Substance Abuse and Mental Health Services Administration
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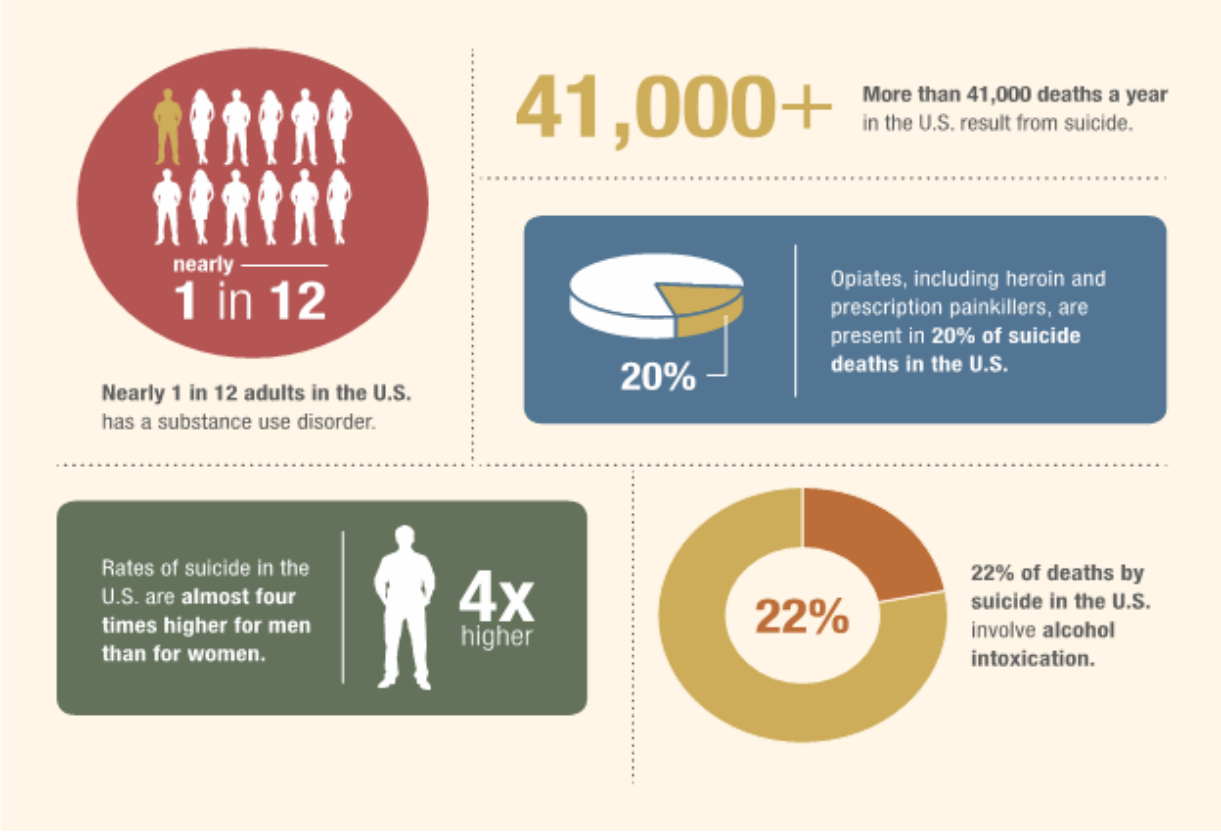
IN BRIEF
2016

Substance Use and Suicide: A Nexus Requiring a Public Health Approach

Suicide is a serious and preventable public health problem in the United States. Collaboration among prevention professionals across behavioral health fields has the potential to reduce suicide rates. While multiple factors influence suicidal behaviors, substance use—especially alcohol use—is a significant factor that is linked to a substantial number of suicides and suicide attempts. This "nexus" between substance use and suicide provides an opportunity for behavioral health leaders to develop a cohesive strategy within a public health framework to reduce suicidal behaviors and suicide rates.

This *In Brief* summarizes the relationship between substance use and suicide and provides state and tribal prevention professionals with information on the scope of the problem, an understanding of traditional barriers to collaboration and current programming, and ways to work together on substance misuse and suicide prevention strategies.

Scope of the Problem



How Prevalent Is Substance Misuse and Suicide?

In 2013, there were more than 41,000 deaths as a result of suicide in the U.S. (CDC, 2015). Suicide is the tenth leading cause of death, claiming more lives each year than death due to motor vehicle crashes. It is the second leading cause of death for young people age 10 to 24, as well as for those age 25 to 42 (CDC, 2015).

Additionally, almost four percent of adults—9.4 million people—age 18 or older had serious thoughts of suicide in the past 12 months, according to the National Survey on Drug Use and Health (NSDUH) (SAMHSA, 2014b). The prevalence of suicide ideation and suicide attempts varies based on demographic and individual factors, including age and substance use. Within the adult population, 2.7 million reported making a suicide plan, and 1.1 million reported a suicide attempt (SAMHSA, 2015)

Suicide rates vary considerably within different population subgroups and are affected by factors such as socioeconomic status, employment, occupation, sexual orientation, and gender identity:

- Americans age 45–54 were more likely to die by suicide than any other single age group, with 19.7 deaths per 100,000, compared to 13.0 per 100,000 within the general population (CDC, 2015a);
- Adolescents and young adults (age 15–24) had a suicide rate of 11.1 per 100,000, whereas suicide among children ages 5–14 was relatively rare—0.96 per 100,000 in 2013 (CDC, 2015);
- The rates of suicide were almost four times higher for men than for women (20.6 per 100,000 vs. 5.7 per 100,000) and were highest among Whites (14.9 per 100,000) (CDC, 2015); and
- In 2013, suicide rates were 11.7 per 100,000 for American Indians/Alaska Natives, 6.0 per 100,000 for Asians/Pacific Islanders, 5.3 per 100,000 for Hispanics, and 5.4 per 100,000 for African Americans (CDC, 2015).

