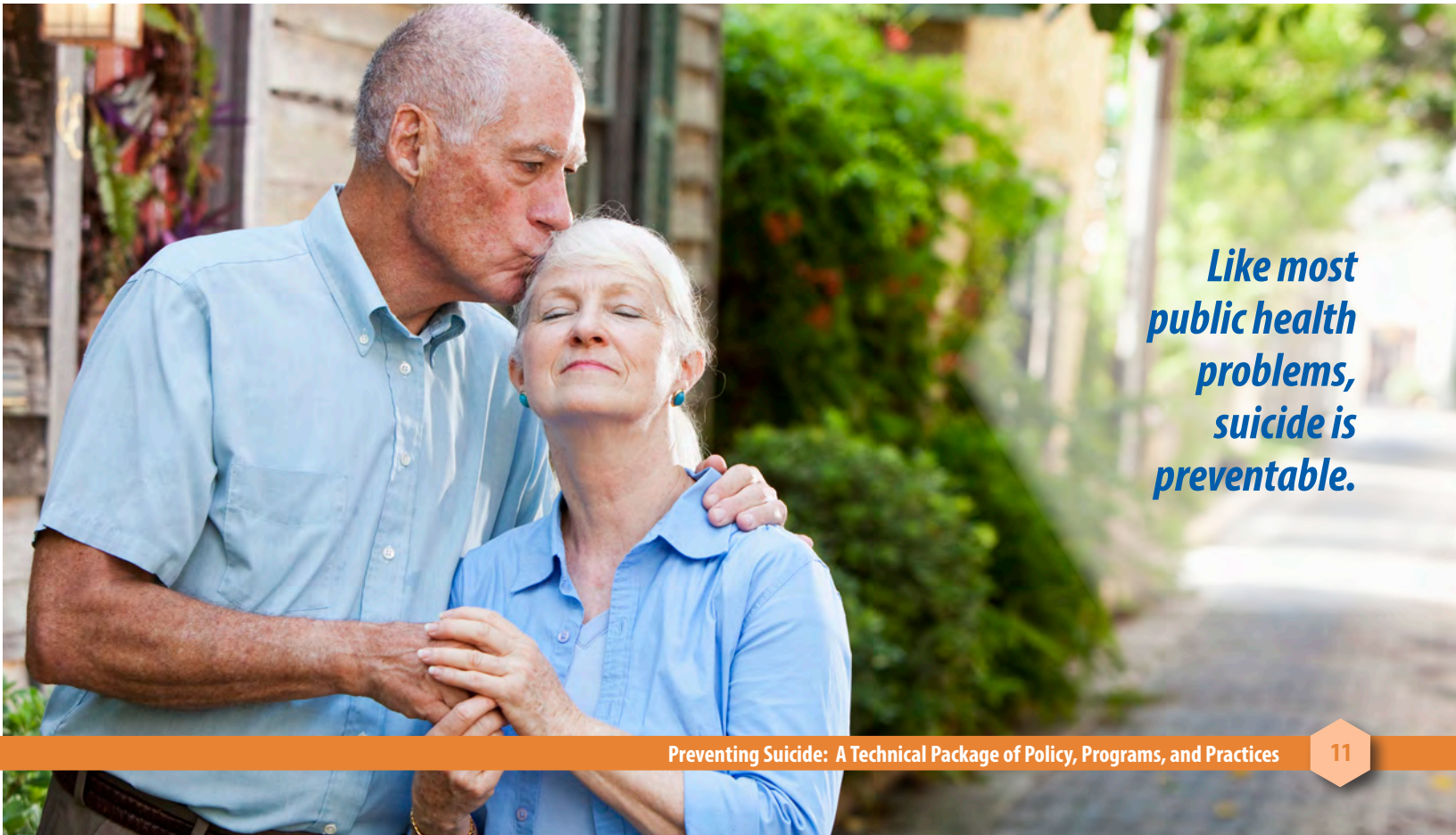
This technical package includes programs, practices, and policies with evidence of impact on suicide or risk or protective factors for suicide. To be considered for inclusion in the technical package, the program, practice, or policy selected had to meet at least one of these criteria: a) meta-analyses or systematic reviews showing impact on suicide; b) evidence from at least one rigorous (e.g., randomized controlled trial [RCT] or quasi-experimental design) evaluation study that found significant preventive effects on suicide; c) meta-analyses or systematic reviews showing impact on risk or protective factors for suicide, or d) evidence from at least one rigorous (e.g., RCT or quasi-experimental design) evaluation study that found significant impacts on risk or protective factors for suicide. Finally, consideration was also given to the likelihood of achieving beneficial effects on multiple forms of violence; no evidence of harmful effects on specific outcomes or with particular subgroups; and feasibility of implementation in a U.S. context if the program, policy, or practice has been evaluated in another country.

Within this technical package, some approaches do not yet have research evidence demonstrating impact on rates of suicide but instead are supported by evidence indicating impacts on risk or protective factors for suicide (e.g., help-seeking, stigma reduction, depression, connectedness). In terms of the strength of the evidence, programs that have demonstrated effects on suicidal behavior (e.g., reductions in deaths, attempts) provide a higher-level of evidence, but the evidence base is not that strong in all areas. For instance, there has been less evaluation of community engagement and family programs on suicidal behavior. Thus, approaches in this package that have effects on risk or protective factors reflect the developing nature of the evidence base and the use of the best available evidence at a given time.

It is also important to note that there is often significant heterogeneity among the programs, policies, or practices that fall within one approach or strategy in terms of the nature and quality of the available evidence. Not all programs, policies, or practices that utilize the same approach are equally effective, and even those that are effective may not work across all populations. Tailoring programs and conducting more evaluations may be necessary to address different population groups. The evidence-based programs, practices, or policies included in the package are not intended to be a comprehensive list for each approach, but rather to serve as examples that have been shown to impact suicide or have beneficial effects on risk or protective factors for suicide.

Contextual and Cross-Cutting Themes

One important feature of the package is the complementary and potentially synergistic impact of the strategies and approaches. The strategies and approaches included in this technical package represent different levels of the social ecology, with efforts intended to impact community and societal levels, as well individual and relationship levels. The strategies and approaches are intended to work in combination and reinforce each other to prevent suicide (see box on page 12). The strategies are arranged in order such that those strategies hypothesized to have the greatest potential for broad public health impact on suicide are included first, followed by those that might impact subsets of the population (e.g., persons who have already made a suicide attempt).



Preventing Suicide

Strategy	Approach
Strengthen economic supports	• Strengthen household financial security • Housing stabilization policies
Strengthen access and delivery of suicide care	• Coverage of mental health conditions in health insurance policies • Reduce provider shortages in underserved areas • Safer suicide care through systems change
Create protective environments	• Reduce access to lethal means among persons at risk of suicide • Organizational policies and culture • Community-based policies to reduce excessive alcohol use
Promote connectedness	• Peer norm programs • Community engagement activities
Teach coping and problem-solving skills	• Social-emotional learning programs • Parenting skill and family relationship programs
Identify and support people at risk	• Gatekeeper training • Crisis intervention • Treatment for people at risk of suicide • Treatment to prevent re-attempts
Lessen harms and prevent future risk	• Postvention • Safe reporting and messaging about suicide

It is important to note that these strategies are not mutually exclusive but each has an immediate focus. For instance, social-emotional learning programs, an approach under the *Teach Coping and Problem-Solving Skills* strategy, sometimes include components to change peer norms and the broader environment. The primary focus of these programs, however, is to provide children and youth with skills to resolve problems in relationships, school, and with peers, and to help youth address other negative influences (e.g., substance use) associated with suicide.

The goal of this package is to stress the importance of comprehensive prevention efforts and to provide examples of effective programs addressing each level of the social ecology, with the knowledge that some programs, practices, and policies may impact multiple levels. Further, those that involve multiple sectors and that impact multiple levels of the social ecology are more likely to have a greater impact on the overall burden of suicide.

Suicide ideation, thoughts, attempts, and deaths vary by gender, race/ethnicity, age, occupation, and other important population characteristics.[6,50] Further, certain transition periods are also associated with higher rates of suicide (e.g., transition from working into retirement, transition from active duty military status to civilian status).[48,51] In fact, suicide risk can change along with dynamic risk factors. For example, individuals' coping skills may change during periods of crisis and heightened stress, limiting their normal ability to effectively solve problems and cope. Research indicates that suicide risk changes as a result of the number and intensity of key risk and protective factors experienced.[52] Ideally, the availability of multiple strategies and approaches tailored to the social, economic, cultural, and environmental context of individuals and communities are desirable as they may increase the likelihood of removing barriers to supportive and effective care and provide opportunities to develop individual and community resilience.[1]

Identifying programs, practices, and policies with evidence of impact on suicide, suicide attempts, or beneficial effects on risk or protective factors for suicide is only the first step. In practice, the effectiveness of the programs, policies and practices identified in this package will be strongly dependent on how well they are implemented, as well as the partners and communities in which they are implemented. Practitioners in the field may be in the best position to assess the needs and strengths of their communities and work with community members to make decisions about the combination of approaches included here that are best suited to their context.

