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Substance Abuse and Suicide Prevention: Evidence & Implications

A White Paper

Page 2**ACKNOWLEDGEMENTS**

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Substance Abuse and Suicide Prevention: Evidence and Implications A White Paper

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INTRODUCTION

Almost a decade ago, then-Surgeon General David Satcher, MD, issued a Call to Action to Prevent Suicide (1999) as the first step toward adoption of a National Strategy on Suicide Prevention and the acknowledgement of suicide as an issue of public health concern and for national action. Recognizing that each year, over 30,000 individuals of all ages, races and ethnicities lose their lives by suicide in the U.S., Dr. Satcher observed that the “difference between knowing and doing can be fatal.” Pointing out that “...even the most well considered plan accomplishes nothing if it is not implemented,” he urged action to advance the Report’s 15 key recommendations focused on awareness, intervention and methodology.

The Call to Action called for the implementation of strategies to reduce the stigma associated not only with suicidal behavior and mental illnesses, but also with substance abuse disorders. It urged that resources be enhanced for suicide prevention programs and for mental and substance abuse disorder assessment and treatment. Moreover, it recommended that health care provider capacity be enhanced to better recognize and either refer or treat depression, substance abuse and other major mental illnesses associated with suicide risk.

Since publication of the Call to Action, considerable necessary progress has been made, thanks to a confluence of concerted action by policymakers, administrators, researchers, clinicians, and families touched by suicide. The body of scientific knowledge about suicide prevention and intervention has grown markedly. Increasing numbers of evidence-based programs have been taking their place in the realm of best practices. The Garrett Lee Smith Memorial Act has resulted in the implementation of grant programs focused on youth suicide prevention in communities and on college campuses around the country. The Suicide Prevention Lifeline network of over 125 call centers is reaching out to reduce suicides one call at a time, including from populations at elevated risk, such as our nation's returning veterans. The Suicide Prevention Resource Center is facilitating dissemination of awareness messages and primary care education, giving the public and practitioners better suicide prevention tools than ever before.

However, needed progress is not the same as sufficient progress. One of the critical issues that require further exploration and attention is the role of substance abuse in the interplay of factors that result in a greater risk for suicidal behaviors. This document focuses on the current state of knowledge at the intersection of suicide and substance abuse. The first section focuses on the epidemiology of suicide itself and presents a brief history of the growing focus on suicide as a public health issue of significant concern. The second section provides an overview of what we know and do not know of the impact of substance abuse—including both drugs and alcohol—on suicide risk. It also acknowledges the critical interrelationships among substance abuse, mental illness and suicide risk. The final section of the document explores suicide prevention within the public health context of behavioral health promotion and illness prevention. This document marks a first step toward greater knowledge. It soon will be supplemented by a far more extensive consensus-built Treatment Improvement Protocol on substance abuse and suicide.

Despite the progress, much more remains to be done if we are to respond to the public health imperative posed by continuing high rates of suicide in the nation. It is time to end continued stovepipe approaches to prevention and treatment; it is time to change the focus from an acute care model of health care. Moreover, it is time to implement a more integrated, public health-oriented approach to suicide prevention—one that takes into account the role of substance abuse disorders as well as mental illnesses and genetic, social and environmental factors, that takes in the continuum of care from prevention through long-term intervention.

SUICIDE: A NATIONAL, PREVENTABLE PUBLIC HEALTH PROBLEM

The mind is its own place, and in itself can make a heaven of hell, a hell of heaven.

—John Milton

Suicide is not a new phenomenon; it is centuries old. In some cultures, death by suicide was considered honorable; in others, it was considered immoral, a crime. Whether revered or reviled, suicide robs families, communities and societies around the world of thousands of its members each year. In a single year, in the United States alone, suicide was responsible for the deaths of over 32,000 people of all ages (Centers for Disease Control and Prevention 2007) and cost an estimated \$11.8 billion in lost income

(Goldsmith et al. 2002).

Efforts to understand suicide, also, are not new. The 19th century sociologist, Emile Durkheim (1897/1951), wrote about the social context that may lead to suicide. However, like mental illnesses, substance abuse and other poorly understood illnesses such as cancer, suicide was a taboo topic for most people. Public health attention was on the prevention and treatment of better-understood, more visible acute illnesses across the population. For all of the damage to individuals and families, communities and economies, only in the past decade have suicide—and the mental and substance use disorders to which the vast majority of suicide can be attributed—become visible on the public health radar screen (U.S. Public Health Service 1999a, 1999b, 2001; New Freedom Commission on Mental Health 2003).

Over the past decade, the situation has been changing for the better, in part, due to the growing public health approach to suicide prevention (U.S. Public Health Service 1999a; New Freedom Commission on Mental Health 2003; Mann et al. 2005). By moving the dial from an individual-by-individual approach to a population-based systems approach, suicide, increasingly, has been recognized as the product of the complex interaction of multiple factors—some biological and some environmental—spanning the socio-cultural, interpersonal, psychological, genetic, and neurological spectra (U.S. Public Health Service 2001; Goldsmith et al. 2002). As a result of this growing understanding, knowledge and education are being spread across the public and among health professionals. Science is amassing an expanded knowledge base of complex factors that may lead to suicide and a greater understanding of the best ways to identify and intervene among those at risk. The critical role of mental illnesses in the mix of factors precipitating suicide attempts and completions has been well established in the literature (Moscicki 2001; U.S. Public Health Service 2001; Goldsmith et al. 2002; Goldston, 2004). More recently, the impact of both alcohol and drug abuse on suicide risk—particularly when accompanied by mental illness—has been gaining greater traction in the literature as well. (See references).

As the next section suggests, however, the pace, has been far too slow for far too many people of all ages, races and ethnicities. Due to the social stigma or lack of understanding, many individuals and health care providers do not recognize the signs or treat mental disorders with the same urgency as other medical conditions. As noted in the *National Strategy on Suicide Prevention* (2001), suicide remains a preventable tragedy for too many in America and around the world. The magnitude of suicide's impact makes it an issue for those engaged in improving the health of the nation and the world. Its relationship to behavioral disorders makes the issue of suicide and its prevention critical to the work of those in mental health care, and substance abuse treatment and prevention.

.....Epidemiology

In the United States, almost 90 lives are lost to suicide each day, the equivalent of a death by suicide every 16 minutes (Centers for Disease Control and Prevention 2007). In 2005 (the most recent year for which data are available), suicide accounted for 32,637 deaths among people of all ages, and 31,610

among adults age 18 and up (Centers for Disease Control and Prevention 2006b). The 11th leading cause of death in the United States, suicide was responsible for more deaths in that year than homicide and HIV combined (Centers for Disease Control and Prevention 2006a). The human and economic costs of suicide ripple outward beyond the individual. In addition to those who die by suicide each year, as many as 200,000 additional individuals will be affected by the loss of a loved one or acquaintance to suicide (Corso et al. 2007). The total lifetime cost of self-inflicted injuries occurring in 2000 was approximately \$33 billion. This includes \$1 billion for medical treatment and \$32 billion for lost productivity (Corso et al. 2007). Despite growing recognition of suicide as a problem demanding public health attention, overall rates of suicide in the U.S. have remained essentially stable for the last half-century (Goldsmith et al. 2002; National Center for Health Statistics 2008).

FIGURE 1
Death Rates for Suicide by Sex, 1950-2004

[Source: National Center for Health Statistics, 2007]

Population differences in suicide

Suicide affects everyone, but some groups are at higher risk than others. Suicide rates vary by gender, ethnicity and age. Suicide is the eighth leading cause of death for men of all ages and the 16th leading cause of death for women (Centers for Disease Control and Prevention 2005). Men are four times more likely than women to die from suicide, representing 78.8% of all U.S. suicides (Centers for Disease Control and Prevention 2006b). However, three times more women than men report attempting suicide (Krug et al. 2002). Firearms, suffocation and poison are by far the most common methods of suicide, overall. However, men and women differ in the method used (Centers for Disease Control and Prevention 2006b):

TABLE 1
Suicide by Sex and Method

Suicide by:	Males (%)	Females (%)
Firearms	57	32
Suffocation	23	20
Poisoning	13	38

[Source: Centers for Disease Control and Prevention 2006b]

In addition, suicide rates are high among young people and those over age 65. Among those ages 25-34, suicide is the second leading cause of death, behind unintentional injuries. Suicides represent the third leading cause of death among 15-24 year olds, nearly 13% of all deaths annually. Gender differences in suicide also arise among young people. Almost four times as many males as females ages 15 to 19 died by suicide (Centers for Disease Control and Prevention 2006a); more than six times as many males as females ages 20 to 24 died by suicide (Centers for Disease Control and Prevention 2006a). Moreover, for every suicide completed in the 15 to 24 age group in the U.S., there are 100-200 attempted suicides (Arias et al. 2003).