At-Risk Populations for Suicide

The following populations are known to have an increased risk for suicidal behaviors (HHS, 2012):

- American Indians/Alaska Natives
- Individuals bereaved by suicide
- Individuals in justice and child welfare settings
- Individuals who engage in non-suicidal self-injury
- Individuals who have attempted suicide
- Individuals with medical conditions
- Individuals with mental and/or substance use disorders
- LGBT individuals
- Members of the armed forces and veterans
- Men in midlife
- Older men

Substance misuse is also prevalent in the U.S. among individuals age 12 and older in 2014:

- Approximately 1 in 12 (21.5 million) had a substance use disorder in the past year;
- Almost one quarter engaged in binge drinking in the past month; and
- Over 10 percent used illicit drugs in the past month (SAMHSA, 2015).

Suicides and Suicide Attempts Are Significantly Affected by Substance Use

Individuals with substance use disorders (SUDs) are particularly susceptible to suicide and suicide attempts. Indeed, suicide is a leading cause of death among people who misuse alcohol and drugs (SAMHSA, 2008; HHS, 2012; Wilcox, Conner, & Caine, 2004; Pompili et al., 2010). Substance misuse significantly increases the risk of suicide:

- Approximately 22 percent of deaths by suicide involved alcohol intoxication, with a blood-alcohol content at or above the legal limit (CDC, 2014b);
- Opiates (including heroin and prescription painkillers) were present in 20 percent of suicide deaths, marijuana in 10.2 percent, cocaine in 4.6 percent, and amphetamines in 3.4 percent (CDC, 2014b).

One of the reasons alcohol and/or drug misuse significantly affects suicide rates is the disinhibition that occurs when a person is intoxicated (HHS, 2012; Pompili et al., 2010). Although less is known about the relationship between suicide risk and other drug use, the number of substances used seems to be more predictive of suicide than the types of substances used (HHS, 2012). However, the research on this subject is limited, and the relationship between drug misuse and suicide risk is even less developed. More research is needed on the association between different drugs, drug combinations, and self-medication on suicidal behavior (SAMHSA, 2008).

Surveillance data nevertheless reveal that a diagnosis of alcohol misuse or dependence is associated with a suicide risk that is 10 times greater than the suicide risk in the general population, and individuals who inject drugs are at about 14 times greater risk for suicide (Wilcox, Conner, & Caine, 2004; SAMHSA, 2009).

Acute alcohol intoxication is present in about 30-40 percent of suicide *attempts* (Cherpitel, Borges, & Wilcox, 2004; SAMHSA, 2009). Many of these suicide attempts require medical attention, and every year about 650,000 people receive treatment in emergency rooms following a suicide attempt (Chang, Gitlin, & Patel, 2011). In 2011, approximately 230,000 emergency department visits resulted from drug-related suicide attempts, and almost all involved a prescription drug or over-the-counter medication. The number of emergency department visits for drug-related suicide attempts increased 51 percent overall from 2005 to 2011, and more than doubled among people age 45–64 (SAMHSA, 2014a). The text box on page 4 provides some additional information regarding alcohol's role in suicidal behavior.

Alcohol's Behavioral Mechanism as a Catalyst for Suicide

Acute alcohol intoxication may substantially increase the risk of suicide by decreasing inhibitions and increasing depressed mood. The acute effects of alcohol intoxication act as important proximal risk factors for suicidal behavior among individuals with alcohol use disorders and those without. Mechanisms responsible for alcohol's ability to increase the proximal risk for suicidal behavior include alcohol's ability to (1) increase psychological distress, (2) increase aggressiveness, (3) propel suicidal ideation into action through suicide-specific alcohol expectancies (e.g., alcohol may supply the motivation to complete the action, the user may believe that alcohol will assist in completing suicide painlessly), and (4) constrict cognition, which impairs the generation and implementation of alternative coping strategies (Hufford, 2001).

Programs that Address the Substance Use/Suicide Nexus

SAMHSA's National Registry for Evidence-based Programs and Practices (NREPP) and the Suicide Prevention Resource Center's (SPRC's) Best Practices Registry include evidence-based programs that focus on substance misuse and suicide prevention in different settings (see Resources). The text box below summarizes three programs that specifically target adolescents and their caregivers.

Many of these programs contain replicable elements—e.g., life skills training—that support effective problem-solving and emotional regulation, the nurturing of positive connections with friends and family members, and strong ties to both school and community. Taken together, these social supports can protect individuals from both substance use and suicide. Other programs provide treatment and recovery support and help guide the individual toward recovery from SUDs and from preoccupations with suicidal thoughts.

A Sampling of Evidence-Based Programs for Adolescents and Their Caregivers

Model Adolescent Suicide Prevention Program (MASPP) uses a public health-oriented suicidal-behavior prevention and intervention program originally developed for a Native American tribe in New Mexico. The goals of the program are to reduce the incidence of suicides and suicide attempts by adolescents through community education about suicide and related behavioral issues that include alcohol and substance misuse.