Data-driven strategic planning processes can help communities with this work.[53-55] These planning processes engage and guide community stakeholders through a prevention planning process designed to address a community's profile of risk and protective factors with evidence-based programs, practices, and policies. These processes can also be used to monitor implementation, track outcomes, and make adjustments as indicated by the data. The readiness of the program for broad dissemination and implementation (e.g., availability of program materials, training and technical assistance) can also influence program effects. Implementation guidance to assist practitioners, organizations and communities will be developed separately.

This package includes strategies where public health agencies are well positioned to bring leadership and resources to implementation efforts. It also includes strategies where public health can serve as an important collaborator (e.g., strategies addressing community and societal level risks), but where leadership and commitment from other sectors such as business, labor or health care is critical to implement a particular policy or program (e.g., workplace policies; treatment to prevent re-attempts). The role of various sectors in the implementation of a strategy or approach in preventing suicide is described further in the section on *Sector Involvement*.

In the sections that follow, the strategies and approaches with the best available evidence for preventing suicide are described.

Strengthen Economic Supports

Rationale

Studies from the U.S. examining historical trends indicate that suicide rates increase during economic recessions marked by high unemployment rates, job losses, and economic instability and decrease during economic expansions and periods marked by low unemployment rates, particularly for working-age individuals 25 to 64 years old.[56,57] Economic and financial strain, such as job loss, long periods of unemployment, reduced income, difficulty covering medical, food, and housing expenses, and even the anticipation of such financial stress may increase an individual's risk for suicide or may indirectly increase risk by exacerbating related physical and mental health problems.[58] Buffering these risks can, therefore, potentially protect against suicide. For example, strengthening economic support systems can help people stay in their homes or obtain affordable housing while also paying for necessities such as food and medical care, job training, child care, among other expenses required for daily living. In providing this support, stress and anxiety and the potential for a crisis situation may be reduced, thereby preventing suicide. Although more research is needed to understand how economic factors interact with other factors to increase suicide risk, the available evidence suggests that strengthening economic supports may be one opportunity to buffer suicide risk.

Approaches

Economic supports for individuals and families can be strengthened by targeting household financial security and ensuring stability in housing during periods of economic stress.

Strengthening household financial security can potentially buffer the risk of suicide by providing individuals with the financial means to lessen the stress and hardship associated with a job loss or other unanticipated financial problems. The provision of unemployment benefits and other forms of temporary assistance, livable wages, medical benefits, and retirement and disability insurance to help cover the cost of necessities or to offset costs in the event of disability, are examples of ways to strengthen household financial security.

Housing stabilization policies aim to keep people in their homes and provide housing options for those in need during times of financial insecurity. This may occur through programs that provide affordable housing such as through government subsidies or through other options available to potential homebuyers such as loan modification programs, move-out planning, or financial counseling services that help minimize the risk or impact of foreclosures and eviction.

Potential Outcomes

- Reductions in foreclosure rates
- Reductions in eviction rates
- Reductions in emotional distress
- Reductions in rates of suicide

Evidence

There is evidence suggesting that strengthening household financial security and stabilizing housing can reduce suicide risk.

Strengthen household financial security. The *Federal-State Unemployment Insurance Program* allows states to define the maximum amount and duration of unemployment benefits that workers are entitled to receive after a job loss.[59] An examination of variations in *unemployment benefit programs* across states demonstrated that the impact of unemployment on rates of suicide was offset in those states that provided greater than average unemployment benefits (mean level: $7,990 per person in U.S. constant dollars). The effects of *unemployment benefit programs* were also consistent by sex and age group.[59] Another U.S. study examining the link between unemployment and suicide rates using monthly suicide data, length of unemployment (less than 5 weeks, 5-14 weeks, 15-26 weeks, and greater than 26 weeks), and job losses found that the duration of unemployment, as opposed to just the loss of a job, predicted suicide risk.[60] Together, these results suggest that not only should state unemployment benefit programs be generous in their financial allocations, but also in their duration.

Other measures to strengthen household financial security (e.g., transfer payments related to retirement and disability insurance, unemployment insurance compensation, medical benefits, and other forms of family assistance) have also shown an impact on rates of suicide. A study by Flavin and Radcliff[61] examined the impact of states' per capita spending on transfer payments, medical benefits, and family assistance (Temporary Assistance to Needy Families—TANF) and total state spending on suicide rates between 1990-2000, controlling for a number of suicide risk factors (e.g., residential mobility, divorce rate, unemployment rate) at the state level. As per capita spending on total transfer payments, medical benefits, and family assistance increased there was an associated decrease in state suicide rates. In terms of lives saved, Flavin and Radcliff calculated the cost of reducing a state's suicide rate by a full point for the years studied.[61] At the national level, they estimated 3,000 fewer suicides would occur per year nationwide if every state increased its per capita spending on these types of

assistance by $45 per year.[61] Although this was a correlational study, the results demonstrate the potential benefits of policies that reach particularly vulnerable individuals during periods of great need. More evaluation studies are needed to further understand the outcomes impacted by programs such as these.

Housing stabilization policies. The *Neighborhood Stabilization Program*[62] was designed to help neighborhoods suffering from high rates of foreclosure and abandonment by slowing the deterioration of the neighborhoods and providing affordable housing options for low, moderate, and middle-income homebuyers. This program also offers financial assistance to eligible individuals for the purchase of a new home. Although this program has not been rigorously evaluated for its impact on suicide outcomes, it addresses foreclosure and eviction, which are risk factors for suicide. A longitudinal analysis of annual data on suicides and foreclosures demonstrated that as the proportion of foreclosed properties increased in U.S. states, so did the state suicide rate, particularly among working-aged adults.[63] Another study of data from 16 U.S. states participating in the *National Violent Death Reporting System* found that suicides precipitated by home foreclosures and evictions increased more than 100% from 2005 (before the housing crisis began) to 2010 (after it had peaked).[57] Most of these suicides occurred prior to the actual loss of the decedent's home. These findings suggest that integrating suicide prevention resources, messaging, and referrals into financial, foreclosure, and move-out planning and counseling services may help to prevent suicide.

Strengthen Access and Delivery of Suicide Care

Rationale

While most people with mental health problems do not attempt or die by suicide[18,19] and the level of risk conferred by different types of mental illness varies,[64-66] previous research indicates that mental illness is an important risk factor for suicide.[5,67] State-level suicide rates have also been found to be correlated with general mental health measures such as depression.[68,69] Findings from the *National Comorbidity Survey* indicate that relatively few people in the U.S. with mental health disorders receive treatment for those conditions.[70] Lack of access to mental health care is one of the contributing factors related to the underuse of mental health services.[71] Identifying ways to improve access to timely, affordable, and quality mental health and suicide care for people in need is a critical component to prevention.[5] Additionally, research suggests that services provided are maximized when health and behavioral health care systems are set up to effectively and efficiently deliver such care.[72] Apart from treatment benefits, these approaches can also normalize help-seeking behavior and increase the use of such services.

Approaches

There are a number of approaches that can be used to strengthen access and delivery of suicide care, including:

Coverage of mental health conditions in health insurance policies. Federal and state laws include provisions for equal coverage of mental health services in health insurance plans that is on par with coverage for other health concerns (i.e., mental health parity).[73] Benefits and services covered include such things as the number of visits, co-pays, deductibles, inpatient/outpatient services, prescription drugs, and hospitalizations. If a state has a stronger mental health parity law than the federal parity law, then insurance plans regulated by the state must follow the state parity law. If a state has a weaker parity law than the federal parity law (e.g., includes coverage for some mental health conditions but not others), then the federal parity law will replace the state law. Equal coverage does not necessarily imply good coverage as health insurance plans vary in the extent to which benefits and services are offered to address various health conditions. Rather it helps to ensure that mental health services are covered on par with other health concerns.

Reduce provider shortages in underserved areas. Access to effective and state-of-the-art mental health care is largely dependent upon the training and the size of the mental health care workforce. Over 85 million Americans live in areas with an insufficient number of mental health providers; this shortage is particularly severe among low-income urban and rural communities.[74] There are various ways to increase the number and distribution of practicing mental health providers in underserved areas including offering financial incentives through existing state and federal programs (e.g., loan repayment programs) and expanding the reach of health services through telephone, video and web-based technologies. Such approaches can increase the likelihood that those in need will be able to access affordable, quality care for mental health problems, which can reduce risk for suicide.

Safer suicide care through systems change. Access to health and behavioral health care services is critical for people at risk of suicide; however this is just one piece of the puzzle. Care should also be delivered efficiently and effectively. More specifically, care should take place within a system that supports suicide prevention and patient safety through strong leadership, workforce training, systematic identification and assessment of suicide risk, implementation of evidence-based treatments (see *Identify and Support People at Risk*), continuity of care, and continuous quality improvement. Care that is patient-centered and promotes equity for all patients is also of critical importance.[75]

Potential Outcomes

- Increased use of mental health services
- Lower rates of treatment attrition
- Reductions in depressive symptoms
- Reductions in rates of suicide attempts
- Reductions in rates of suicide

Evidence

There is evidence suggesting that coverage of mental health conditions in health insurance policies and improving access and the delivery of care can reduce risk factors associated with suicide and may directly impact suicide rates.