Suicide rates are highest in old age. Of every 100,000 people ages 65 and older, 14.3 die by suicide. This figure is markedly higher than the national average of 10.9 suicides per 100,000 people in the general population (Centers for Disease Control and Prevention 2006b). After age 75, the rate of suicide is three times higher than average (Mental Health America, 2008). Non-Hispanic white men age 85 or older had an even higher rate, with 17.8 suicide deaths per 100,000 (Centers for Disease Control and Prevention 2006b). Elderly people who die by suicide are often divorced or widowed and suffer from a physical illness.

[Source: National Center for Health Statistics]

Race and ethnicity also can be factors that contribute to suicide risk. For example, suicide rates among American Indian/Alaska Native adolescents and young adults, ages 15-24, are almost two times higher than the national average for that age group (Centers for Disease Control and Prevention 2007). Young Indian women have rates of suicide that are two to three times higher than for females in the general population (Goldsmith et al. 2002).

[Source: National Center for Health Statistics, 2007]

65 and up, estimates suggest there is one suicide for every four suicide attempts (Goldsmith et al. 2002). Among youth, in 2005, 16.9 percent of U.S. high school students reported they had seriously considered attempting suicide during the previous 12 months. More than eight percent reported they actually had attempted suicide at least once during the same period (Eaton et al. 2006). College students may be particularly vulnerable. The 2006 National College Health Assessment found that 44 percent of the students surveyed reported that they “felt so depressed it was difficult to function” during the past year; nearly one in 10 said that they had “seriously considered suicide” during the year (American College Health Association 2007).

Those who attempt suicide and survive may have serious injuries like broken bones, brain damage or organ failure. Also, people who survive often experience depression and other mental health problems. The fact of a suicide attempt is a predictor of future, possibly fatal attempts (Moscicki 2001; Goldsmith et al. 2002; Eaton et al. 2006; Centers for Disease Control and Prevention 2007).

Suicide and the risk for suicide also affect the health of the community. Family and friends of people who die by or attempt suicide may feel shame, shock, anger, guilt and depression. The taboo that surrounds suicide leads many people to silence at a time when reaching out for assistance is most critical. However, the stigma surrounding suicide – like mental and substance abuse disorders before it – is lifting. Suicide and the need for suicide prevention, once hardly a matter for public conversation, are becoming a matter of public health and public concern. A national poll conducted for the Suicide Prevention Action Network (SPAN) USA and Research!America (2006) found that over three-quarters of Americans (78%) believe many suicides could have been prevented; four out of five Americans (86%) support the value of a greater national investment in suicide prevention.

These findings suggest the message that suicide is a preventable health problem is being heard and heeded, thanks in large part to the confluence of science and policy, program and the power of people.

Moving Toward Recognition

“If the general public understands that suicide and suicidal behaviors can be prevented, and people are made aware of the roles individuals and groups can play in prevention, many lives can be saved”

– National Strategy for Suicide Prevention

Over the last decade, policymakers, clinicians, administrators, and public health experts have begun to take action against suicide both within the United States and around the world. In 1996, the World Health Organization (WHO), recognizing the growing problem of suicide worldwide, urged member nations to address suicide in its document *Prevention of Suicide: Guidelines for the Formulation and Implementation of National Strategies*. This Report motivated the Surgeon General to determine in 1999 that suicide is a public health problem and to issue a *Call to Action to Prevent Suicide*. It urged establishment of a national strategy to prevent suicide, relying on the expertise of the Substance Abuse and Mental Health Services Administration (SAMHSA), the Centers for Disease Control and Prevention (CDC), the Health Resources and Service Administration (HRSA), the Indian Health Service (IHS), the

National Institute on Mental Health (NIMH), and the Office of the Surgeon General, as well as the Suicide Prevention Advocacy Network (SPAN USA) and other advocacy and stakeholder organizations.

Just two years later, in 2001, the first installment of the *National Strategy for Suicide Prevention* (NSSP) was unveiled. The document established 11 goals and 68 measurable objectives for public and private sector involvement to prevent suicides and attempts, as well as to reduce the harmful after-effects they have on families and communities. Its goals and objectives laid out a framework for action and a guide for the development of an array of services and programs. During the same period, the quasi-

governmental Institute of Medicine convened two workshops on suicide prevention, leading to the 2002 publication of its landmark report, *Reducing Suicide: A National Imperative*.

These reports, coupled with the final report of the President's New Freedom Commission on Mental Health, *Achieving the Promise: Transforming Mental Health Care in America* (2003), have helped bring attention to the burden of suicide on our nation and the need for concerted prevention initiatives. The Commission's very first recommendation focuses on suicide prevention as a key element of a comprehensive mental health system, urging the President to "advance and implement a national campaign to reduce the stigma of seeking care and a national strategy for suicide prevention."

Critically, three of the 11 goals of the *National Strategy for Suicide Prevention* (2001) highlight the role that substance abuse increasingly plays as a risk factor for suicide, adding impetus to a growing body of knowledge and practice in this important area of suicide prevention. Specifically,

- Goal Three calls for the development and implementation of "strategies to reduce the stigma associated with being a consumer of mental health, *substance abuse* and suicide prevention services."
- Goal Seven emphasizes the need for effective suicide prevention-related clinical and professional practices (from screening through treatment and referral, as warranted) by health care providers, including *those involved in substance abuse treatment*.
- Goal Eight promotes efforts to increase access to and community linkages with mental health and substance abuse services.

Individually, these reports mark important steps toward greater recognition of suicide as a public health issue. Taken together, however, the reports provide a roadmap that, if followed, can help ensure that the suicide prevention and the behavioral health care communities are working together to save lives.

That roadmap is being followed, thanks to the growing concern about suicide and suicide prevention that has galvanized the Congress, the Federal Executive Branch, and concerned communities, organizations and individuals around the country to action. During the 105th Congress, the House and Senate enacted resolutions acknowledging suicide as a national problem that warrants a national response (S. Res. 84 and H.Res. 212). Since then, Congress has authorized the establishment of and directed funding to several suicide prevention programs, including the Garret Lee Smith Memorial Act (PL 108-355) that established a series of programs designed to address youth suicide. Building from the NSSP, 46 states have developed a suicide prevention plan, many based on the model of the NSSP. The majority of these states have developed their plans through coalitions or task forces, most of which include representatives from government agencies, suicide survivors, advocates and other concerned individuals.

As the lead agency charged with implementation of suicide prevention initiatives, SAMHSA has supported the establishment of a national toll-free hotline (the National Suicide Prevention Lifeline), a technical assistance center (the Suicide Prevention Resource Center), and a youth suicide prevention grant program for states and colleges (consistent with authority under the Garrett Lee Smith Memorial Act). Beginning in 2008, SAMHSA's National Survey on Drug Use and Health will ask all respondents about suicide attempts, whether or not they had previously acknowledged a major depression. This is an important step forward in suicide surveillance, promoting greater attention to the interrelationships among suicide and substance abuse. Moreover, the Agency also has been supporting the identification, development and dissemination of best practices in suicide prevention, focusing on risk and protective factors related to suicide—with particular attention to mental health and substance abuse issues affecting suicide risk. To that end, SAMHSA's Center for Substance Abuse Treatment is developing a *Treatment Improvement Protocol* to focus on substance abuse and suicide prevention/risk assessment for substance abuse service providers.

The convergence of the data and increased recognition of suicide as a matter for health policy, programs, advocacy and education is what makes the issue one of urgent public health priority. The time simply is right for action. The role for behavioral health professionals cannot be overstated because the interconnections among mental illnesses, substance abuse and suicide, described in the next section of this white paper, are at the core of the public health approach to suicide prevention—an approach highlighted in the final section of this paper.

SUICIDE AND SUBSTANCE USE DISORDERS

A focus on the primary prevention of alcohol and drug use disorders and other psychopathological disorders associated with suicide, as well as intervention for those showing early indication of such disorders, are needed in order to have a meaningful impact on the population rate of suicide.