Emergency Department Means Restriction Education is an intervention for adult caregivers of young adults or adolescents who are seen in the emergency department and determined through a mental health assessment to be at-risk for suicide. Parents and adult caregivers of these at-risk youth are taught to recognize the importance of taking immediate action to restrict access to alcohol, prescription drugs, and firearms in the home. Caregivers are given practical advice on how to restrict access to—or dispose of—alcohol and prescription drugs.

Coping and Support Training (CAST) is a school-based small group counseling program for at-risk youth that has demonstrated decreased suicide risk factors in adolescents. The program, offered through 12 55-minute sessions, can be delivered by trained teachers, counselors, social workers, or others with similar experience. The program is available from Reconnecting Youth, Inc., for a fee.

Traditional Barriers to Collaboration among State and Tribal Agencies

Organizational Barriers

Prevention professionals who work on substance use and suicide issues are usually housed in different state agencies or tribal organizations according to their "specialty." Within states, substance misuse prevention specialists typically reside in the Single State Authority for substance misuse or behavioral health, whereas suicide prevention specialists are based within mental health, injury, or violence prevention offices, which may be located within larger public health, mental health, or public safety agencies. Other suicide prevention specialists may be based in combined behavioral health (i.e., mental health and substance misuse) agencies. Organizational barriers to collaborating may exist due to each agency's unique and distinct mission and the structures in place for addressing its mission. Using an interagency approach to develop a comprehensive suicide prevention strategy, state and tribal governments can bridge organizational barriers, build connections among agencies, and facilitate collaboration.

Funding Barriers

Funding mechanisms are another potential barrier to collaboration. Federal funding, which includes Block Grants for both mental health and substance misuse and Partnerships for Success grants for substance misuse prevention (among others), is typically disbursed to a specific state agency or tribal government, which then provides sub-grants to community agencies or organizations, institutions of higher education, or tribal organizations. These funding streams may reinforce each agency's unique way of operating and fulfilling its mission. Formation of suicide prevention councils, coalitions, or work groups that bring together stakeholders across agencies and organizations can help to coordinate funding from different sources and promote collaboration to tackle suicide prevention activities. Such collaboration is likely crucial for effective, sustained, and comprehensive efforts.

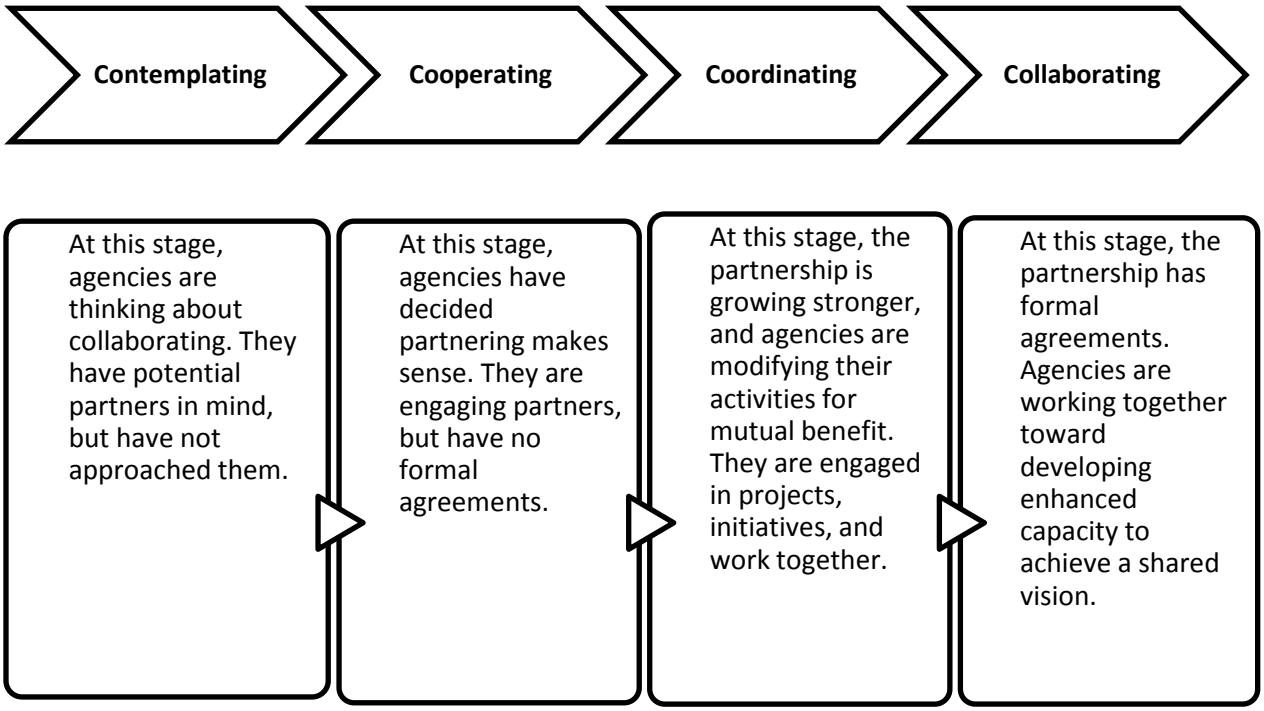
Philosophical Differences

In the span of several decades, there has been a growing realization that substance misuse and suicide are both public health issues requiring comprehensive, population-based strategies. Such a public health approach includes prevention programs as well as clinical treatment for individuals who present with behavioral health issues. In Native American communities, suicide and substance misuse prevention strategies must also reflect cultural traditions and traditional views of health (HHS, 2010; IHS, 2007). Professionals working in the behavioral health field are moving away from a focus primarily on the individual (and individual factors) toward implementation of prevention and health promotion strategies for the whole community. Previously, substance misuse preventionists thought of suicide as a mental health issue that was best addressed through clinical interventions, especially for depression. Those working in the substance misuse field left suicide prevention mainly to mental health professionals. At the same time, mental health professionals were not always trained to work with suicidal persons who had co-occurring mental and substance use problems. However, as research began to show the multiple social and environmental factors affecting suicide risk, it became apparent that population-based strategies aimed at reducing risk and increasing protective factors were critical. Additionally, risk and protective factors for both issues were found to overlap, and a risk factor for suicidal behavior included substance use and misuse. Working collaboratively across the mental health and substance misuse fields is therefore key to reducing suicide rates.