Coverage of mental health conditions in health insurance policies. The *National Survey on Drug Use and Health (NSDUH)* is a nationally representative survey of the U.S. population that provides data on substance use, mental health conditions, and service utilization.[50] Using data from this survey, Harris, Carpenter, and Bao[76] found that 12 months after states enacted *mental health parity laws*, self-reported use of mental healthcare services significantly increased. Moreover, subsequent research by Lang[69] examined state mental health laws and suicide rates between 1990 and 2004 and found that mental health parity laws, specifically, were associated with an approximate 5% reduction in suicide rates. This reduction, in the 29 states with parity laws, equated to the prevention of 592 suicides per year.[69]

Reduce provider shortages in underserved areas. One example of a program to improve access to mental health care providers is the *National Health Service Corps (NHSC)*, which offers financial incentives to attract mental/behavioral health clinicians to underserved areas.[77] Programs such as *NHSC* encourage individuals to work in the mental health profession in locations designated as Health Professional Shortage Areas (HPSAs) in exchange for student loan debt repayment. A 2012 retention survey conducted by the Health Resources and Services Administration (HRSA), found that 61% of mental and behavioral health care providers continued to practice in designated mental health shortage areas after their four year commitment to the *NHSC*.[78] Although this program has not been evaluated for impact on suicide, it addresses access to care, which is a critical component to suicide prevention.

Telemental Health (TMH) services refer to the use of telephone, video and web-based technologies for providing psychiatric or psychological care at a distance.[79] *TMH* can be used in a variety of settings (e.g., outpatient clinics, hospitals, military treatment facilities) to treat a wide range of mental health conditions. It can also improve access to care for patients in isolated areas, as well as reduce travel time and expenses, reduce delays in receiving care, and improve satisfaction interacting with the mental health care system. A systematic review of *TMH* services found that services rated as high or good quality were effective in treating mental health conditions such as depression, schizophrenia, substance

abuse, and suicidal ideation and suicide.[79] Further, Mohr and colleagues[80] conducted a meta-analysis examining the effect of psychotherapy delivered specifically via telephone and found that it significantly reduced depressive symptoms in comparison to face-to-face psychotherapy. They also found that treatment attrition rates were significantly lower among patients receiving telephone-administered psychotherapy compared to patients receiving face-to-face therapy.[80] Thus, *TMH* may not only offer improved access to mental health care, but it may also ensure continuity of care, and thereby further reduce the risk for suicide.

Safer suicide care through systems change. *Henry Ford Health System*, which is a large health maintenance organization (HMO) in the state of Michigan, pioneered *Perfect Depression Care,*[81] the pre-cursor to what is now called *Zero Suicide*. The overall goal of *Perfect Depression Care* was to eliminate suicide among HMO members. More broadly, the goal of the program was to redesign delivery of depression care to achieve "breakthrough improvement" in quality and safety by focusing on effectiveness, safety, patient centeredness, timeliness, efficiency, and equity among patients. The program screened and assessed each patient for suicide risk and implemented coordinated continuous follow-up care system wide.[81] An examination of the impact of the program found that there was a dramatic and statistically significant decrease in the rate of suicide between the baseline years, 1999 and 2000, and the intervention years, 2002-2009. During this time period, the suicide rate fell by 82%.[81,82] Further, among HMO members who received mental health specialty services, the suicide rate significantly decreased over time from 1999 to 2010 (110.3 to 47.6 per 100,000 population; $p<.04$) with a mean of 36.2 per 100,000 over the period.[83] Additionally, for those HMO members who accessed only general medical services as opposed to specialty mental health services, the suicide rate increased from 2.7 to 5.6 per 100,000 ($p<.01$).[83] Similarly, in the state of Michigan, rates of suicide in the general population increased over the period from 9.8 to 12.5 per 100,000 ($p<.001$).[83]

Create Protective Environments

Rationale

Prevention efforts that focus not only on individual behavior change (e.g., help-seeking, treatment interventions) but on changes to the environment can increase the likelihood of positive behavioral and health outcomes.[84] Creating environments that address risk and protective factors where individuals live, work, and play can help prevent suicide.[1,17] For example, rates of suicide are high among middle-aged adults who comprise 42.6% of the workforce[85]; among certain occupational groups[10,11]; and among people in detention facilities (e.g., jail, prison),[86] to name a few. Thus, settings where these populations work and reside are ideal for implementing programs, practices and policies to buffer against suicide. Changes to organizational culture through the implementation of supportive policies, for instance, can change social norms, encourage help-seeking, and demonstrate that good health and mental health are valued and that stigma and other risk factors for suicide are not.[87,88] Similarly, modifying the characteristics of the physical environment to prevent harmful behavior such as access to lethal means can reduce suicide rates, particularly in times of crisis or transition.[89-94]

Approaches

The current evidence suggests three potential approaches for creating environments that protect against suicide.

Reduce access to lethal means among persons at risk of suicide. Means of suicide such as firearms, hanging/suffocation, or jumping from heights provide little opportunity for rescue and, as such, have high case fatality rates (e.g., about 85% of people who use a firearm in a suicide attempt die from their injury).[95] Research also indicates that: 1) the interval between deciding to act and attempting suicide can be as short as 5 or 10 minutes,[96,97] and 2) people tend *not* to substitute a different method when a highly lethal method is unavailable or difficult to access.[98,99] Therefore, increasing the time interval between deciding to act and the suicide attempt, for example, by making it more difficult to access lethal means, can be lifesaving. The following are examples of approaches reducing access to lethal means for persons at risk of suicide:

- *Intervening at Suicide Hotspots.* Suicide hotspots, or places where suicides may take place relatively easily, include tall structures (e.g., bridges, cliffs, balconies, and rooftops), railway tracks, and isolated locations such as parks. Efforts to prevent suicide at these locations include erecting barriers or limiting access to prevent jumping, and installing signs and telephones to encourage individuals who are considering suicide, to seek help.[100]

- *Safe Storage Practices.* Safe storage of medications, firearms, and other household products can reduce the risk for suicide by separating vulnerable individuals from easy access to lethal means. Such practices may include education and counseling around storing firearms locked in a secure place (e.g., in a gun safe or lock box), unloaded and separate from the ammunition; and keeping medicines in a locked cabinet or other secure location away from people who may be at risk or who have made prior attempts.[89,101]

Organizational policies and culture that promote protective environments may be implemented in places of employment, detention facilities, and other secured environments (e.g., residential settings). Such policies and cultural values encourage leadership from the top down and may promote prosocial behavior (e.g., asking for help), skill building, positive social norms, assessment, referral and access to helping services (e.g., mental health, substance abuse treatment, financial counseling), and development of crisis response plans, postvention and other measures to foster a safe physical environment. Such policies and cultural shifts can positively impact organizational climate and morale and help prevent suicide and its related risk factors (e.g., depression, social isolation).[88,102]

Community-based policies to reduce excessive alcohol use. Research studies in the United States have found that greater alcohol availability is positively associated with alcohol-involved suicides.[103-105] Policies to reduce excessive alcohol use broadly include zoning to limit the location and density of alcohol outlets, taxes on alcohol, and bans on the sale of alcohol for individuals under the legal drinking age.[105] These policies are important because acute alcohol use has been found to be associated with more than one-third of suicides and approximately 40% of suicide attempts.[106]

Potential Outcomes

- Increases in safe storage of lethal means
- Reductions in rates of suicide
- Reductions in suicide attempts
- Increases in help-seeking
- Reductions in alcohol-related suicide deaths

Evidence

The evidence suggests that creating protective environments can reduce suicide and suicide attempts and increase protective behaviors.