-- Wilcox, Conner and Caine (2004, p. S18)

Suicide has been spotlighted as a national public health issue (U.S. Public Health Service 1999; Goldsmith et al. 2002; New Freedom Commission on Mental Health 2003; U.S. Department of Health and Human Services 2007), and as such, its two most significant risk factors, mental and substance abuse disorders, must also be seen in that same light. While 95 percent of individuals with a mental illness and/or substance use disorder will never complete suicide, several decades of evidence consistently suggests that as many as 90 percent of individuals who do complete suicide experience a mental or substance use disorder, or both (Harris and Barraclough 1997; Pages et al. 1997; Moscicki 2001; Conwell et al 1996, Molnar et al. 2001 (reported in IOM 2002)). The vast majority experience a mood disorder, such as depression (Moscicki 2001); as many as 25 percent experience alcohol abuse disorders (Institute of Medicine 2002). Many experience co-occurring mental and substance use disorders.

Unfortunately, despite ongoing efforts to educate the public, the same social stigma that surrounds suicide also continues to stand between many people with mental and substance use disorders and the care they need – care that could help thwart potential suicide. According to SAMHSA's 2006 National Survey on Drug Use and Health (NSDUH), of the 23.6 million people aged 12 or older in need of treatment for an

illicit drug use or alcohol use problem only 2.5 million received treatment at a specialty facility (Office of Applied Studies 2007d). In the same year, among the 24.9 million adults aged 18 or older reporting serious psychological distress (having a level of symptoms known to be indicative of a mental disorder) fewer than half, 10.9 million (44.0 percent), received treatment for a mental health problem (Office of Applied Studies 2007d).

The significant gap between needing and getting care for mental disorders and substance use problems—and the role both play in suicide—underscore the public health imperative of preventing behavioral health problems in the first place where possible, and otherwise identifying and treating them early in their course. Independent of each other, mental illnesses, substance abuse and suicide each have a profound impact on individuals and families, schools and workplaces, communities and society at large. The human and economic costs of these public health problems are significant. When each of these three problems is examined separately, it becomes clear that, in many instances and for many individuals, each one is related in some way to the other two. Thus, the co-occurrence of mental and substance abuse disorders today is the expectation rather than the exception (U.S. Public Health Service 1999; Goldsmith et al. 2002; Substance Abuse and Mental Health Services Administration 2002; New Freedom Commission on Mental Health 2003).

The role mental illness plays in suicide risk, attempt and completion has been documented extensively in the scientific literature and will not be revisited in this white paper. Thus, the next section explores the growing body of evidence being amassed with respect to suicide and substance abuse and the interconnections among suicide and mental and substance abuse disorders.

Substance Use Disorders and Suicide: The Big Picture

A growing body of studies has demonstrated that alcohol and drug abuse are second only to depression and other mood disorders as the most frequent risk factors for suicide (cited in IOM 2002). Molnar and colleagues' assessment (2001) of data from the National Comorbidity Survey disclosed that alcohol and drug abuse disorders are associated with a risk 6.2 times greater than average risk of suicide attempts.

According to SAMHSA's Drug Abuse Warning Network latest report on drug-related emergency department (ED) visits, in 2005, over 132,500 visits to emergency rooms were for alcohol- or drug-related suicide attempts. Substantial percentages of suicide victims tested positive for alcohol or other drugs. The most frequently identified substance was alcohol, found in one third of those tested; four other substances were identified in approximately 10 percent of tested victims. Illicit drugs were involved in approximately one fifth (19%) of the ED visits for drug-related suicide attempts. Over 85 percent of individuals associated with these attempts were seriously ill enough to merit admission to a hospital or another health care facility (Office of Applied Studies 2007c).

The Drug Abuse Warning Network also has examined emergency department visits for drug-related suicide attempts by youth. In 2004, the most recent year for which data are available, reporting

emergency departments handled over 15,000 drug-related suicide attempts by youth, ages 12-17, almost 75 percent of which were serious enough to warrant hospitalization. Around half of all of these suicide attempts involved the use of pain medications (Office of Applied Studies 2006a).

These data do not suggest that all of the individuals who attempted suicide, whether young or adult, were experiencing substance abuse disorders; rather the data inform only that alcohol or drugs of abuse were used in what was characterized as a suicide attempt. Nonetheless, the sheer numbers are compelling.

Field-based studies have been ongoing to understand the relationships between substances of abuse and suicide. Significant studies have been based on psychological autopsies; only in the last few years have increasing numbers of prospective studies been conducted. Research is complicated and sometimes confounded by the complex interrelationships among mental and substance use disorders, combined with other biological, behavioral, environmental and social factors influencing suicide risk.

Alcohol

In 1938, Karl Menninger observed that alcohol dependence is a type of chronic suicide (in Hufford 2001). His observation has been found to be accurate over the decades during which the relationship between suicide and alcohol consumption, alcohol use and alcohol dependence has been studied. As many as one-fourth of individuals who die by suicide are intoxicated with alcohol (IOM 2002).

Today, the literature bearing on the role alcohol plays in suicide risk is considerably more robust than that associated with drug abuse and suicide. As Wilcox notes in her 2004 review of the link between drug use and suicidal behaviors among adolescents, the association between suicidal behavior and alcohol abuse has been long documented, dating back to the 1980s. An extensive body of literature—primarily retrospective studies—has established that active alcohol use or abuse is a powerful risk factor for suicide (reported in Conner et al. 2000). One of the more significant reasons posited for this association is the disinhibition resulting from alcohol use that occurs shortly prior to a suicide attempt (Hufford 2001; Wilcox 2004). Hufford's literature review (2001) suggests alcohol intoxication appears to play a more significant role as a proximal, rather than distal, risk factor for suicide.

However, some caution needs to be exercised regarding the body of published studies bearing on alcohol and suicide. Cherpirtel and colleagues (2004) note in their literature review that the majority of studies, whether cross-sectional or case-controlled, are subject to several sources of bias due to their focus on completed suicide and the tendency to report prevalence estimates. She and her colleagues suggest the effectiveness of adopting a case-crossover design to overcome the biases and limitations of existing studies. One such case-crossover study, described in an overview by Conner and Chiapella (2003) of a workshop on alcohol and suicidal behavior, suggests that the role of acute alcohol in suicidal behavior may include promoting depression and hopelessness, impairing problem solving, and facilitating aggression.

Drugs

As noted earlier, the study of the relationship between drug abuse and suicide risk is substantially less

well developed than that of either mental illnesses or alcohol and suicide. As researchers have pointed out in their articles beginning in the mid-1990s to this date, relatively little is known about the impact of different drugs, drug combinations, substance-induced effects and self-medication on suicidal behavior. What is known is that there is some association between current drug use and suicidal ideation that is not entirely due to the effects of co-occurring mental disorders (Borges et al. 2000). The number of substances used appears to be more predictive of suicidal behavior than the types of substances used (Borges et al. 2000; Wilcox 2004). Moreover, based on a few initial studies, it also appears that drug abuse treatment itself may have the capacity to help reduce the risk for future suicidality (Ilgen et al. 2007). However, in the main, causal relationships between drugs of abuse—both in the aggregate and in specific instances—have not been well established (Erinoff et al. 2004).

Co-occurring Disorders

A substantial body of knowledge suggests that substance use – both drugs and alcohol – is associated with mental disorders (SAMHSA 2002; Armstrong and Costello, in Golston 2004; Jane-Llopis and Matytsina 2006). Moreover, some suggest that this linkage may be bidirectional. For example, depression may be associated with increased substance use and chronic substance abuse may be a factor in the development of depression or other mood disorders (Sinha and Rounsaville 2002). In fact, it has been suggested that co-occurring disorders should be considered the expectation rather than the exception by clinicians, and should be treated concurrently to be most effective (U.S. Public Health Service 1999; SAMHSA 2002).

FIGURE 4

[Source: Office of Applied Studies 2007d]

Further, both mental and substance use disorders are known risk factors for suicide. Secondary analysis of combined 2004 and 2005 data from SAMHSA's National Survey on Drug Use and Health (NSDUH) sheds light not only on the magnitude of co-occurring mental and substance use disorders, but also on the considerable impact they have when they occur together. According to the NSDUH analysis, an estimated 16.4 million adults, age 18 and older, experienced a major depressive episode in the past year. During their worst or most recent experience of major depression, over half thought they would be better off

dead; over 10 percent attempted suicide. When alcohol abuse or the use of illicit drugs was added to a major depressive episode, the proportion of suicide attempts rose to nearly 14 percent for alcohol abuse and nearly 20 percent for illicit drug use (Office of Applied Studies 2006b).