Lack of Information

Reluctance to work collaboratively across agencies, departments, organizations, and professions may also be due to lack of information about the link between substance use and suicidal behavior. Studies show that strategies to reduce alcohol use among young people ages 18 to 23—for example, minimum legal drinking age laws—affect suicide rates (Grucza et al., 2012; Birckmayer & Hemenway, 1999). One study concluded that the minimum legal drinking age of 21 may be preventing as many as 600 suicides annually in the U.S. (Grucza et al., 2012). Prevention professionals[1] should be informed about the connections between suicide and substance use--particularly underage alcohol use, binge drinking, and adult alcohol misuse-- and be encouraged to work together on prevention strategies.

Working across state and tribal agencies, departments, and service providers may be challenging. Yet the rewards gained by substance misuse, mental health, and injury/violence prevention professionals combining their subject matter expertise far outweigh systemic challenges. The sections that follow provide recommendations to both state and tribal policymakers and prevention specialists for addressing the nexus between substance use and suicide, and thereby improving public health. SAMHSA's Suicide Prevention Resource Center (SPRC) has developed a Collaboration Continuum to help states, tribes, campuses, and communities identify where they are on the continuum and find ways to strengthen their collaboration efforts (see below).



[1] Prevention professionals include clinicians, counselors, public health officials, and others who provide services aimed at preventing or reducing problems caused by alcohol, tobacco, and other drug use and abuse.

The Role of State and Tribal Policy Makers

Why State and Tribal Officials Should Focus on the Substance Misuse/Suicide Nexus

As discussed, the prevalence rates of suicide are greatly affected by substance use. These issues are not isolated to a single demographic; they affect everyone. State and tribal prevention professionals have the unique advantage of being in a position to promote a public health approach, supporting preventive interventions across the entire continuum from prevention to treatment to recovery supports. Focusing on alcohol consumption, population-based studies have begun to show that alcohol prevention *is* suicide prevention. For example, a study in Ontario, Canada, revealed that as alcohol consumption in a population rises, the suicide rate also rises by between 11 and 39 percent, suggesting that a population's level of alcohol use may be correlated with the suicide rate (Mann et al., 2006). In the United States, the density of both on- and off-premise alcohol outlets in a county is associated positively with alcohol-related suicide, especially among American Indians/Alaska Natives (Giesbrecht et al., 2014). Other studies have found that limiting alcohol availability may also reduce suicide mortality in a population (Pridemore & Snowden, 2009; Varnik et al., 2006; Markowitz, Chatterji, & Kaestner, 2003). For the research community, this underscores the importance of incorporating suicide-related outcomes into substance use prevention studies.

Actions for State and Tribal Policy Makers

The suicide and substance misuse prevention fields need to align their efforts to promote healthy individuals and communities. The causes of suicide and substance misuse are complex, and coordination and collaboration among state and tribal policy makers are essential to identifying and implementing strategies to reduce the risks of suicidal behavior resulting from alcohol and other drug misuse. The public health approach to preventing suicide and substance misuse includes universal, selective, and indicated strategies. People who misuse substances and people who die by suicide share multiple risk factors and multiple protective factors. Thus, a multi-faceted, population-based approach should be adopted (SAMHSA, 2008; Caine, 2004; Knox et al., 2004; Goldston, 2004). State and tribal governments should follow a strategic planning process to develop a comprehensive suicide prevention strategy. What follows are some suggestions that state and tribal policymakers may implement to further promote this public health approach.

Determine the extent of the problem. Estimating the incidence of substance misuse and suicidal behaviors within the state is a precursor to developing a strategy to reduce suicides linked to substance use. Data available from SAMHSA and CDC provide a starting place for analyzing the extent of the problem (see Resources). State epidemiological work groups may also have data to inform a prevention strategy. Further, review of the available data may reveal data gaps or inadequacies in the state's or tribe's surveillance systems and point to areas for improvement.

Identify substance misuse and suicide prevention efforts already occurring within the state or tribe. An environmental scan for existing substance misuse and suicide prevention programs is the next step in developing a strategic plan to address the intersection between substance misuse and suicide. An environmental scan should include assessing programs in clinical and community settings, including hospitals, primary care clinics, behavioral health settings, crisis intervention programs, the criminal and juvenile justice systems, schools, college campuses, community-based organizations, workplaces, and faith-based organizations. The leaders for suicide and substance misuse prevention in states and tribes, working with other stakeholders, should oversee the task of conducting the environmental scan and developing a coordinated strategic plan. The leader for suicide prevention will often be the state's designated lead(s) or contact person(s) for overseeing the state's suicide prevention plan. These individuals may be designated by a state agency or governor's office as the state suicide prevention coordinator, may be in an agency responsible for mental health or injury prevention, or may be associated with a state or community coalition or non-profit organization. In tribal communities, suicide prevention may be led by individuals in the tribal health department, the local Indian Health Service, or other agencies or organizations connected to suicide prevention efforts for the tribe, in partnership with traditional healers. Every state, U.S. territory, and the District of Columbia also has a National Prevention Network representative who administers substance misuse prevention initiatives.