Reduce access to lethal means among persons at risk of suicide. A meta-analysis examining the impact of *suicide hotspot interventions* implemented in combination or in isolation, both in the U.S. and abroad, found associated reduced rates of suicide.[100,107] For example, after erecting a barrier on the Jacques-Cartier bridge in Canada, the suicide rate from jumping from the bridge decreased from about 10 suicide deaths per year to about 3 deaths per year.[108] Moreover, the reduction in suicides by jumping was sustained even when all bridges and nearby jumping sites were considered, suggesting little to no displacement of suicides to other jumping sites.[108] Further evidence for the effectiveness of bridge barriers was demonstrated by a study examining the impact of the *removal* of safety barriers from the Grafton Bridge in Auckland, New Zealand. After removal of the barrier, both the number and rate of suicide increased five-fold.[93,109]

Another form of means reduction involves implementation of *safe storage practices*. In a case-control study of firearm-related events identified from 37 counties in Washington, Oregon, and Missouri, and from 5 trauma centers, researchers found that storing firearms unloaded, separate from ammunition, in a locked place or secured with a safety device was protective of suicide attempts among adolescents.[110] Further, a recent systematic review of clinic and community-based education and counseling interventions suggested that the provision of safety devices significantly increased safe firearm storage practices compared to counseling alone or compared to the provision of economic incentives to acquire safety devices on one's own.[101]

Another program, the *Emergency Department Counseling on Access to Lethal Means (ED CALM)*, trained psychiatric emergency clinicians in a large children's hospital to provide lethal means counseling and safe storage boxes to parents of patients under age 18 receiving care for suicidal behavior. In a pre-post quality improvement project, Runyan et al[89] found that at post-test 76% (of the 55% of parents followed up, n=114) reported that all medications in the home were locked up as compared to fewer than 10% at the time of the initial emergency department visit. Among parents who indicated the presence of guns in the home at pre-test (i.e., 67%), all (100%) reported guns were currently locked up at post-test.[89]

Organizational policies and culture. *Together for Life* is a workplace program of the Montreal Police Force implemented to address suicide among officers. Policy and program components were designed to foster an organizational culture that promoted mutual support and solidarity among all members of the Force. The program included training of supervisors, managers and all units to improve competencies in identifying suicidal risk and to improve use and awareness of existing resources. The program also included an education campaign to improve awareness and help-seeking.[111] Police suicides were tracked over 12 years and compared to rates in the control city of Quebec. The suicide rate in the intervention group decreased significantly by 78.9% to a rate of 6.4 suicides per 100,000 population per year compared to an 11% increase in the control city (29.0 per 100,000).[111]

Another example of this approach is the *United States Air Force Suicide Prevention Program*. The program included 11 policy and education initiatives and was designed to change the culture of the Air Force surrounding suicide. The program uses leaders as role models and agents of change, establishes expectations for behavior related to awareness of suicide risk, develops population skills and knowledge (i.e., education and training), and investigates every suicide (i.e., outcomes measurement). The program represents a fundamental shift from viewing suicide and mental illness solely as medical problems and instead sees them as larger service-wide problems impacting the whole community.[112] Using a time-series design to examine the impact of the program on various violence-related outcomes, researchers found that the program was associated with a 33% relative risk reduction in suicide.[112] The program was also associated with relative risk reductions in related outcomes including moderate and severe family violence (30% and 54%, respectively), homicide (51%), and accidental death (18%).[112] A longitudinal assessment of the program over the period 1981 to 2008 (16 years before the 1997 launch of the program and 11 years post-launch) found significantly lower rates of suicide after the program was launched than before.[87] These effects were sustained over time, except in 2004, which the authors found was associated with less rigorous implementation of program components in that year than in the other years.[87]

Finally, while the evidence is still being built for suicide prevention in correctional facilities, preliminary evidence suggests organizational policies and practices that include routine suicide prevention training for all staff; standardized intake screening and risk assessment; provision of shared information between staff members (especially in transitioning or transferring of inmates); varying levels of observation; safe physical environment; emergency response protocols; notification of suicidal behavior/suicide through the chain of command; and critical incident stress debriefing and death review can potentially reduce suicide.[102] When these policies and practices were implemented across 11 state prisons in Louisiana, suicide rates dropped 46%, from a rate of 23.1 per 100,000 before the intervention to 12.4 per 100,000 the following year.[113] Similar programs have seen declines in suicide both in the United States and in other countries.[114]

Community-based policies to reduce excessive alcohol use. While multiple policies to limit excessive use of alcohol exist, several studies on alcohol outlet density and risk factors for suicide, such as interpersonal violence and social connectedness,[115-118] suggest that measures to reduce alcohol outlet density can potentially reduce alcohol-involved suicides. Additionally, a longitudinal analysis of alcohol outlet density, suicide mortality, and hospitalizations for suicide attempts over 6 years in 581 California zip codes, indicated that greater density of bars, specifically, was related to greater suicide and suicide attempts, particularly in rural areas.[119]

Promote Connectedness

Rationale

Sociologist, Emile Durkheim theorized in 1897 that weak social bonds, i.e., lack of connectedness, were among the chief causes of suicidality.[120] Connectedness is the degree to which an individual or group of individuals are socially close, interrelated, or share resources with others.[121] Social connections can be formed within and between multiple levels of the social ecology,[17] for instance between individuals (e.g., peers, neighbors, co-workers), families, schools, neighborhoods, workplaces, faith communities, cultural groups, and society as a whole. Related to connectedness, social capital refers to a sense of trust in one's community and neighborhood, social integration, and also the availability and participation in social organizations.[122,123] Many ecological cross-sectional and longitudinal studies have examined the impact of aspects of social capital on depression symptoms, depressive disorder, mental health more generally, and suicide. While the evidence is limited, existing studies suggest a positive association between social capital (as measured by social trust and community/neighborhood engagement), and improved mental health.[124,125] Connectedness and social capital together may protect against suicidal behaviors by decreasing isolation, encouraging adaptive coping behaviors, and by increasing belongingness, personal value, and worth, to help build resilience in the face of adversity. Connectedness can also provide individuals with better access to formal supports and resources, mobilize communities to meet the needs of its members and provide collective primary prevention activities to the community as a whole.[121]

Approaches

Promoting connectedness among individuals and within communities through modeling peer norms and enhancing community engagement may protect against suicide.

Peer norm programs seek to normalize protective factors for suicide such as help-seeking, reaching out and talking to trusted adults, and promote peer connectedness. By leveraging the leadership qualities and social influence of peers, these approaches can be used to shift group-level beliefs and promote positive social and behavioral change. These approaches typically target youth and are delivered in school settings but can also be implemented in community settings.[126]

Community engagement activities. Community engagement is an aspect of social capital.[127] Community engagement approaches may involve residents participating in a range of activities, including religious activities, community clean-up and greening activities, and group physical exercise. These activities provide opportunities for residents to become more involved in the community and to connect with other community members, organizations, and resources, resulting in enhanced overall physical health, reduced stress, and decreased depressive symptoms, thereby reducing risk of suicide.

Potential Outcomes

- Increases in healthy coping attitudes and behaviors
- Increases in referrals for youth in distress
- Increases in help-seeking behaviors
- Increases in positive perceptions of adult support

Evidence

Current evidence suggests a number of positive benefits of peer norm and community engagement activities, although more evaluation research is needed to examine whether these improvements in factors that protect against suicidal behavior translate into reduced suicide attempts and deaths.

Peer norm programs. Evaluations show that programs such as *Sources of Strength* can improve school norms and beliefs about suicide that are created and disseminated by student peers. In a randomized controlled trial of *Sources of Strength* conducted with 18 high-schools (6 metropolitan, 12 rural), researchers found that the program improved adaptive norms regarding suicide, connectedness to adults, and school engagement.[36] Peer leaders were also more likely than controls to refer a suicidal friend to an adult. For students, the program resulted in increased perceptions of adult support for suicidal youths, particularly among those with a history of suicidal ideation, and the acceptability of help-seeking behaviors. Finally, trained peer leaders also reported a greater decrease in maladaptive coping attitudes compared with untrained leaders.[36]

Community engagement activities. A vacant lot greening initiative was undertaken in Philadelphia between 1999 and 2008. Local residents and community members worked together to green 4,436 lots (or 7.8 million square feet) in four areas of the city. Researchers found significant reductions in community residents' self-reported level of stress, a risk factor for suicide, and engagement in more physical exercise, a protective factor for suicide, than residents in control vacant lot areas. There is some evidence for other cross-cutting benefits, including reductions in firearm assaults and vandalism.[128,129]

Teach Coping and Problem-Solving Skills

Rationale

Building life skills prepares individuals to successfully tackle every day challenges and adapt to stress and adversity. Life skills encompasses many concepts, but most often include coping and problem-solving skills, emotional regulation, conflict resolution, and critical thinking. Life skills are important in protecting individuals from suicidal behaviors.[126] Suicide prevention programs that focus on life and social skills training are drawn from social cognitive theories,[130] surmising that suicidal behavior is attributed to either direct learning and modeling or environmental and individual (e.g., hopelessness) characteristics. The inability to employ adequate strategies to cope with immediate stressors or identify and find solutions for problems has been characterized among suicide attempters.[131] Teaching and providing youth with the skills to tackle every day challenges and stressors is, therefore, an important developmental component to suicide prevention.

Approaches

Social-emotional learning programs and parenting skill and family relationship programs are two approaches for teaching coping and problem-solving skills.

Social-emotional learning programs focus on developing and strengthening communication and problem-solving skills, emotional regulation, conflict resolution, help seeking and coping skills. These approaches address a range of risk and protective factors for suicidal behavior. They provide children and youth with skills to resolve problems in relationships, school, and with peers, and help youth address other negative influences (e.g., substance use) associated with suicide.[126] These approaches are typically delivered to all students in a particular grade or school, although some programs also focus on groups of students considered to be at high risk for suicide. Opportunities to practice and reinforce skills are an important part of programs that work.[132]

Parenting skill and family relationship programs provide caregivers with support and are designed to strengthen parenting skills, enhance positive parent-child interactions, and improve children's behavioral and emotional skills and abilities.[132] Programs are typically designed for parents or caregivers with children in a specific age range and can be self-directed or delivered to individual families or groups of families. Some programs have sessions primarily with parents or caregivers while others include sessions for parents or caregivers, youth, and the family. Specific program content typically varies by the age of the child but often has consistent themes of child development, parent-child communication and relationships, and youth's interpersonal and problem-solving skills.