A growing number of case control and longitudinal studies have sought to examine whether substance and mental disorders, when co-occurring, exacerbate suicide risk. Moscicki (2002) points out that co-occurrence of mood disorders, in particular in concert with substance abuse, greatly increases the likelihood of attempted suicide. Indeed, she suggests that further research is warranted to determine if co-occurrence is a necessary condition for suicide to occur, despite previous findings by Pages and colleagues (1997) who found that, independent of depressed mood, alcohol and drug dependency were associated with high levels suicidal ideation among 891 hospitalized patients with major depressive disorder.

In contrast to Pages and colleagues, Roy's (2003) study of suicidality among 449 drug-dependent patients found that the 175 who had attempted suicide had greater lifetime comorbidity with major depression than the patients who did not attempt suicide. The results, similar to two other studies of drug-dependent patients conducted by the same researcher (Roy 2001, 2002), highlight the complicating role distal factors, such as childhood abuse and family history of suicide, play in concert with drug abuse and depression in suicidality.

Further, Goldston's (2004) review of conceptual issues associated with the relationships between suicide and substance abuse has clarified that what is not known about these relationships is far greater than what is known with certainty. He posits, for example, that both suicide and substance use share a number of risk factors – including depression, impulsivity, and thrill-seeking/life-threatening behaviors. As such, they ultimately may be related to underlying primary mental health problems (Goldston 2004). Data from the National Survey on Drug Use and Health point out the significantly higher rates of illicit drug, cigarette and alcohol use among those who experience a major depressive episode in the last year compared to those who did not (Office of Applied Studies 2006a, 2006b, 2007a, 2007b, 2007d). Both sets of findings suggest the potential use of substances, whether drugs, cigarettes or alcohol, as a means of "self-medicating" a mood disorder. Conner and colleagues (2000) have noted that suicide risk remains among people in remission from alcohol use; older adults frequently experience ongoing depression and younger individuals more subtle forms of mood disorders, such as dysthymia, problems that may have given rise to the substance abuse in the first place.

These findings speak to the need for clinicians to be vigilant about both substance abuse history and history of mental health problems among patients being seen for either or both illness. They speak to the ongoing need to consider and treat both substance abuse and mental illnesses concurrently in persons with co-occurring disorders to help reduce the risk for suicide when one of the co-occurring disorders is left untreated. All too often this is a fact of life for people of all ages with both substance use and mental disorders.

[Source: Office of Applied Studies 2007d]

ADOPTING A PUBLIC HEALTH APPROACH TO PREVENT SUICIDE AND BEHAVIORAL DISORDERS

A skillful doctor cures illness when there is no sign of disease, and thus the disease never comes.

– Liu An, second century Chinese philosopher

Science has triggered dramatic changes in thinking about behavioral health. Once believed to be debilitating, lifelong conditions, mental and substance use disorders are now understood to be as treatable as most physical illnesses. Today—given the right combination of treatment and support and a voice in decisions concerning their care—individuals with mental and substance use disorders can and do recover. Given the significant relationship between suicide and both substance abuse and mental disorders, it means that suicide is becoming recognized increasingly as a preventable tragedy.

However, as Loebel (2005) has pointed out, because suicide is the product of multiple causes, its prevention requires broad, multifaceted approaches. Thus, no single effort has proven effective in achieving large-scale and long-term reductions in suicide (Loebel 2005). This finding is not dissimilar to findings related to other significant health problems, ranging from obesity to substance abuse and from mental health problems to heart disease. What is called for is a change in how prevention and treatment are approached: a change from a disease-specific focus to one based on a multi-pronged, population-oriented model built on known best practices: a public health model (Caine 2004; Knox et al. 2004).

The Power of a Public Health Approach

The power of a public health approach to prevent disease and illness and to promote health is significant. Efforts that span the community, state and national levels have enhanced the quality of life for millions of Americans for more than a century. The use of vaccines, improved sanitation and pure drinking water helped curb many acute, often fatal illnesses and contagious diseases of past decades (Bunker et al. 1994; Cutler and Mille 2005). Today, the power of prevention is being used to help prevent, delay and reduce the severity of more chronic illnesses that take a toll on health, productivity, education, community engagement and the quality of life. Increasingly, policy makers and researchers are embracing the public health approach as the lens for analyzing and addressing chronic health issues – including suicide, mental illness and substance abuse.

The goal of this public health model is to fundamentally transform our approach to health and illness from a disease care system to a health care system that stresses prevention on a par with diagnosis and treatment. This approach was infused throughout the Surgeon General’s Call to Action on Suicide and the National Strategy on Suicide Prevention as well as New Freedom Commission on Mental Health’s report. It is a key element in the work of both the Substance Abuse and Mental Health Services Administration and Centers for Disease Control and Prevention to prevent illnesses with modifiable risk factors and to identify and intervene early.

With the growing importance of a public health approach, it is instructive to understand its elements and

how it works and to explore how it is applicable to suicide and substance abuse prevention.

Defining a Public Health Approach and Prevention

A public health approach takes the long view. Its population-based approach examines the link between health and the physical, psychological, cultural and social environments in which people live. It focuses not only on traditional areas of medicine – diagnosis, treatment and etiology of illness—but also on disease surveillance, health promotion, disease prevention and access to and evaluation of treatment services (U.S. Public Health Service 1999; Center for Mental Health Services 2007). Thus, it focuses on the full gamut of the health-illness continuum – from the promotion of health through the prevention of illness and disability, to the treatment and rehabilitation of those affected (Herrman, et al 2005). It seeks long-term solutions that are achieved through the application of high-quality, evidence-based care long before symptoms and co-occurring conditions are exacerbated. These interventions may be interrelated; they may overlap. Under any circumstance, each is a critical ingredient in the public health framework (Herrman et al. 2005). Accordingly, prevention becomes as important as treatment. While focusing treatment and care on the needs of the individual, a public health model also supports development of preventive interventions for the entire population.

From a population perspective, prevention means providing people with the tools, skills and knowledge they need to be healthy. Those tools, skills and knowledge vary based on the level of risk for the untoward event occurring in a particular population: universal, selective, and indicated. (See Figure 6, below.) While some programs include interventions that address all three of these levels of prevention and some do not, what is important is that some interventions extend the very definition of prevention itself, based on a definition crafted by the National Institute of Mental Health (NIMH) and adopted by SAMHSA. NIMH (1998) defined prevention to include not only interventions that occur before the initial onset of a disorder “but also to interventions that prevent comorbidity, relapse, disability, and the consequences of severe...illness...” Thus, prevention is seen as spanning the full gamut of the health-illness continuum, with interventions ranging from primary prevention through recovery support.

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[Source: [National Institute of Mental Health, 1998]

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The good news is that, in many respects, without regard to the illness or behavior being targeted – whether underage drinking, suicide, obesity or heart disease, the principles and the approach remain much the same. The components of effective prevention are the same whether the focus is on reducing or eliminating the health, psychosocial, and community effects of environmental and biological factors, risk-taking behaviors, or poor choices that affect the individual, family and community. Prevention is prevention is prevention.

Thus, whatever its focus, and wherever along the health-illness continuum it operates, a public health model follows an ordered, continuous set of steps to promote health and prevent illness:

- Identify the problem
- Identify risk and protective factors
- Develop, implement and test interventions
- Ensure widespread adoption of evidence-based practices

Simply put, the problem is the illness, adverse health condition or complex of health problems that needs to be prevented. Whether addressing diabetes or heart disease, suicide or drug addiction, the focus is on reducing the factors that might lead to those health issues and encouraging adoption of behaviors, attitudes and lifestyles that decrease the risks, whether in individuals, families or communities as a whole. Research and experience have found that identical, important risk factors (such as extreme economic deprivation, academic failure, peer rejection and family conflict) affect a broad array of health issues—from HIV/AIDS to heart disease, from depression to substance abuse and suicide. Other factors, such as strong family bonds and social skills, opportunities for school success, and involvement in community activities, can protect against these potential health issues. Comprehensive public health promotion strategies seek to affect the multiple risk and protective factors that exist at the individual, peer/family, community and societal levels.

These risk and protective factors are at the very heart of promotion and prevention interventions based on the public health model. As noted by Mrazek and Haggerty (1994) in their groundbreaking volume on preventive intervention research, “The goal [of prevention programs] is to address malleable, or modifiable, risk and protective factors related to the onset of disorders” within the context of the larger

population, not the individual. Suicide is a remarkable example of the confluence of a broad array of biological, behavioral and environmental risk factors: individual psychological traits like impulsiveness and hopelessness; interpersonal factors such as relationship loss, social isolation, trauma and violence; environmental stressors such as lost wages or economic hardship; and biological factors such as behavioral or physical illness or disability (IOM 2001).