Begin the dialogue with one another. Multi-disciplinary collaboration is a key attribute of public health. Therefore, a dialogue that emphasizes a public health approach and that engages all facets of the state, tribe, and community—the general public, elected officials, schools, parents, first responders, religious communities, health professionals, media, researchers, clinicians, counselors, and consumers (including suicide attempt survivors and loss survivors) and their families—should be launched and maintained. State agencies and tribal organizations may wish either to create a work group to explore the current needs of communities and identify existing service gaps or work with an existing state or tribal work group, council, or coalition on this issue. The group might be charged with creating an action plan for integrating suicide and substance misuse prevention strategies.

Translate the need for substance misuse/suicide prevention integration into distinct prevention funding initiatives. States and tribes provide funding to a wide range of community partners, including schools, workplaces, community-based organizations, tribal councils, and faith-based organizations for prevention programming and services. These partners collectively form a natural constituency for integrated funding initiatives. State and tribal policymakers can use the federal Garrett Lee Smith Memorial Act grants or the Partnerships for Success grants as models for partnership development and collaboration: the Garrett Lee Smith grants are designed to build infrastructure and enhance suicide prevention services within states, tribes, and on college campuses (among other objectives); Partnership for Success grants support diverse stakeholders to combine their efforts in reducing substance misuse. Additionally, the Substance Abuse Prevention and Treatment Block Grant and the Community Mental Health Services Block Grant provide funding for comprehensive prevention services. New funding streams might be created with these monies to leverage the resources and expertise of substance misuse, mental health, and injury prevention offices, and that target at-risk populations.

Develop, disseminate, and implement policies supporting prevention of substance misuse and suicide. State and tribal policy development and implementation provide multiple opportunities for suicide and substance misuse prevention. For example, all states and some Native American/Alaska Native tribes and villages already have suicide and substance misuse prevention plans. These plans identify strategies to coordinate prevention activities across the state/tribe and to link substance misuse and suicide prevention efforts. State agencies may want to encourage or require local entities (e.g., counties) to develop their own prevention plans to advance state goals and objectives.

Another area of policy development is screening and assessment. States and tribal authorities can further their prevention goals by developing and promoting professional guidelines for assessing substance use disorders and suicide risk within primary care settings, emergency departments, specialty mental health and substance use disorder treatment centers, schools and institutions of higher education, and other settings. They may also decide to promote universal screening in some settings and select common screening and assessment tools.

States/tribes might also develop and require provider organizations to adopt policies on how to intervene with individuals found to have a substance use disorder or a risk for suicide. Additionally, policies might require all staff working in substance misuse and mental health programs to receive training on assessing substance use and suicide risk. A recent example is legislation passed in Washington State that requires mental health professionals to receive training in suicide assessment, treatment, and management (Wash. HB2315, 2014). Similar legislation was recently passed in Kentucky that includes alcohol and drug counselors, social workers, and psychologists (among others) (Ky. SB72, 2013). States may also wish to work with professional certification and licensing agencies to require competencies in assessing substance misuse, as well as continuing education on suicide prevention.

Finally, some states and tribal governments may want to consider creating an office of suicide prevention within an agency that coordinates substance misuse and suicide prevention activities. As an example, Nevada has established an office within the Department of Health and Human Services' Division of Public and Behavioral Health.

Program development. Once information has been gathered about the prevalence of suicidal behaviors linked to substance use and available programs addressing these issues have been identified, states and tribes should select and implement evidence-based programs that meet the specific cultural, community, and developmental norms of the targeted population. Programs selected or developed should fit the state's or tribal community's strategic plan. Community interventions must be able to deliver and, to some extent, integrate primary prevention, assessment, diagnostic, and treatment services (SAMHSA, 2008; SAMHSA, 2009). Screenings, brief interventions, and referrals to treatment (or other support services) should be components of these programs. The online registries offered by SAMHSA (NREPP, which includes evidence-based practices in behavioral health) and SPRC (Best Practices Registry, which includes best and evidence-based practices in suicide prevention) may be consulted for specific programs (see Resources on page 13).

Workforce development. The nexus between substance misuse and suicide must be emphasized in the training, including cross-training, of professionals who work in the mental health, injury prevention, and substance misuse prevention fields. While more treatment development is needed, evidence-based psychotherapies for individuals being treated after a suicide attempt (many of whom have substance use problems) have successfully prevented re-attempts (e.g., Brown et al., 2005), and have enhanced their engagement in both mental health and substance use disorder treatment (e.g., Stanley et al., 2015). As

substance misuse interventions continue to improve and are better integrated in various care settings, training can be in the form of pre-service orientations, in-service development, materials development, as well as online and/or continuing education courses.

What Should Prevention Professionals Do?

Be Aware of Shared Risk and Protective Factors

Alcohol and drug misuse are second only to depression and other mood disorders as the most frequent risk factors for suicidal behavior (SAMHSA, 2008; IOM, 2002). Practitioners must be aware that individuals who make a suicide attempt are at considerable risk for repeat attempts and eventual suicide and that this risk may last many years (Knesper, AAS, & SPRC, 2010). People at risk for suicide and substance misuse share a number of risk factors that include depression, impulsivity, and thrill-seeking/life threatening behaviors (Goldston, 2004). Because risk and protective factors for the two can overlap, prevention professionals need to be aware of them and to implement prevention programming that reduces risk and enhances protective factors within the population and in communities.