Potential Outcomes

- Reductions in suicide ideation
- Reductions in suicide attempts
- Reductions in suicide risk behaviors (i.e., depression, anxiety, conduct problems, substance abuse)
- Improvements in help-seeking behavior
- Improvements in social competence and emotional regulation skills
- Improvements in problem-solving and conflict management skills

Evidence

Several social-emotional learning and parenting and family relationship programs have been shown in rigorous evaluations to improve resilience and reduce problem behavior and risk factors for various behaviors, including ones closely related to suicide, such as depression, internalizing behaviors, and substance abuse.[133]

Social-emotional learning programs. The *Youth Aware of Mental Health Program (YAM)* is a program developed for teenagers aged 14–16 that uses interactive dialogue and role-playing to teach adolescents about the risk and protective factors associated with suicide (including knowledge about depression and anxiety) and enhances their problem-solving skills for dealing with adverse life events, stress, school and other problems.[134] In a cluster-randomized controlled trial conducted across 10 European Union countries and 168 schools, students in schools randomized to *YAM* were significantly less likely to attempt suicide and have severe suicidal ideation at the 12-month follow-up compared to students in control schools which received educational materials and care as usual. Overall, the relative risk of youth suicide attempts among the *YAM* group was reduced by over 50% demonstrating that out of 1000 students, five attempted suicide in the *YAM* group compared to 11 in the control group. Additionally, related to severe suicide ideation, in the *YAM* group, relative risk fell by 49.6%.[134]

Another example is the *Good Behavior Game (GBG),* which is a classroom-based program for elementary school children aged 6–10. The program uses a team-based behavior management strategy that promotes good behavior by setting clear expectations for good behavior and consequences for maladaptive behavior. The goal of the *GBG* program is to create an integrated classroom social system that is supportive of all children being able to learn with little aggressive or disruptive behavior.[135] Two cohorts of youths participated in the program in 1985-86 and 1986-87 school years when they were in the first and second grades. A number of proximal and distal outcomes were assessed among the two cohorts over time. With respect to distal suicide-related outcomes, an outcome evaluation of the *GBG* indicated that individuals in the first cohort, who were assigned to participate in *GBG* when they were in the first grade, reported half the adjusted odds of suicidal ideation and suicide attempts when assessed approximately 15 years later, between the ages of 19 to 21, compared to peers who had been in a standard classroom setting. The beneficial effect of the program was consistent for suicidal ideation regardless of whether baseline covariates were included.[135] The *GBG* effect on attempts was less robust in some adjusted models including caregiver mental health. In the second cohort of *GBG* students, neither suicidal ideation nor suicide attempts were significantly different between *GBG* and the control interventions.[135] The researchers believed this may have been due to a lack of implementation fidelity, including less mentoring and monitoring of teachers. *GBG* was also found to be associated with reduced risk of later substance abuse and other suicide risk factors among the first cohort of students. Results for the second cohort were generally smaller but in the desired direction.[136]

Parenting skill and family relationship programs. Parenting and family skills training approaches have shown promising impacts in preventing key risk factors associated with suicide. For example, the *Incredible Years (IY)* is a comprehensive group training program for parents, teachers and children designed to reduce conduct and substance abuse problems (two important suicide risk factors in youth) by improving protective factors such as responsive and positive parent-teacher-child interactions and relationships, emotional self-regulation and social competence (all protective factors for suicide).[132] The program includes 9-20 sessions offered in community-based settings (e.g., religious, recreation centers, mental health treatment centers, and hospitals). Several studies have demonstrated the effect of the *IY* program on reducing internalizing symptoms, such as anxiety and depression, and child conduct problems.[137,138] The program is also associated with improved problem-solving and conflict management; these skills were maintained at 1-year follow-up.[139-141] Additionally, the program demonstrated greater benefits in mother-rated child internalizing symptoms, compared to the waitlisted control group, when parent, child, and teacher components were included.[132]

Additionally, *Strengthening Families 10–14* is a program that involves sessions for parents, youth, and families with the goal of improving parents' skills for disciplining, managing emotions and conflict, and communicating with their children; promoting youths' interpersonal and problem-solving skills; and creating family activities to build cohesion and positive parent-child interactions. The premise of the program is that developing these skills for both parents and children will reduce internalizing behavior and adolescent substance abuse, two important risk factors for suicide.[142] *Strengthening Families* has been shown to significantly decrease externalizing behaviors, such as aggression, alcohol use, and drug use among youth participants, as well as reduce depression, alcohol use, and drug use among participating families.[142]

Identify and Support People at Risk

Rationale

In order to decrease suicide, care of, and attention to, vulnerable populations is necessary, as these groups tend to experience suicidal behavior at higher than average rates. Such vulnerable populations include, but are not limited to, individuals with lower socio-economic status or who are living with a mental health problem; people who have previously attempted suicide; Veterans and active duty military personnel; individuals who are institutionalized, have been victims of violence, or are homeless; individuals of sexual minority status; and members of certain racial and ethnic minority groups.[8,9,12,13,143] Supporting people at risk requires proactive case finding and effective response, crisis intervention, and evidence-based treatment. Finding optimal ways of identifying at risk individuals, customizing services to make them more accessible (e.g., Internet-based services when appropriate) and engaging people in evidence-based care (e.g., through such measures as collaborative treatment), remain key challenges.[81,144,145] Simply improving or expanding services does not guarantee that those services will be used by people most in need, nor will it necessarily increase the number of people who follow recommended referrals or treatment. For example, some people living in disadvantaged communities may face social and economic issues that can adversely affect their ability to access supportive services.[70]

Approaches

The following approaches focus on identifying and supporting people at increased risk of suicide.

Gatekeeper training is designed to train teachers, coaches, clergy, emergency responders, primary and urgent care providers, and others in the community to identify people who may be at risk of suicide and to respond effectively, including facilitating treatment seeking and support services. Gatekeeper training may be implemented in a variety of settings to identify and support people at risk.[146]

Crisis intervention. These approaches provide support and referral services, typically by connecting a person in crisis (or a friend or family member of someone at risk) to trained volunteers or professional staff via telephone hotline, online chat, text messaging, or in-person. Crisis intervention approaches are intended to impact key risk factors for suicide, including feelings of depression, hopelessness, and subsequent mental health care utilization.[147] Similar to means reduction, crisis interventions can put space or time between an individual who may be considering suicide and harmful behavior.

Treatment for people at risk of suicide can include various forms of psychotherapy delivered by licensed providers to help individuals with mental health problems and other suicide risk factors with problem-solving and emotional regulation. Treatment usually takes place in a one-on-one or group format between patients and clinicians and can vary in duration from several weeks to ongoing therapy, as needed. Treatment that employs collaborative (i.e., between patient and therapist or care manager) and/or integrated care (e.g., linkage between primary care and behavioral health care) can help engage and motivate patients, thereby increasing retention in therapy and decreasing suicide risk.[148-150]

Treatment to prevent re-attempts. These approaches typically include follow-up contact and use diverse modalities (e.g., home visits, mail, telephone, e-mail) to engage recent suicide attempt survivors in continued treatment to prevent re-attempts.[151] Treatment may focus on improved coping skills, mindfulness, and other emotional regulation skills, and may include case management home visits to increase adherence to treatment and continuity of care; and one-on-one interpersonal therapy and/or group therapy. Approaches that engage and connect people who have attempted to peers and providers are especially important because many attempters do not present to aftercare; 12%-25% re-attempt within a year, and 3%-9% of attempt survivors die by suicide within 1 to 5 years of their initial attempt.[151]

Potential Outcomes

- Reductions in suicidal ideation
- Reductions in suicide attempts
- Reductions in suicide rates
- Reductions in depression and feelings of hopelessness
- Reductions in re-attempts
- Improvements in coping skills
- Increases in treatment engagement and compliance with medications

Evidence

The current evidence suggests that identifying people at risk of suicide and the continued provision of treatment and support for these individuals can positively impact suicide and its associated risk factors.