With risk and protective factors known, it becomes possible to develop, test and measure interventions that can reduce the factors associated with an increased probability of developing the problem (risk factors) and can enhance the factors associated with a decreased probability of developing the problem (protective factors).

Identifying and Responding to Factors for and Against Suicide and Behavioral Health Issues

While no specific tests can identify a person who is suicidal, specific risk and protective factors for suicide are known and can be identified (Gould et al. 2003). Protective factors include:

- Effective clinical care for mental, physical and substance use disorders
- Easy access to a variety of clinical interventions and support for help seeking
- Restricted access to highly lethal means of suicide
- Strong connections to family and community support

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- Support through ongoing medical and mental health care relationships
- Skills in problem solving, conflict resolution and nonviolent handling of disputes
- Cultural and religious beliefs that discourage suicide and support self-preservation (Suicide Prevention Resource Center 2008).

Given the significant number of individuals in need of care for mental and substance use disorders who do not receive it, the number of individuals who lack regular health care providers, and the availability of many highly lethal means of suicide to the American public, for too many people these protective factors are simply not part of their reality. What could have been protective, becomes a risk, of which there are many, spanning several dimensions: biopsychosocial, environmental and sociocultural.

Some of the risk factors are more relevant to one age group or racial/ethnic subpopulation than another, but many of the risk factors are consistent with risk factors for substance abuse and mood disorders as well, among them: family history, illness or disability, family dysfunction, age-specific stressful life events, incarceration, and others (Goldsmith 2001).

Moreover, both mental and substance use disorders are, themselves, risk factors for suicide. Moscicki has suggested

SUICIDE RISK FACTORS

Biopsychosocial

- Mental disorders, particularly mood disorders, schizophrenia, anxiety disorders and certain personality disorders
- Alcohol and other substance use disorders
- Hopelessness
- Impulsiveness and/or aggressiveness
- History of trauma or abuse
- Major physical illness
- Previous suicide attempt
- Family history of suicide

Environmental

- Job or financial loss
- Relational or social loss
- Easy access to lethal means
- Local clusters of suicide with a contagious influence

Socialcultural

- Lack of social support; sense of isolation
- Stigma of help-seeking behavior
- Barriers to accessing health care,

that one of the most significant environmental interventions that could be undertaken to prevent suicide is to reduce psychiatric and substance abuse morbidity (in Goldsmith 2001). By “doing prevention” around these behavioral health issues, a number of the specific risk factors for suicide can be attacked and, as a corollary, protective factors can be strengthened.

- especially mental health care and substance abuse treatment
- Certain cultural and religious beliefs (for instance, the belief that suicide is a noble resolution of a personal dilemma)
 - Exposure to (including through the media) and influence of others who have died by suicide

[Source: Suicide Prevention Resource Center, 2008]

Developing and Implementing Programs

Among the most significant issues related to the development and implementation of prevention programs—whether to prevent suicide, substance abuse or any other health problem—are the need to

- Adopt an “upstream” approach that brings prevention to the people, with integrated services for prevention, assessment, diagnosis and treatment;
- Identify, adapt and advance specific evidence-based programs to the specific cultural, community and developmental norms of program participants.

Integrated upstream approach

As noted earlier, by focusing on prevention as well as illness, a public health approach involves working “upstream” as well as downstream. While health care providers need to keep “rescuing drowning individuals,” they also need to move upstream to try to keep people from falling in the river in the first place. Such an approach emphasizes connections far different from the stovepipe approach to services in an acute care model.

It values—

- Connections across disciplines to create a larger context for the care of the whole person and for preventive care that can identify and act on risks for suicide early—including attention to both substance abuse and mental disorders.
- Primary care practitioners and behavioral health care providers who look beyond their individual disciplines to integrate historically independent and isolated disciplines
- Connections between the scientific community and the broader public and between the behavioral health service community and consumers.

Above all, this “upstream” approach recognizes that behavioral health is linked inextricably to overall health and that integration is valuable and necessary. Greater integration of behavioral health into the larger fabric of general health care services can go a long way to reducing the tragedy of suicide. By moving upstream and by integrating care across disciplines—particularly by engaging and educating primary care providers—the toll taken by excess disability that arises when diagnosis and treatment come later along the health-illness continuum can be lowered.

Delaying or preventing alcohol and drug abuse among young people can forestall more serious illnesses and the increased risk for suicide in later life. Similarly, research (Kessler et al. 2005) has shown that a

five-year window of opportunity among youth for early intervention exists during which identification and treatment of a mental health problem forestall subsequent co-occurring substance abuse, suicide risk and excess disability. It can yield dividends in terms of educational attainment, reduced involvement in the juvenile justice system, reduced risk of potential suicide, and better overall physical health and wellbeing as an adult.

The need for prevention and early intervention to help avoid the risk of adolescent suicide is why the American Academy of Pediatrics (AAP) has urged greater involvement by pediatricians and family practitioners in assessing suicide risk among their youthful patients. The AAP's Committee on Adolescents has recommended that clinicians ask about risk factors associated with suicide, such as depression and substance abuse in routine history-taking throughout adolescents, at both acute care and routine care visits (Shain 2007).

At the same time, it is important to increase vigilance by primary care providers to screen for suicide risk. The Institute of Medicine (2002) reports that a majority of people who die by suicide visited a health care provider within a year of their deaths; 40 percent had seen a clinician within a month. Mann and colleagues (2005) report that other studies suggest 83 percent of those who die by suicide had been in contact with a primary care provider within a year and up to 66 percent within a month. The impact of inadequate attention to suicide risk factors among those treating older adults is highlighted by chilling statistics reported by Loebel (2005). He reports that data strongly suggest that clinicians do not often diagnose suicidal intent among their elderly patients and that suicidal older adults frequently consulted health care providers (usually primary care physicians) shortly before the suicidal act, sometimes as recently as hours before the suicidal act. In one study he cites, 41 percent of persons who died by suicide had contact with a health care professional within a month of death, 47 percent within a week and 18 percent on the day of death. Suicidal intent was discussed in only 22 percent of these meetings.

The human savings realized by integrated upstream care is matched by economic savings measured in reduced hospital stays and lower associated costs. According to the Agency for Healthcare Research and Quality, almost one in four of all stays in U.S. community hospitals for patients age 18 and older—7.6 million of nearly 32 million stays—involved mental or substance use related disorders in 2004 (Owens et al. 2007). The significant number of hospital stays related to mental and substance use disorders signal the

need for an increased national effort to identify and intervene early before the conditions require a hospital stay.

These are only a few of the reasons SAMHSA is involved in a number of activities that aim to strengthen the capacity of primary care providers to identify, refer, or provide treatment for behavioral disorders and to screen routinely for suicide risk.

Adopting best practices

Research suggests that prevention offers great potential to change lives and save money. However, policymakers, administrators, clinicians and the public are demanding that potential needs to be matched by demonstrable outcomes. Prevention programs need to demonstrate effectiveness in achieving desired outcomes and show a positive cost-benefit. A number of research papers explore the challenges inherent

in the implementation of evidence-based research practices (Center for Mental Health Services 2007). Fixen and colleagues (2005) have noted that implementation of an effective practice can take from 2 to 4 years to complete, since it takes time to bring provider, process and program to maturity.

Today, of the more than 50 programs in SAMHSA's National Registry of Evidence-based Programs and Practices, approximately 10 have relevance to the prevention of suicide and substance abuse. (See below.) However, it will take time, dedicated researchers and communities, and motivated policymakers before a growing body of effective programs focused at the confluence of suicide and substance abuse prevention are assessed and found worthy to take their place in the roster of evidence-based practices and programs. The data presented in this paper—and the lives that can be saved through solid preventive interventions—suggest that the urgency to move this agenda forward is greater than ever.