Shared Risk Factors	Shared Protective Factors
• Academic failure • Aggressive tendencies or history of violent behavior • Bullying, victimization • Family conflict • History of trauma or abuse • Hopelessness, impulsivity, low self-esteem • Mental illness and/or substance use disorder • Peer rejection • Physical illness or chronic pain • Previous suicide attempt(s) • Relational, social, work, or financial losses • Social withdrawal	• A trusting relationship with a counselor, physician, or other service provider • An optimistic or positive outlook • Childrearing responsibilities • Coping and problem-solving skills • Cultural and religious beliefs that discourage suicide • Employment • Involvement in community activities • Perceiving that there are clear reasons to live • Receiving effective mental and/or substance use disorder treatment/care • Resiliency, self-esteem, direction, perseverance • Sobriety • Strong family bonds and social skills

Be Aware of Warning Signs

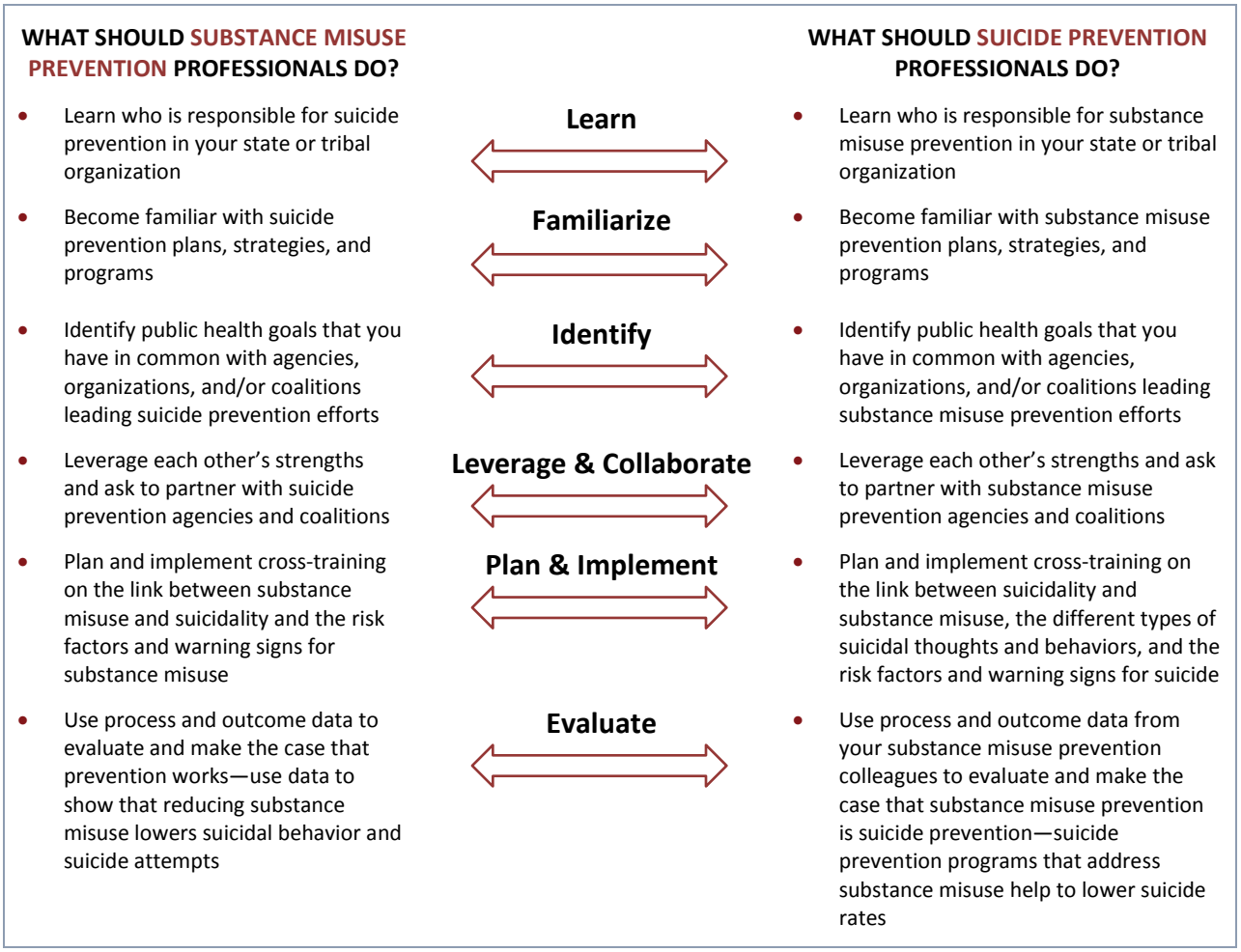
Prevention professionals should be aware of and educate others about the warning signs for alcohol misuse or drug use, as well as suicidal behaviors. These signs may mean someone is at risk for suicide; the risk is greater if a behavior is new or has increased, and if it seems related to a painful event, loss, or change. For more information about these warning signs, refer to SAMHSA's National Suicide Prevention Lifeline Wallet Card and "Signs and Symptoms" on the National Council on Alcoholism and Drug Dependence (NCADD) website.