Gatekeeper training. *Applied Suicide Intervention Skills Training (ASIST)* is a widely implemented training program that helps hotline counselors, emergency workers, and other gatekeepers to identify and connect with suicidal individuals, understand their reasoning for living and dying, and assist with safely connecting those in need to available resources. In a study employing a randomized controlled trial, Gould, Cross, Pisani, Munfakh, & Kleinman[152] evaluated the training across the *National Suicide Prevention Lifeline* network of hotlines over the period 2008-2009. Using data from 1,410 suicidal individuals who called 17 Lifeline centers, the researchers found that callers who spoke with *ASIST*-trained

counselors were significantly more likely to feel less depressed, less suicidal, less overwhelmed, and more hopeful by the end of their call, compared to callers who spoke to non-*ASIST* trained counselors. Counselors trained in *ASIST* were also more skilled at keeping callers on the phone longer and establishing a connection with them. However, training in *ASIST* did not result in more comprehensive suicide risk assessments than usual care training.[152]

Gatekeeper training has also been a primary component of the *Garret Lee Smith (GLS) Suicide Prevention Program*, which has been implemented in 50 states and 50 tribes. A multi-site evaluation assessed the impact of community gatekeeper training on suicide attempts and deaths by comparing the change in suicide rates and nonfatal suicidal behavior among young people aged 10–24 in counties implementing *GLS* trainings, with the trajectory observed in similar counties that did not implement these trainings. Counties that implemented *GLS* trainings had significantly lower youth suicide rates one year following the training implementation.[153] This finding equates to a decrease of 1 suicide death per 100,000 youth ages 10 to 24, or the prevention of approximately 237 deaths in the age group, between 2007 and 2010. Counties implementing *GLS* program activities also had significantly lower suicide attempt rates among youth ages 16 to 23 in the year following implementation of the *GLS* program than did similar counties that did not implement *GLS* activities (4.9 fewer attempts per 1000 youths).[154] More than 79,000 suicide attempts may have been prevented during the period examined.

Crisis intervention. Suicide prevention hotlines are one way to provide crisis intervention. In an evaluation of the effectiveness of the *National Suicide Prevention Lifeline* to prevent suicide, 1,085 suicidal individuals who called the hotline completed a standard risk assessment for suicide, and 380 of those completed a follow-up assessment between 1 and 52 days (mean=13.5 days) after the initial assessment. Researchers found that over half of the initial sample were seriously considering suicide when they called, and they had a plan for their suicide. Researchers also found that among follow-up participants, there was a significant decrease in psychological pain, hopelessness, and intent to die between initiation of the call (time 1) to follow-up (time 3).[155] Between time 2 (end of the call) to time 3, the effect remained for psychological pain and hopelessness, but was not significant for intent to die, suggesting that greater effort at outreach during and following the call is needed for callers with high levels of suicide intent.[155]

Treatment for people at risk of suicide. The *Improving Mood—Promoting Access to Collaborative Treatment (IMPACT)* program aims to prevent suicide among older primary care patients by reducing suicide ideation and depression. *IMPACT* facilitates the development of a therapeutic alliance, a personalized treatment plan that includes patient preferences, as well as proactive follow-up (biweekly during an acute phase and monthly during continuation phase) by a depression care manager.[156] The program has been shown to significantly improve quality of life, and to reduce functional impairment, depression and suicidal ideation over 24-months of follow-up[156,157] relative to patients who received care as usual.

Collaborative Assessment and Management of Suicidality (CAMS), is a therapeutic approach for suicide-specific assessment and treatment. The program's flexible approach can be used across treatment settings and clinician theoretical orientations and involves the clinician and patient working together in an interactive assessment process to develop patient-specific treatment plans. Sessions are collaborative and involve constant patient input about what is and is not working with the ultimate goal of enhancing the therapeutic alliance and increasing treatment motivation in the suicidal patient. *CAMS* has been tested and supported in 6 correlational studies,[144] in a variety of inpatient and outpatient settings, and in one RCT with several additional RCTs under way. A feasibility trial with a community-based sample of suicidal outpatients randomly assigned to *CAMS* or enhanced care as usual (intake with a psychiatrist or psychiatric nurse practitioner followed by 1-11 visits with a case manager and medication as needed) found better treatment retention among the *CAMS* group and significant improvements in suicidal ideation, overall symptom distress, and feelings of hopelessness at the 12 month follow-up.[158]

Other examples include *Dialectical Behavioral Therapy (DBT)* and *Attachment-Based Family Therapy (ABFT)*. *DBT* is a multicomponent therapy for individuals at high risk for suicide and who may struggle with impulsivity and emotional regulation issues. The components of *DBT* include individual therapy, group skills training, between-session telephone coaching and a therapist consultation team. In a randomized controlled trial of women with recent suicidal or self-injurious behavior, those receiving *DBT* were half as likely to make a suicide attempt at the two-year follow-up than women receiving community treatment (23% vs 46%), required less hospitalization for suicide ideation, and had lower medical risk across all suicide attempts and self-injurious acts combined.[159]

ABFT is a program for adolescents aged 12–18 and is designed to treat clinically diagnosed major depressive disorder, eliminate suicidal ideation, and reduce dispositional anxiety.[160] A randomized controlled trial of *ABFT* found that suicidal adolescents assigned to *ABFT* experienced significantly greater improvement in suicidal ideation over 24 weeks of follow-up than did adolescents assigned to enhanced usual care. Additionally, a significantly higher percentage of *ABFT* participants reported no suicidal ideation in the week prior to assessment at 12 weeks than did adolescents receiving enhanced usual care (69.2% vs. 34.6%) and at 24 weeks (82.1% vs. 46.2%).[160]

The Veterans Affairs *Translating Initiatives for Depression into Effective Solutions* project (*TIDES*) uses a depression care liaison to link primary care and mental health services. The depression care liaison assesses and educates patients and follows-up with both patients and providers between primary care visits to optimize treatment. This collaborative care increases the efficiency of providing mental health services by bringing mental health care to the primary care setting, where most patients are first detected and subsequently treated for many mental health conditions. An evaluation of *TIDES* found significant decreases in depression severity scores among 70% of primary care patients.[161] *TIDES* patients also demonstrated 85% and 95% compliance with medication and follow-up visits, respectively.[161]

Treatment to prevent re-attempts. Several strategies that aim to prevent re-attempts have demonstrated impact on reducing suicide deaths. For example, *Emergency Department Brief Intervention with Follow-up Visits* is a program that involves a one-hour discharge information session that addresses suicidal ideation and attempts, distress, risk and protective factors, alternatives to self-harm, and referral options, combined with nine follow-up contacts over 18 months (at 1, 2, 4, 7, 11 weeks and 4, 6, 12, 18 months). Follow-up contacts are either conducted by phone or through home visits according to a specific timeline for up to 18 months. A randomized controlled trial that enrolled suicide attempters from eight hospital emergency departments in five countries (Brazil, India, Sri Lanka, Iran, and China) found that a brief intervention combined with nine follow-up visits over 18 months was associated with significantly fewer deaths from suicide relative to a treatment-as-usual group (0.2% versus 2.2%, respectively).[162]

Another example of treatment to prevent re-attempts involves *active follow-up contact approaches* such as postcards, letters, and telephone calls intended to increase a patient's sense of connectedness with health care providers and decrease isolation.[151] These approaches include expression of care and support and typically invite patients to reconnect with their provider. Contacts are made periodically (e.g., monthly or every few months in the first 12 months post-discharge with some programs continuing contact for two or more years). In a meta-analysis conducted by Inagaki et al[151] interventions to prevent repeat suicide attempts in patients admitted to an emergency department for suicide attempt were found to reduce re-attempts by approximately 17% for up to 12 months post-discharge; however, the effects of these approaches beyond 12 months on re-attempts has not yet been demonstrated.[151] Also, because the number of trials and associated sample sizes included in this meta-analysis were small, it was not possible to determine the effect of active contact and follow-up approaches on suicide.

In a randomized controlled trial of the post-crisis suicide prevention long-term follow-up contact approach, Motto and Bostrom[163] found that patients who refused ongoing care but who were randomized to be contacted by letter four times per year had a lower rate of suicide over two years of follow-up than did patients in the control group who received no further contact. Other studies have also shown post-crisis letters and coping cards to be protective against suicide ideation and attempts.[164,165]

Finally, *Cognitive Behavior Therapy for Suicide Prevention (CBT-SP)* is an example of a therapeutic approach to prevent re-attempts. It uses a risk-reduction, relapse prevention approach that includes an analysis of proximal risk factors and stressors (e.g., relationship problems, school or work-related difficulties) leading up to and following the suicide attempt; safety plan development; skill building; and psychoeducation. *CBT-SP* also has family skill modules focused on family support and communication patterns as well as improving the family's problem-solving skills. A randomized controlled trial of *CBT-SP* found that 10-session outpatient cognitive therapy designed to prevent repeat suicide attempts resulted in a 50% reduction in the likelihood of a suicide re-attempt among adults who had been admitted to an emergency department for a suicide attempt relative to treatment as usual.[166]

Several strategies that aim to prevent re-attempts have demonstrated impact on reducing suicide deaths.