SUICIDE PREVENTION-RELATED EVIDENCE-BASED PRACTICES AND PROGRAMS

[Abstracted from SAMHSA's National Registry of Evidence-Based Programs and Practices]

Title	Population	Description
Dialectical Behavior Therapy	Adaptations available for suicidal adolescents; individuals with substance use disorders;	Cognitive-behavioral treatment approach combining a problem-solving focus and acceptance-based strategies. Program emphasizes balancing behavioral change, problem-solving and emotional regulation with validation, mindfulness and acceptance of patients.
American Indian Life Skills Development	Adolescent youth (ages 13-17)	School-based suicide prevention curriculum designed to reduce suicide risk and improve protective factors among American Indian adolescents 14 to 19 years old. Up to 53 interactive lessons (on topics such as building self-esteem, identifying emotions and stress, increasing problem-solving skills, reducing self-destructive behavior, etc.) are delivered over 30 weeks during the school year. Teachers deliver lessons in collaboration with community resource leaders and representatives of local social service agencies. Team teaching ensures that the lessons have a high degree of cultural and linguistic relevance.
CARE (Care, Assess, Respond, Empower) [Formerly called Counselors CARE and Measure of Adolescent Potential for Suicide]	Adolescents; young adults (ages 13-17 and 18-25)	High school-based suicide prevention program targeting high-risk youth. The goals are threefold: (1) to decrease suicidal behaviors, (2) to decrease related risk factors, and (3) to increase personal and social assets. CARE assesses the adolescent's needs, provides immediate support, and then serves as the adolescent's crucial communication bridge with school personnel and the parent or guardian of choice. Program (consisting of a 2-hour, one-on-one computer-assisted suicide assessment interview and a 2-hour motivational counseling and social support intervention) is delivered by school/advanced-practice nurses, counselors, psychologists or social workers. It also includes follow-up reassessment of broad suicide risk and protective factors and a booster motivational counseling session 9 weeks after the initial counseling session. Although originally developed to target high-risk youth in high school, its scope has been expanded to include young adults (ages 20 to 24) in settings outside of schools, such as health care clinics.

Title	Population	Description
CAST (Coping and Support Training)	Adolescent youth and young adults (ages 14-19 and 18-25)	A high school-based suicide prevention program targeting youth, CAST delivers life-skills training and social support in a small-group format (6-8 students per group) through 12 55-minute group sessions administered over 6 weeks by trained, master's-level high school teachers, counselors or nurses. The sessions target three overall goals: increased mood management (depression and anger), improved school performance, and decreased drug involvement. CAST serves as a follow-up for youth identified as at significant risk for suicide. In the original trials, identification of youth was done through the CARE program; since then, other evidence-based suicide risk screening instruments can be used.
Cognitive Behavioral Therapy for Adolescent Depression (CBT)	Adolescent youth	Developmental adaptation of Beck's classic cognitive therapy model, CBT emphasizes collaborative empiricism, socializing patients to the cognitive therapy model, and monitoring and modification of automatic thoughts, assumptions, and beliefs. To adapt CBT to adolescents, greater emphasis is placed on (1) use of concrete examples to illustrate points, (2) education psychotherapy and socialization to the treatment model, (3) exploration of autonomy and trust issues, (4) focus on cognitive distortions and affective shifts, and (5) acquisition of problem-solving, affect-regulation, and social skills. To match the more concrete cognitive style of younger adolescents, therapists summarize session content frequently. Abstraction is kept to a minimum; concrete examples linked to personal experience are used whenever possible. The treatment program is delivered in 12-16 weekly sessions.

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Title	Population	Description
Emergency Room Intervention for Adolescent Females	12-18 year old adolescent females	A program for teenage girls admitted to the emergency room after attempting suicide. The intervention, involving the girls and family member(s) who accompany them to the emergency room, seeks to increase attendance at outpatient treatment following ER discharge and to reduce future suicide attempts. The intervention includes 3 components designed to change the family's conceptualization of the suicidal behavior and expectations about therapy. A 2-hour training is conducted separately with each of six groups of staff working with adolescents who have attempted suicide. The adolescents and families then watch a 20-minute videotape that portrays the emergency room experience of two adolescents who have attempted suicide. Last, a bilingual crisis therapist delivers a brief family treatment in the emergency room.
PROSPECT (Prevention of Suicide in Primary Care Elderly: Collaborative Trial)	Adults, age 55+	Designed to help prevent suicide among older primary care patients by reducing suicidal ideation and depression. The intervention includes a treatment algorithm to help primary care physicians make appropriate care choices during the acute, continuation and maintenance phases of treatment. Health specialists collaborate with physicians to monitor patients and encourage patient adherence to recommended treatments. Patients are treated and monitored for 24 months. Program implementation relies on educating primary care physicians to recognize symptoms and apply a clinical algorithm (including both somatic and nonsomatic interventions) based on depression treatment guidelines for older patients.

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Title	Population	Description
SOS (Signs of Suicide)	Adolescents (ages 13-17)	A 2-day secondary school-based intervention that includes screening and education. Students are screened for depression and suicide risk and referred for professional help as indicated. Students also view a video that teaches them to recognize signs of depression and suicide in others. They are taught that the appropriate response to these signs is to acknowledge them, let the person know you care, and tell a responsible adult (either with the person or on that person's behalf). Students also participate in guided classroom discussions about suicide and depression. The intervention attempts to prevent suicide attempts, increase knowledge about suicide and depression, develop desirable attitudes toward suicide and depression and increase help-seeking behavior.
Columbia University TeenScreen Program	Middle school and high school youth (ages 10-17)	Identifies middle- and high school-aged youth in need of mental health services due to undetected mental illness and suicide risk. Primary goal is to foster early identification of problems that might not otherwise come to the attention of professionals. Can be implemented in schools, clinics, doctors' offices, juvenile justice settings, shelters, or any other youth-serving setting. The screening involves: Parent and student written consent during which time both receive information about the screening process, confidentiality, and the teens' rights to refuse to answer any questions they do not want to answer. Teen completion of a 10-minute paper-and-pencil or computerized questionnaire on anxiety, depression, substance and alcohol abuse, and suicidal thoughts and behavior. Teens with responses suggesting suicide risk or

other mental health need, participate in a brief clinical interview with on-site mental health professional. If symptoms warrant further referral, parents are notified and help to find community services.
 Teens whose responses do not indicate need for clinical services receive an individualized debriefing to help reduce the stigma associated with scores indicating risk and to enable the youth to express any concerns not reflected in their questionnaire responses.

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Title	Population	Description
US Air Force Suicide Prevention Program	Young adult (18-25) and adult (26-55)	The Air Force has implemented a population-oriented approach to reducing the risk of suicide that includes 11 initiatives aimed at strengthening social support, promoting development of social skills, and changing policies and norms to encourage effective help-seeking behaviors. The initiatives are: Leadership Involvement Suicide Prevention in Professional Military Education Guidelines for Use of Mental Health Services Community Preventive Services Community Education and Training Investigative Interview Policy Critical Incident Stress Management Integrated Delivery System (IDS) Limited Privilege Suicide Prevention Program Behavioral Health Survey Suicide Event Surveillance System

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APPENDICES

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SUICIDE PREVENTION POLICY A FEDERAL CHRONOLOGY

- 1958:** Los Angeles Suicide Prevention Center opens, funded by the U.S. Public Health Service and directed by Edwin Shneidman.
- 1966:** Center for the Study of Suicide Prevention (later renamed the Suicide Prevention Research Unit) established at the National Institute of Mental Health.
- 1968:** American Association of Suicidology founded by Edwin Shneidman.
- 1983:** CDC Violence Prevention Unit (later subsumed into the National Center for Injury Prevention and Control) established; focuses public attention on an increase in the rate of youth suicide.
- 1985:** Secretary's Task Force on Youth Suicide established to review the problem of youth suicide and recommend actions.
- 1987:** American Foundation for Suicide Prevention founded.
- 1989:** *Report of the Secretary's Task Force on Youth Suicide* published by the U.S. Department of Health and Human Services.
- 1996:** Suicide Prevention Action Network (SPAN) USA founded with the goal of preventing suicide through public education, community action, and advocacy.
- 1996:** World Health Organization (WHO), recognizing the growing problem of suicide worldwide, urged member nations to address suicide in its document *Prevention of Suicide: Guidelines for the Formulation and Implementation of National Strategies*. This Report motivated the Department of Health and Human Services to develop a national strategy to prevent suicide, relying on the expertise of SAMHSA, CDC, HRSA, IHS, NIMH, and OSG, as well as the Suicide Prevention Advocacy Network (SPAN USA), a public grassroots suicide prevention advocacy.
- 1998:** The HHS/SPAN group sponsored a *national conference on suicide prevention* as a response to the WHO./UN publication. Convened in Reno, Nevada, the conference included researchers, health and mental health clinicians, policymakers, suicide survivors, and community activists and leaders. Conferees called for a national strategy to prevent suicide, laying out 15 key recommendations refined from consensus and evidence-based findings presented.
- 1999:** Determining that suicide is a public health problem, Surgeon General issues a *Call to Action to Prevent Suicide*, grounded in the 15 key recommendations from the 1998 Reno Conference. The Call to Action said that any national strategy should focus on three critical areas: awareness, intervention and methodology (AIM)—an approach derived from the collaborative deliberations of the conference participants.