Warning Signs of Substance Misuse	
• Has smell of alcohol on breath or marijuana on clothing • Has burned fingers, burns on lips, or needle track marks on arms • Slurs speech or stutters, is incoherent • Has difficulty maintaining eye contact • Has dilated (enlarged) or constricted (pinpoint) pupils • Has tremors (shaking or twitching of hands and eyelids) • Is hyperactive and overly energetic • Appears lethargic or falls asleep easily • Exhibits impaired coordination or unsteady gait (e.g., staggering, off balance) • Speaks very rapidly or very slowly • Experiences wide mood swings (highs and lows) • Appears fearful or anxious; experiences panic attacks • Appears impatient, agitated, or irritable • Is increasingly angry or defiant • Talks about getting high, uses vocabulary typical among drug users	• Behaves in an impulsive or inappropriate manner • Denies, lies, or covers up • Takes unnecessary risks or acts in a reckless manner • Breaks or bends rules, cheats • Misses interviews, appointments, or meetings or arrives intoxicated • Fails to comply with program requirements without easily verifiable reasons (may be verbally uncooperative to disguise the problem or divert attention) • Has difficulty concentrating, focusing, or attending to a task • Appears distracted or disoriented • Makes inappropriate or unreasonable choices • Has difficulty making decisions • Experiences short-term memory loss • Experiences blackout • Needs directions repeated frequently • Has difficulty recalling known details • Needs repeated assistance completing ordinary paperwork (e.g., application forms)

Warning Signs of Suicide	
• Talking about wanting to die or to kill oneself • Looking for a way to kill oneself, such as searching online or buying a gun • Talking about feeling hopeless or having no reason to live • Talking about feeling trapped or in unbearable pain • Talking about being a burden to others	• Increasing the use of alcohol or drugs • Acting anxious or agitated; behaving recklessly • Sleeping too little or too much • Withdrawing or feeling isolated • Showing rage or talking about seeking revenge • Displaying extreme mood swings • Losing interest in things, or losing the ability to experience pleasure

Actions for Prevention Professionals

Substance misuse prevention and suicide prevention professionals each utilize a public health approach and, in so doing, have shared responsibilities and opportunities. Both should be informed about the many risks that affect the individuals and communities they work with. Both should also learn about suicide and substance use disorders and how misusing substances can affect suicidal thoughts and behaviors. Both should identify opportunities to collaborate with the other to address their common goals, keeping in mind that substance misuse prevention *is* suicide prevention. The graphic on the next page summarizes what suicide and substance misuse prevention professionals can do to improve outcomes for individuals and communities.



Collaboration among diverse stakeholders is necessary to meet the challenge of reducing suicidal behaviors. An example of one state's comprehensive approach to suicide prevention is highlighted in the box below.

Case Study: Massachusetts' Comprehensive Approach

In Massachusetts, a strategic plan for suicide prevention was developed that received input from the departments of public health, violence/injury prevention, mental health, and substance misuse prevention. Recognizing that there may be poor linkages at the state and community levels among mental health, substance use and misuse, and community health services, the plan envisions a system in which individuals experiencing mental illness, SUDs, or feelings of suicide feel comfortable seeking help and have access to appropriate services in their communities.

The state's suicide prevention strategic plan does not assume that a specific agency or organization has overall responsibility or capacity to address all of the plan's goals. Rather, the plan creates opportunities for many individuals, organizations, and communities to make meaningful contributions toward achieving the plan's goals (Commonwealth of Massachusetts, 2009).

In summary, behavioral health leaders are encouraged to build and strengthen connections with their respective counterparts in suicide prevention, substance misuse prevention, and substance use disorder treatment. Through close coordination and collaboration, the nation will be able to advance a comprehensive public health strategy to reduce suicidal behaviors and suicide rates.

Resources

Data

CDC's National Electronic Injury Surveillance System—All Injury Program (NEISS-AIP)
www.cdc.gov/injury/wisqars/index.html.

CDC's National Violent Death Reporting System (NVDRS)
www.cdc.gov/violenceprevention/nvdrs/index.html.

CDC's Web-based Injury Statistics Query and Reporting System (WIQARS)—Fatal Injury Data
http://www.cdc.gov/injury/wisqars/fatal.html.

Department of Defense Suicide Event Report (DoDSER)
www.t2.health.mil/programs/dodser.

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Promoting Emotional Health and Preventing Suicide: A Toolkit for Senior Living Communities. SAMHSA, SMA 10-4515, June 2010. Available at www.store.samhsa.gov.

Suicide: Facts at a Glance. Centers for Disease Control and Prevention, 2012. Available at
www.cdc.gov/violenceprevention/pdf/suicide_datasheet_2012-a.pdf.

Websites

Website of the National Action Alliance for Suicide Prevention (a public/private partnership established in 2010 to advance the *National Strategy for Suicide Prevention*).
http://ActionAllianceForSuicidePrevention.org .

SAMHSA's National Registry for Evidence-Based Programs and Practices
www.nrepp.samhsa.gov.

StopBullying.gov
www.stopbullying.gov/.

Suicide Prevention Resource Center Best Practices Registry
www.sprc.org/bpr.

Suicide Prevention Resource Center Substance Abuse and Suicide Prevention Collaboration Continuum http://www.sprc.org/states/collaborationcontinuum.

Webinars

Understanding the Connection Between Suicide and Substance Abuse: What the Research Tells Us http://captus.samhsa.gov/archived-webinar/understanding-connection-between-suicide-and-substance-abuse-what-research-tells-us.

Understanding the Connection Between Suicide and Substance Abuse http://captus.samhsa.gov/archived-webinar/understanding-connection-between-suicide-and-substance-abuse-what-research-tells-us.