DAILY NEWS
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POLITICS

Lessen Harms and Prevent Future Risk

Rationale

Millions of people are bereaved by suicide every year in the United States and throughout the world.[5] Risk of suicide and suicide risk factors has been shown to increase among people who have lost a friend/peer, family member, co-worker, or other close contact to suicide.[167] Care and attention to the bereaved is therefore of high importance. Despite often good intentions, media and others responding to suicide may add to this risk. For example, research suggests that exposure to sensationalized or otherwise uninformed reporting on suicide may heighten the risk of suicide among vulnerable individuals and can inadvertently contribute to what is known as suicide contagion.[168,169]

Approaches

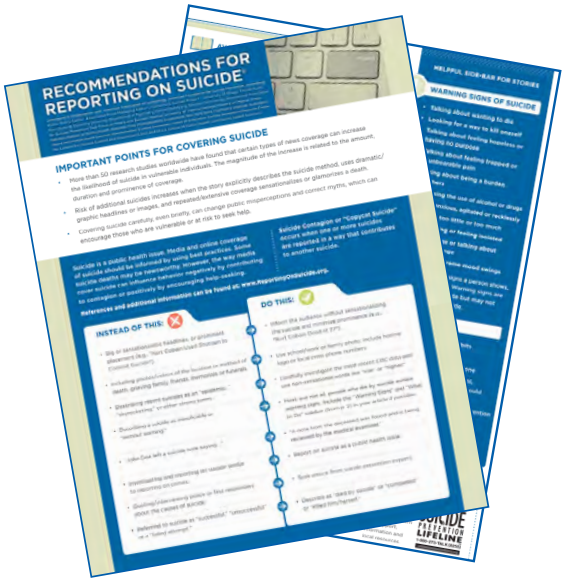
Some approaches that can be used to lessen harms and reduce future risk of suicide include postvention and safe reporting and messaging following a suicide.

Postvention approaches are implemented *after* a suicide has taken place and may include debriefing sessions, counseling, and/or bereavement support groups for surviving friends, family members, or other close contacts. These programs have not typically been evaluated for their impact on suicide, attempts, or ideation, but they may reduce survivors' guilt, feelings of depression, and complicated grief.[170]

Safe reporting and messaging about suicide. The manner in which information on a recent suicide is communicated to the public (e.g., school assemblies, mass media, social media) can heighten the risk of suicide among vulnerable individuals and can inadvertently contribute to suicide contagion. Reports that are inclusive of suicide prevention messages, stories of hope and resilience, risk and protective factors, and links to helping resources (e.g., hotline), and that avoid sensationalizing events or reducing suicide to one cause, can help reduce the likelihood of suicide contagion.[171]

Potential Outcomes

- Reductions in suicidal ideation
- Reductions in suicide attempts
- Reductions in rates of suicide
- Reductions in psychological distress
- Improvements in reporting following suicide
- Reductions in contagion effects related to suicide



Evidence

Current evidence suggests that postvention and safe reporting and messaging can impact risk and protective factors for suicide.

Postvention. One example of a postvention program with evidence of impact on risk and protective factors for suicide is the *StandBy Response Service* (*StandBy*). *StandBy* provides clients with face-to-face outreach and telephone support through a professional crisis response team. Site coordinators develop customized case management plans, referring clients to other existing community services matched to their needs.[172] In a study by Visser, Comans, and Scuffham,[172] *StandBy* clients were significantly less likely to be at high risk for suicidality (suicide ideation and attempts) and had less psychological distress than a suicide bereaved comparison group who had not had contact with the *StandBy* program (48% and 64% respectively). Additionally, research suggests that active postvention approaches in which outreach to suicide survivors occurs at the scene of a suicide is associated with intake into treatment sooner, greater attendance at support group meetings, and attendance at more meetings compared to passive postvention (i.e., approaches where survivors self-refer for services).[173]

Safe reporting and messaging about suicide. One way to ensure safe reporting and messaging about suicide is to encourage news media to adhere to *Recommendations for Reporting on Suicide* (http://www.reportingonsuicide.org). The most compelling evidence supporting these recommendations for reporting comes from Austria. After a sharp increase in suicides on the Viennese subway, media guidelines were introduced and an interrupted time-series design was used to evaluate the national impact of the guidelines on subsequent suicides. Changes in the quality and quantity of media reporting resulted in a nationwide significant reduction of 81 suicides annually.[169] Finally, research suggests that not only does reporting on suicide in a negative way (e.g., reporting on suicide myths and repetition) have harmful effects on suicide, but reporting on positive coping skills in the face of adversity can also demonstrate protective effects against suicide.[174] Reports of individual suicidal ideation (not accompanied by reports of suicide or suicide attempts) along with reports describing a "mastery" of a crisis situation where adversities were overcome was associated with significant decreases in suicide rates in the time period immediately following such reports.[174]

Sector Involvement

Public health can play an important and unique role in addressing suicide. Public health agencies, which typically place prevention at the forefront of efforts and work to create broad population-level impact, can bring critical leadership and resources to bear on this problem. For example, these agencies can serve as a convener, bringing together partners and stakeholders to plan, prioritize, and coordinate suicide prevention efforts. Public health agencies are also well positioned to collect and disseminate data, implement preventive measures, evaluate programs, and track progress. Although public health can play a leadership role in preventing suicide, the strategies and approaches outlined in this technical package cannot be accomplished by the public health sector alone. As noted in the *National Strategy for Suicide Prevention,*[1] the integration and coordination of prevention activities across sectors and settings is critical for expanding the reach and impact of suicide prevention efforts.

Other sectors vital to implementing this package include, but are not limited to, education, government (local, state, and federal), social services, health services, business, labor, justice, housing, media, and organizations that comprise the civil society sector such as faith-based organizations, youth-serving organizations, foundations, and other non-governmental organizations. Collectively, these sectors can make a difference in preventing suicide by impacting the various contexts and underlying risks that contribute to suicide.

The strategies and approaches described in this technical package are summarized in the Appendix along with the relevant sectors that are well positioned to lead implementation efforts. For example, business and labor, the health sector (including insurers, providers, and health systems), and government entities are in the best position to implement programs and policies that *Strengthen Economic Supports* and *Strengthen Access and Delivery of Suicide Care*. These types of supports go beyond individual behavior change and require commitment and support from those sectors that can directly address some of the underlying risks and the environmental contexts that increase the risk for suicide. Public health entities can play an important role by gathering and synthesizing information to inform policy, raise awareness, and evaluate the effectiveness of various policies. Moreover, partnerships with non-governmental and community organizations can be instrumental in increasing awareness of and garnering support for policies affecting individuals and families.

The public health sector has been at the forefront of many community-based prevention efforts, working collaboratively with schools and community-based organizations, to change social norms and positively impact health behavior. Public health is well suited to take on a similar leadership role in *Promoting Connectedness* through peer norm and community engagement activities and supporting the development, evaluation, and adoption of effective programs that *Teach Coping and Problem-Solving Skills* to prevent the risk of suicide in the first place. These programs are often delivered in school and community settings, making education and non-governmental organizations vital partners in prevention.

Businesses, workplaces, and local and state government entities, on the other hand, are in the best position to establish policies and support practices that *Create Protective Environments* where people live, work, and play. Public health entities can serve in an important role by gathering and synthesizing information, working with other governmental agencies (e.g., criminal justice, defense) and agencies within the executive branch of their state or local government in support of policy and other approaches, and evaluating the effectiveness of measures taken. In a similar fashion, public health entities can partner with schools, workplaces, and community organizations to implement and evaluate prevention programs, policies and practices geared toward creating safe, healthy, and supportive environments.

Finally, this technical package includes a number of interventions delivered in hospital, primary care, behavioral health care, and community settings designed to *Identify and Support People at Risk*. The intensity and activities for many of these interventions require the expertise of professionals who are licensed and trained to deliver critical intervention support. The health, social services, and justice sectors can work collaboratively to support individuals at high-risk for suicide and their families. These activities also require coordination of supports across various service providers and community organizations.

Regardless of strategy, action by many sectors will be necessary for the successful implementation of this package. In this regard, all sectors can play an important and influential role in preventing the risk of suicide in the first place and lessening the immediate and long-term harms of suicidal behavior by helping those in times of crisis get the services and support they need.

Monitoring and Evaluation

Monitoring and evaluation are necessary components of the public health approach to prevention. It is important to have timely and reliable data to monitor the extent of the problem and to evaluate the impact of prevention efforts. Data are also necessary for prevention planning and implementation.

Gathering ongoing and systematic data is important for prevention efforts. However, it is also important to gather data that are uniform and consistent across systems. Consistent data allow public health and other entities to better gauge the scope of the problem, identify high-risk groups, and monitor the effects of prevention programs and policies. Currently, it is common for different sectors, agencies, and organizations to employ varying definitions of suicidal ideation, behavior, and death that can make it difficult to consistently monitor specific outcomes across sectors and over time. For example, the manner in which deaths are classified can change from one jurisdiction to another, and can change based on local medical and/or medico-legal standards.[4] CDC's uniform definitions and recommended data elements for self-directed violence provide a useful framework to help ensure that data are collected in a consistent manner across surveillance systems.[4]

Surveillance systems exist at the federal, state, and local levels. It is important to assess the availability of surveillance data and data systems across these levels to identify and address gaps in the systems. CDC's *National Vital Statistics System (NVSS)*[7] and the *National Violent Death Reporting System (NVDRS)*[175] are examples of surveillance systems that provide data on deaths from suicide. *NVSS* is a nationwide surveillance system that collects demographic, geographic, and cause-of-death data from death certificates.[7] *NVDRS* is a state-based surveillance system (currently in 40 states, the District of Columbia, and Puerto Rico) that combines data from death certificates, law enforcement reports, and coroner or medical examiner reports to provide detailed information on the circumstances of violent deaths, including suicide, which can assist communities in guiding prevention approaches.[175] Data from state and local Child Death Review teams[176] and Suicide Death Review Teams (which are in a few states) offer another source to identify deaths and obtain insight into the gaps in services, systems, and modifiable risk factors for suicide.