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- 2001:** First installment of *National Strategy for Suicide Prevention* unveiled by Surgeon General, setting goals and objectives for the public and private sector. The document established 11 goals and 68 measurable objectives for public and private sector involvement to prevent suicides and attempts, as well as to reduce the harmful after-effects they have on families and communities. The goals and objectives lay out a framework for action and guide development of an array of services and programs previously not yet set in motion. The Surgeon General envisioned that future installments of the National Strategy would be released as work is completed. A publication recommending safe approaches for media coverage of suicide related events was to be developed (see below).
- 2001:** SAMHSA awards grant for the Hotline Evaluation and Linkage Project to the American Association of Suicidology, and for evaluation of the project to Columbia and Rutgers Universities .
- 2001:** Institute of Medicine convenes and publishes the findings of 2 workshops on suicide prevention and intervention as part of its information-gathering activities that inform the IOM's work to assess the science base of suicide etiology, evaluate the current status of suicide prevention, and examine current strategies for the study of suicide.
- 2002:** Institute of Medicine releases *Reducing Suicide: A National Imperative*, the volume resulting from its year of information gathering on suicide and suicide prevention. The book explores the factors that raise a person's risk of suicide: psychological and biological factors including substance abuse, the link between childhood trauma and later suicide, and the impact of family life, economic status, religion, and other social and cultural conditions. It reviews the effectiveness of existing interventions, including mental health practitioners ability to assess suicide risk among patients, and presents lessons learned from the Air Force suicide prevention program and other prevention initiatives. And they identify barriers to effective research and treatment.
- 2002:** SAMHSA releases its *Report to Congress on the Prevention and Treatment of Co-Occurring Substance Abuse Disorders and Mental Disorders*. This population is at particularly high risk for suicide, an issue highlighted in the report.
- 2002:** SAMHSA announces the award of a grant to the Education Development Center (Newton, MA) to establish and manage the *National Suicide Prevention Resource Center*, funded by approximately \$2.5 million per year for 3 years. The Center is designed to provide information about and assistance in implementing suicide prevention programs.
- 2003:** The President's New Freedom Commission on Mental Health, established as part of the President's agenda to enable Americans with mental illness to live, work, learn, and participate

fully in their communities, presents its final report to the President. The very first recommendation contained in the report, *Achieving the Promise: Transforming Mental Health Care in America*, focuses on suicide prevention as a key element of a comprehensive mental health system, urging the President to “Advance and implement a national campaign to reduce the stigma of seeking care and a national strategy for suicide prevention.”

- 2003:** SAMHSA convenes *Collaboration Around Youth Suicide Prevention: A Workshop for State Public Health and Mental Health Officials* in Seattle, Washington.

- 2003-4:** *Reporting On Suicide: Recommendations for the Media* is developed and released by SAMHSA in collaboration with the Centers for Disease Control and Prevention, National Institute of Mental Health, Office of the Surgeon General, American Foundation for Suicide Prevention, American Association of Suicidology, and the Annenberg Public Policy Center in collaboration with the World Health Organization, the National Swedish Centre for Suicide Research, and the New Zealand Youth Suicide Prevention Strategy.
- 2004:** SAMHSA’s Office of Applied Studies adds questions specific to suicide (both ideation and attempts) to its *National Survey on Drug Use and Health* NSDUH, the Nation’s primary source of information on the prevalence of illicit drug use among people aged 12 or older, also providing estimates of alcohol and tobacco use and mental health problems in that population. The report begins to provide information about the relationships between suicidal thoughts, suicide attempts, and substance use among adults aged 18 or older who have had at least one major depressive episode (MDE) during the past year.
- 2004:** The *Garrett Lee Smith Memorial Act* is signed into law by President Bush. It includes a series of programs designed to address youth suicide (early intervention and prevention, campus care and counseling, etc.).
- 2004:** SAMHSA awards a grant to launch the *National Suicide Prevention Lifeline* (1-800-273-TALK) as part of the National Suicide Prevention Initiative, designed to help reduce the incidence of suicide nationwide. The National Suicide Prevention Lifeline is a network of local crisis centers located in communities across the country that are committed to suicide prevention. Callers to the hotline will receive suicide prevention counseling from trained staff at the closest certified crisis center in the network.
- 2005:** SAMHSA announces availability of approximately \$2.6 million in FY 2005 funds for a cooperative agreement for up to 5 years to create and operate a suicide prevention resource center to assist states, territories, tribes and communities in their efforts to plan for the development, implementation and evaluation of suicide prevention programs. The program was authorized under the Garrett Lee Smith Memorial Act.
- 2005:** Three SAMHSA suicide prevention grant programs, authorized under the Garrett Lee Smith Memorial Act, are announced and awarded:

- State/Tribal Youth Suicide Prevention to build on the foundation of prior suicide prevention efforts by states and tribes to develop and implement statewide or tribal youth suicide prevention;
 - Campus Suicide Prevention provides funding to institutions of higher education to enhance services for students with mental and behavioral health problems, such as depression, substance abuse, and suicide attempts;
 - Hurricane Katrina-related Suicide Prevention for Hurricane Katrina-related state-sponsored youth suicide prevention and early intervention.
- 2006:** SAMHSA Administrator designates suicide prevention as a priority program/policy activity, establishing a matrix focus area, working group to coordinate and stimulate activities on this topic. It establishes a 2-year action agenda, including not only the identification of programs, actions, milestones and objectives, but also measures of their achievement.

- 2006:** Federal Working Group on Suicide Prevention established. Representatives from SAMHSA, Centers for Disease Control, National Institute on Mental Health, Indian Health Services, Department of Defense, Veterans Affairs and other federal agencies.
- 2006:** SAMHSA announces and awards almost \$9.6 million over three years for eight new grants to support national suicide prevention and early intervention efforts focusing on youth. The first year grant total is almost \$3.2 million. This grant program is authorized under the Garrett Lee Smith Memorial Act, which provides funding for programs to combat suicide.
- 2007:** Department of Health and Human Services five-year strategic plan is amended to include suicide prevention as one of its core prevention measures, establishing the ambitious goal of reducing suicide deaths by six percent by 2012, in large measure relying on SAMHSA's suicide prevention activities, policies and programs.
- 2007:** SAMHSA's Center for Substance Abuse Treatment begins development of a Treatment Improvement Protocol specifically focused on the relationship between suicide and substance abuse.
- 2007:** SAMHSA convenes the first regularly planned in-service program to better educate SAMHSA staff and others about suicide prevention as an agency priority, key issues, and new developments, products and publications bearing on the topic.
- 2007:** SAMHSA awards a cooperative agreement for \$2.88 million in each of up to 5 years to the Mental Health Association of New York City to manage, enhance and strengthen the National Suicide Prevention Lifeline, a network of over 125 crisis centers in the U.S. that responds to over 36,000 calls every month. It is one of SAMHSA's infrastructure programs that provide a solid foundation for delivering and sustaining effective behavioral health services.

- 2007:** SAMHSA announces the availability of up to \$6.5 million for a new round of grants to states/tribal organizations and to colleges/universities to support national suicide prevention and early intervention efforts focusing on youth under the Garrett Lee Smith Memorial Act.
- 2007:** The Department of Veterans Affairs partners with SAMHSA to establish a toll-free hotline for veterans in crisis. Using the 1-800-273-TALK Lifeline number, veterans calling will be connected to a special, VA-sponsored crisis center staffed by mental health professionals in Canadaiqua, NY. They will take calls from across the country and work closely with local VA mental health providers to help callers.
- 2007:** SAMHSA names suicide prevention one of the 2008 review priorities for mental health and substance use prevention and treatment programs and practices submitted to the National Registry of Evidence-based Programs and Practices (NREPP). NREPP is a voluntary rating and classification system designed to provide the public with reliable information on the scientific basis and practicality of interventions that prevent and/or treat mental and substance use disorders.
- 2007-8:** Establishment of the National Action Alliance for Suicide Prevention is initiated by SPAN USA and the Suicide Prevention Resource Center, with the support and partnership of SAMHSA. The goal of the Action Alliance is to move the goals and objectives of the 2001 National Strategy for Suicide Prevention (NSSP) from paper to practice by monitoring, guiding, coordinating and promoting suicide prevention efforts across the country. The public-private partnership is to heighten awareness about suicide, help reduce the stigma surrounding mental

illnesses and suicide and coordinate the nation's suicide prevention responses. Membership is drawn from the public and private sectors, including people who have survived the suicide or the suicide of a loved one, government officials and representatives from non-profits, business, philanthropy, academia, and both professional and advocacy organizations.