Suicide Prevention Hotlines

National Suicide Prevention Lifeline
1-800-273-TALK (8255)
www.SuicidePreventionLifeline.org.

Veterans Crisis Line
1-800-273-TALK (8255) PRESS 1
www.veteranscrisisline.net/ChatTermsOfService.aspx?account=Veterans%20Chat.

Treatment Locators

Behavioral Health Treatment Services Locator
http://findtreatment.samhsa.gov.

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In Brief

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Suicide

Facts at a Glance 2015

Suicide

- Suicide was the tenth leading cause of death for all ages in 2013.[1]
- There were 41,149 suicides in 2013 in the United States—a rate of 12.6 per 100,000 is equal to 113 suicides each day or one every 13 minutes.[1]
- Based on data about suicides in 16 National Violent Death Reporting System states in 2010, 33.4% of suicide decedents tested positive for alcohol, 23.8% for antidepressants, and 20.0% for opiates, including heroin and prescription pain killers.[2]
- Suicide results in an estimated $51 billion in combined medical and work loss costs.[1]

Nonfatal Suicidal Thoughts and Behavior

- Among adults aged ≥18 years in the United States during 2013:[3]
  - An estimated 9.3 million adults (3.9% of the adult U.S. population) reported having suicidal thoughts in the past year.
  - The percentage of adults having serious thoughts about suicide was highest among adults aged 18 to 25 (7.4%), followed by adults aged 26 to 49 (4.0%), then by adults aged 50 or older (2.7%).
  - An estimated 2.7 million people (1.1%) made a plan about how they would attempt suicide in the past year.
  - The percentage of adults who made a suicide plan in the past year was higher among adults aged 18 to 25 (2.5%) than among adults aged 26 to 49 (1.35%) and those aged 50 or older (0.6%).
  - An estimated 1.3 million adults aged 18 or older (0.6%) attempted suicide in the past year. Among these adults who attempted suicide, 1.1 million also reported making suicide plans (0.2 million did not make suicide plans).
- Among students in grades 9-12 in the U.S. during 2013:[4]
  - 17.0% of students seriously considered attempting suicide in the previous 12 months (22.4% of females and 11.6% of males).
  - 13.6% of students made a plan about how they would attempt suicide in the previous 12 months (16.9% of females and 10.3% of males).
  - 8.0% of students attempted suicide one or more times in the previous 12 months (10.6% of females and 5.4% of males).
  - 2.7% of students made a suicide attempt that resulted in an injury, poisoning, or an overdose that required medical attention (3.6% of females and 1.8% of males).

Gender Disparities

- Males take their own lives at nearly four times the rate of females and represent 77.9% of all suicides.[1]
- Females are more likely than males to have suicidal thoughts.[3]
- Suicide is the seventh leading cause of death for males and the fourteenth leading cause for females.[1]
- Firearms are the most commonly used method of suicide among males (56.9%).[1]
- Poisoning is the most common method of suicide for females (34.8%).[1]

National Center for Injury Prevention and Control
Division of Violence Prevention

Suicide Facts at a Glance 2015

Racial and Ethnic Disparities

- Suicide is the eighth leading cause of death among American Indians/Alaska Natives across all ages.[1]
- Among American Indians/Alaska Natives aged 10 to 34 years, suicide is the second leading cause of death.[1]
- The suicide rate among American Indian/Alaska Native adolescents and young adults ages 15 to 34 (19.5 per 100,000) is 1.5 times higher than the national average for that age group (12.9 per 100,000).[1]
- The percentages of adults aged 18 or older having suicidal thoughts in the previous 12 months were 2.9% among blacks, 3.3% among Asians, 3.6% among Hispanics, 4.1% among whites, 4.6% among Native Hawaiians /Other Pacific Islanders, 4.8% among American Indians/Alaska Natives, and 7.9% among adults reporting two or more races.[3]
- Among Hispanic students in grades 9-12, the prevalence of having seriously considered attempting suicide (18.9%), having made a plan about how they would attempt suicide (15.7%), having attempted suicide (11.3%), and having made a suicide attempt that resulted in an injury, poisoning, or overdose that required medical attention (4.1%) was consistently higher than white and black students.[4]

Age Group Differences

- Suicide is the third leading cause of death among persons aged 10-14, the second among persons aged 15-34 years, the fourth among persons aged 35-44 years, the fifth among persons aged 45-54 years, the eighth among person 55-64 years, and the seventeenth among persons 65 years and older.[1]
- In 2011, middle-aged adults accounted for the largest proportion of suicides (56%)1, and from 1999-2010, the suicide rate among this group increased by nearly 30%.[5]
- Among adults aged 18-22 years, similar percentages of full-time college students and other adults in this age group had suicidal thoughts (8.0 and 8.7%, respectively) or made suicide plans (2.4 and 3.1%).[3]
- Full-time college students aged 18-22 years were less likely to attempt suicide (0.9 vs. 1.9 percent) or receive medical attention as a result of a suicide attempt in the previous 12 months (0.3 vs. 0.7%).[3]

Nonfatal, Self-Inflicted Injuries*

- In 2013, 494,169 people were treated in emergency departments for self-inflicted injuries.[1]
- Nonfatal, self-inflicted injuries (including hospitalized and emergency department treated and released) resulted in an estimated $10.4 billion in combined medical and work loss costs.[1]

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**The term "self-inflicted injuries" refers to suicidal and non-suicidal behaviors such as self-mutilation.*