The *National Electronic Injury Surveillance System-All Injury Program (NEISS-AIP)* provides nationally representative data about all types and causes of nonfatal injuries treated in U.S. hospital emergency departments, and can be used to assess national rates of, and trends in, self-harm injuries by cause (e.g., falls, poisoning, etc.), age, race/ethnicity, sex, disposition (where the injured person goes when released from the emergency department).[6]

In addition to information on deaths and nonfatal injuries, there are also surveillance systems that provide national, state, and some local estimates of suicidal behavior. The *Youth Risk Behavior Surveillance System (YRBSS)* collects information from a nationally representative sample of 9–12 grade students and is a key resource in monitoring health-risk behaviors among youth, including whether youth have seriously considered attempting suicide, attempted suicide, made a plan, or required treatment by a doctor or nurse for a suicide attempt that resulted in an injury, poisoning, or overdose.[177] The *YRBSS* data are obtained from a national school-based survey conducted by CDC as well as from state, territorial, tribal, and large urban school district surveys conducted by education and health agencies.[177] The *National Survey on Drug Use and Health (NSDUH)*[50] is an annual survey of the civilian, non-institutionalized population aged 12 years and older. *NSDUH* provides both national and state-level estimates of substance use (alcohol, tobacco, illicit drugs, and non-medical use of prescription drugs); mental health (past year mental illness, co-occurring illnesses); and service utilization, along with suicide ideation, suicide plans, and suicide attempts. *NSDUH* is a key resource to track trends in suicide-related risk factors in the population and to help identify groups at increased risk.[50]

It is also important at all levels (local, state, and federal) to address gaps in responses, track progress of prevention efforts and evaluate the impact of those efforts, including the impact of this technical package. Evaluation data, produced through program implementation and monitoring, is essential to provide information on what does and does not work to reduce rates of suicide and its associated risk and protective factors. Theories of change and logic models that identify short, intermediate, and long-term outcomes are an important part of program evaluation.

The evidence-base for suicide prevention has advanced greatly over the last few decades. However, additional research is needed to understand the impact of programs, policies, and practices on suicide (and suicide attempts, at a minimum), as opposed to merely examining their effectiveness on risk factors. More research is also needed to examine the effectiveness of primary prevention strategies (before risk occurs) and community-level strategies to prevent suicide at the population level. It will be important for researchers to test the effectiveness of combinations of the strategies and approaches included in this package. Most existing evaluations focus on approaches implemented in isolation, but there is potential to understand the synergistic effects within a comprehensive prevention approach. Lastly, there are also many potential opportunities to build and strengthen partnerships across program areas (e.g., violence prevention, substance abuse prevention) to evaluate the impact of different approaches on multiple outcomes.

Conclusion

Suicide is a serious public health problem. Rates of suicide have been on the rise for more than a decade and the costs stretch well into the billions of dollars each year. While suicide is a rare outcome statistically, its human impact has a ripple effect that is far-reaching. Each of us likely interacts with suicide survivors, those with lived experience, and those with thoughts of suicide on a daily basis—at home, at work, and in our communities. Suicide and suicide attempts are public health issues of societal concern. There are a number of barriers that have impeded progress, including, for example, stigma related to help-seeking, mental illness, being a survivor and fear related to asking someone about suicidal thoughts. Fortunately, like many public health problems, suicide is preventable,[1,5] and more is being done to prevent suicide than ever before, as evidenced by the work of the National Action Alliance for Suicide Prevention,[39,40,75,88] the release of the first world report on suicide,[5] and more timely surveillance data, to name just a few examples.

In an effort to continue pushing the field and society further towards prevention, this technical package includes strategies and approaches that ideally would be used in a comprehensive, multi-level and multi-sectoral way. It includes strategies and approaches to prevent the risk of suicide in the first place, as well as strategies focused on lessening the immediate and long-term harms of suicidal behavior. It includes strategies that range from a focus on the whole population regardless of risk to strategies designed to support people at highest risk. Importantly, this technical package extends the bounds of the typical prevention strategies to consider approaches that go beyond individual behavior change to better address risk factors impacting communities and populations more broadly (e.g., economic policies to strengthen housing and financial security).

While the evidence base continues to emerge, the collection of programs, policies, and practices laid out here are available for implementation now. In keeping with good public health practice, the intent is that monitoring and evaluation will play a key role in that implementation. Moreover, as new evidence becomes available, this technical package can be refined to reflect the current state of the science.

In closing, and in keeping with a message of resilience as spoken by those with lived experience, "hope, help, and healing is possible."

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Appendix: Summary of Strategies and Approaches to Prevent Suicide

Strategy	Approach/Program, Practice or Policy	Best Available Evidence			Lead Sectors[1]
		Suicide	Suicide Attempts or Ideation	Other Risk/ Protective Factors for Suicide	
Strengthen economic supports	**Strengthening household financial security**				Government (local, state, Federal) Business/Labor
	Unemployment benefit programs	✓		✓	
	Other income supports	✓			
	Housing stabilization policies				Government (local, state, Federal)
	Neighborhood Stabilization Program			✓	
Strengthen access and delivery of suicide care	**Coverage of mental health conditions in health insurance policies**				Government (local, state, Federal) Healthcare Social Services
	Mental Health Parity Laws	✓		✓	
	Reduce provider shortages in underserved areas				
	National Health Service Corps (NHSC)			✓	
	Telemental Health (TMH)			✓	
	Safer suicide care through systems change				
	Henry Ford Perfect Depression Care (Pre-cursor to Zero Suicide)	✓		✓	
Create protective environments	**Reduce access to lethal means among persons at risk**				Government (local, state) Public Health Healthcare
	Intervening at suicide hot spots	✓			
	Safe storage practices		✓	✓	
	Emergency Department Counseling on Access to Lethal Means (ED CALM)			✓	
	Organizational policies and culture				Business/labor Justice Government (local, state, Federal)
	Together for Life	✓			
	US Air Force Suicide Prevention Program	✓		✓	
	Correctional suicide prevention	✓			
	Community-based policies to reduce excessive alcohol use				Government (local, state) Business/labor
	Alcohol outlet density	✓		✓	
Promote connectedness	**Peer norm programs**				Public Health Education
	Sources of Strength			✓	
	Community engagement activities				Public Health Government (local)
	Greening vacant urban spaces			✓	

*This column refers to the lead sectors well positioned to bring leadership and resources to implementation efforts. For each strategy, there are many other sectors such as non-governmental organizations that are instrumental to prevention planning and implementing specific activities.

Strategy	Approach/Program, Practice or Policy	Best Available Evidence			Lead Sectors[1]
		Suicide	Suicide Attempts or Ideation	Other Risk/ Protective Factors for Suicide	
Teach coping and problem-solving skills	**Social-emotional learning programs**				Public Health Education
	Youth Aware of Mental Health Program		✓	✓	
	Good Behavior Game		✓	✓	
	Parenting skill and family relationship approaches				Public Health Education
	The Incredible Years			✓	
	Strengthening Families 10–14			✓	
Identify and support people at risk	**Gatekeeper training**				Public Health Health Care
	Applied Suicide Intervention Skills Training			✓	
	Garret Lee Smith Suicide Prevention Program	✓	✓		
	Crisis intervention				Public Health Social Services
	National Suicide Prevention Lifeline		✓	✓	
	Treatment for people at risk of suicide				Healthcare Social Services Justice
	Improving Mood – Promoting Access to Collaborative Treatment (IMPACT)		✓	✓	
	Collaborative Assessment and Management of Suicidality (CAMS)		✓	✓	
	Dialectical Behavioral Therapy (DBT)		✓	✓	
	Attachment-Based Family Therapy (ABFT)		✓		
	Translating Initiatives for Depression into Effective Solutions project (TIDES)			✓	
	Treatment to prevent re-attempts				Healthcare Social Services
	ED Brief Intervention with Follow-up Visits	✓			
	Active follow-up contact approaches	✓	✓		
	CBT for Suicide Prevention		✓		
Lessen harms and prevent future risk	**Postvention**				Healthcare
	StandBy Response Service		✓	✓	
	Safe reporting and message about suicide				Public Health Media
	Media Guidelines	✓			

*This column refers to the lead sectors well positioned to bring leadership and resources to implementation efforts. For each strategy, there are many other sectors such as non-governmental organizations that are instrumental to prevention planning and implementing specific activities.

For more information

To learn more about preventing suicide, call 1-800-CDC-INFO or visit CDC's violence prevention pages at www.cdc.gov/violenceprevention.

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