- 2008:** SAMHSA's National Survey on Drug Use and Health will ask all respondents about suicide attempts, whether or not they had previously acknowledged a major depression, an important step forward in suicide surveillance. The first data will be available in the 2008 NSDUH.

RESOURCES ¹

Publications (Print and Electronic)

SAMHSA Publications

Office of Applied Studies (2006). *Emergency Department Visits Involving ADHD Stimulant Medications (The New DAWN Report)*. Rockville, MD: Substance Abuse and Mental Health Services Administration.

Office of Applied Studies (2006). *Suicidal Thoughts, Suicide Attempts, Major Depressive Episode & Substance Use among Adults (The OAS Report)*. Rockville, MD: Substance Abuse and Mental Health Services Administration.

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Other Federal Publications

Centers for Disease Control and Prevention (2007). *Preventing Suicide: Program Activities Guide*. Atlanta, GA: Centers for Disease Control and Prevention. www.cdc.gov/ncipc/dvp/Preventing_Suicide.pdf (Accessed 2/11/08)

National Institute of Mental Health (2004). *Reporting On Suicide: Recommendations for the Media*. Developed and released in collaboration with the Substance Abuse and Mental Health Services Administration, Centers for Disease Control and Prevention, National Institute of Mental Health, Office of the Surgeon General, American Foundation for Suicide Prevention, American Association of Suicidology, and the Annenberg Public Policy Center in collaboration with the World Health Organization, the National Swedish Centre for Suicide Research, and the New Zealand Youth Suicide

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Prevention Strategy. www.nimh.nih.gov/health/topics/suicide-prevention/reporting-on-suicide-recommendations-for-the-media.shtml (Accessed 3/3/08).

New Freedom Commission on Mental Health (2003). *Achieving the Promise: Transforming Mental Health Care in America. Final Report*. DHHS Pub. No. SMA-03-3832. Rockville, MD: Government Printing Office.

U.S. Department of Health and Human Services (2007). *HHS Strategic Plan Goals and Objectives 2007-2012*. Washington, DC: Government Printing Office. http://www.hhs.gov/strategic_plan/ (Accessed

3/3/08)

U.S. Department of Health and Human Services, Public Health Service. (2001). *National Strategy for Suicide Prevention: Goals and Objectives for Action* (DHHS Publication No. SMA 01–3517). Rockville, MD: Government Printing Office. <http://www.mentalhealth.samhsa.gov/suicideprevention/strategy.asp>

U.S. Department of Health and Human Services (2000). *Healthy People 2010*. 2nd ed. With Understanding and Improving Health and Objectives for Improving Health. 2 vols. Washington, DC: U.S. Government Printing Office.

Other Publications

Committee on Crossing the Quality Chasm: Adaptation to Mental Health and Addictive Disorders

Board on Health Care Services (2006). *Improving the Quality of Health Care for Mental and Substance-Use Conditions*. Washington, DC: National Academies Press.

Institute of Medicine (Goldsmith SK, Pellmar TC, Kleinman AM, Bunney WE, Eds.). (2002). *Reducing Suicide: A National Imperative*. Washington, DC: National Academy Press. <http://books.nap.edu/books/0309083214/html/index.html>

Jacobs D (2008). The Suicide Assessment Five-step Evaluation and Triage (SAFE-T) Card. Rockville, MD: Suicide Prevention Resource Center. http://www.sprc.org/library/safe_t_pcktrd_edc.pdf

Mental Health America (2007) *Ranking America's Mental Health: An Analysis of Depression Across the States*. Alexandria VA: Mental Health America. <http://www.mentalhealthamerica.net/go/state-ranking> (Accessed 3/3/08).

World Health Organization (1996). *Prevention of Suicide: Guidelines for the Formulation and Implementation of National Strategies*. Geneva, Switzerland: World Health Organization.

Web sites

SAMHSA-Related Sites

Substance Abuse and Mental Health Services Administration: <http://www.samhsa.gov>

Suicide Prevention Data Reports: <http://www.oas.samhsa.gov>

Suicide Prevention Resource Center (SPRC): <http://www.sprc.org>

Best Practices Registry: http://www.sprc.org/featured_resources/bpr/index.asp

Suicide Prevention Lifeline: <http://www.suicidepreventionlifeline.org>

National Registry of Evidence-based Programs and Practices: <http://www.nrepp.samhsa.gov>

Co-Occurring Center of Excellence (COCE): <http://www.coce.samsha.gov>

National Strategy for Suicide Prevention: <http://mentalhealth.samhsa.gov/suicideprevention/default.asp>

Other Federal Sites

National Strategy for Suicide Prevention: <http://mentalhealth.samhsa.gov/suicideprevention/default.asp>

Centers for Disease Control and Prevention: <http://www.cdc.gov>
National Institute on Mental Health: <http://www.nimh.nih.gov>
National Institute on Drug Abuse: <http://www.nida.nih.gov>
National Institute on Alcohol Abuse and Alcoholism: <http://www.niaaa.nih.gov>

Non-Government Sites

Active Minds on Campus: <http://www.activemindsoncampus.org>
American Association of Suicidology: <http://www.suicidology.org>
American Foundation for Suicide Prevention: <http://www.afsp.org>
The Jed Foundation: <http://www.jedfoundation.org>
National Alliance on Mental Illness (NAMI): <http://www.nami.org>
National Association of Crisis Center Directors (NASCOD): <http://www.nascod.org>
National Council for Suicide Prevention: <http://www.ncsp.org>
National Mental Health Association: <http://www.nmha.org>
National Organization for People of Color Against Suicide (NOPCAS): <http://www.nopcas.com>
Suicide Awareness/Voices of Education: <http://www.save.org>
Suicide Prevention Action Network: <http://www.spanusa.org>

NATIONAL STRATEGY FOR SUICIDE PREVENTION: MENTIONS OF SUBSTANCE ABUSE

Goal 3

Develop and implement strategies to reduce the stigma associated with being a consumer of mental health, substance abuse and suicide prevention services

Objective 3.3: By 2005, increase the proportion of the public that views consumers of mental health, substance abuse, and suicide prevention services as pursuing fundamental care and treatment for overall health.

Goal 7ju

Develop and promote effective clinical and professional practices

Objective 7.2: By 2005, develop guidelines for assessment of suicidal risk among persons receiving care in primary health care settings, emergency departments, and specialty mental health and substance abuse treatment centers. Implement these guidelines in a proportion of these settings.

Objective 7.3: By 2005, increase the proportion of specialty mental health and substance abuse treatment centers that have policies, procedures, and evaluation programs designed to assess suicide risk and intervene to reduce suicidal behaviors among their patients.

Objective 7.8: By 2005, develop guidelines for providing education to family members and significant others of persons receiving care for the treatment of mental health and substance abuse disorders with risk of suicide. Implement the guidelines in facilities (including general and mental hospitals, mental health clinics, and substance abuse treatment centers).

Objective 7.9: By 2005, incorporate screening for depression, substance abuse and suicide risk as a minimum standard of care for assessment in primary care settings, hospice, and skilled nursing facilities for all Federally-supported healthcare programs (e.g., Medicaid, CHAMPUS/TRICARE, CHIP, Medicare).

Objective 7.10: By 2005, include screening for depression, substance abuse and suicide risk as measurable performance items in the Health Plan Employer Data and Information Set (HEDIS).

Goal 8

Increase access to and community linkages with mental health and substance abuse services

Objective 8.1: By 2005, increase the number of States that require health insurance plans to cover mental health and substance abuse services on par with coverage for physical health.

Objective 8.3: By 2005, define guidelines for mental health (including substance abuse) screening and referral of students in schools and colleges. Implement those guidelines in a proportion of school

districts and colleges.

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Objective 8.4: By 2005, develop guidelines for schools on appropriate linkages with mental health and substance abuse treatment services and implement those guidelines in a proportion of school districts.

Objective 8.5: By 2005, increase the proportion of school districts in which school-based clinics incorporate mental health and substance abuse assessment and management into their scope of activities.

