Saving Lives in New York: Suicide Prevention and Public Health

Volume 2
Approaches and Special Populations

New York State
George E. Pataki
Governor

Office of Mental Health
Sharon E. Carpinello, RN, PhD, Commissioner

November 2005
THIS IS THE SECOND OF THREE VOLUMES which together comprise *Saving Lives in New York: Suicide Prevention and Public Health*, a comprehensive, data-driven report on suicide, its risks and prevention, released in May 2005 by the New York State Office of Mental Health (OMH). Prepared by researchers at OMH, Columbia University/New York State Psychiatric Institute, the University of Rochester and the New York State Suicide Prevention Council, the report outlines a prevention strategy with two primary components: diagnose and effectively treat those who have a psychiatric condition that puts them at high risk to end their own life; and use community resources, family and friends to engage individuals who harbor risk factors for suicide well before they become a danger to themselves.

Volume One of the report includes an Executive Summary of all three volumes, a public health strategy for suicide prevention across New York State, and a plan for suicide prevention and public health in New York City. Volume One also includes recommendations and action steps that are designed to: improve access to mental health care and services; enhance identification of those at risk; restrict access to means of self-harm; and expand the knowledge base through research.

Volume Two includes authored chapters that examine specific approaches to suicide prevention, and also review specific needs of identified populations. When viewed together, the chapters of Volume Two illustrate that the risk factors contributing to suicide are unevenly distributed across the population, and that protective factors need to be enhanced to maintain a favorable balance for anyone at risk of suicide. The result is an integrated prevention strategy because most suicides involve complex causes, and no single intervention can serve as a panacea for all those at risk. The recommendations and action steps outlined in Volume One are extrapolated from the information contained in the chapters of Volume Two.

Volume Three of the report is a data book of statewide and county-specific information about suicide that is gathered and maintained by the New York State Department of Health.
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Suicide is a complication of psychiatric disorders, with over 90% of suicide victims or suicide attempters having a diagnosable psychiatric illness \(^1\)\(^-\)\(^7\). However, diagnosis alone is not sufficient to explain suicidal behavior. Clinical studies have found a range of other factors including aggressive/impulsive traits, hopelessness or pessimistic traits, substance abuse and alcoholism \(^5\)\(^-\)\(^8\)\(^-\)\(^16\), a history of physical or sexual abuse during childhood \(^17\), a history of head injury or neurological disorder \(^18\)\(^-\)\(^22\), and cigarette smoking \(^23\) all contribute to increased risk for suicidal behavior \(^24\)\(^-\)\(^27\).

A stress-diathesis model attributes suicidal behavior to the coincidence of stressors, such as onset of a depressive episode, with a diathesis, or predisposition, for suicidal behavior. Pessimism, aggression/impulsivity, and suicidal intent have been identified as three elements of the diathesis for suicidal behavior \(^25\). These diathesis factors are due to both genetic and environmental causes, and neurobiological studies have identified brain-related abnormalities associated with impulsivity and aggression.

Serotonin, an important brain neurotransmitter, has been the most fruitful object of study to date. Suicide attempters have been found to have lower serotonin functioning, with those who complete suicide having the lowest levels. Importantly, this dysfunction has been linked to particular regions of the brain. Studies \(^28\)\(^,\) \(^29\) have identified abnormalities of the serotonin system in suicide victims, in a part of the prefrontal cortex area of the brain located above the eyes and called the ventromedial prefrontal cortex \(^30\)\(^,\) \(^31\). Moreover, this alteration in the brain has been found to be related to suicide independently of a history of a major depressive episode \(^32\) indicating that it is involved in the predisposition to suicide in many psychiatric disorders.

The ventromedial prefrontal cortex is involved in the executive function of behavioral and cognitive inhibition \(^33\). Injuries to this brain area can result in disinhibition \(^34\). Such disinhibition can be manifested by a disregard for social strictures or requirements in terms of politeness, job performance, impulsive aggression or suicide depending on the circumstances or emotional state. Low serotonergic input into this part of the brain may contribute to impaired inhibition, and thus create a greater propensity to act on suicidal or aggressive feelings. In brain imaging studies we, and others, have linked activity in this area and serotonin release \(^35\) to severity of suicidal acts and impulsivity \(^36\). This area of the brain is part of a universal restraint mechanism and less behavioral restraint can lead to aggressive or suicidal behavior depending on the affective state of the individual.
While serotonergic function and both aggressive and suicidal behavior are under substantial genetic control\textsuperscript{37} it is also subject to environmental influences. Demonstrating the interaction of genetics and environment, peer-reared monkeys, in comparison with maternally raised monkeys, develop lower serotonergic activity that persists into adulthood and is reflected in greater impulsivity and aggression. Thus, effects of rearing are superimposed on genetic effects. Given that a history of child abuse is associated with a greater risk for suicidal behavior in adult life, and extrapolating from these monkey studies, one can hypothesize that adverse rearing such as child abuse, resets serotonergic function at a lower level, an effect that persists into adulthood, contributing to the increased risk for suicidal behavior.

Other neurobiological systems are also implicated in the diathesis for suicidal behavior, though their role is less clear than the serotonergic system. Abnormal function of the dopamine neurotransmitter system has been associated with major depression and while the influence of dopamine on suicidal behavior is unclear\textsuperscript{38,39}, it may be related to impulsivity and decision making. Studies have also found evidence of noradrenergic neurotransmitter system dysfunction in suicide victims\textsuperscript{40,41}. The noradrenergic system mediates acute stress responses to circumstances such as a psychiatric illness or severe suicidal ideation and overactivity of that system has been associated with both severe anxiety or agitation and higher suicide risk\textsuperscript{42}. The hypothalamic-pituitary-adrenal (HPA) axis is another major stress response system. Major depression is often associated with hyperactivity of the HPA axis\textsuperscript{43}, and suicide victims exhibit HPA axis abnormalities\textsuperscript{44,45}. Studies of both the HPA axis and noradrenergic activity indicate biological responses to stress that may reflect the risk for suicide.

**Genetic and Familial Influences**

There is an important genetic contribution to the propensity for suicidal behavior as shown by several lines of researchers. Individuals who commit suicide or make suicide attempts have a higher rate of familial suicide acts\textsuperscript{46}. Both twin\textsuperscript{47,48} and adoption\textsuperscript{49} studies have noted a heritability of suicidal behavior independent of psychiatric disorders\textsuperscript{50}. As yet, the specific genes that contribute to suicide risk are unknown. However, since serotonin activity is related to suicidal behavior, and under partial genetic control, investigators have examined the relationship between genetic variation in serotonin-related genes and both suicidal behavior and impulsive aggression. To date candidate gene association findings are inconsistent and unlikely to bear fruit without directly sequencing candidate genes.

Non-genetic familial factors that may contribute to diathesis for suicidal behavior include the impact of parenting. Adults reporting childhood abuse experiences have a higher rate of suicidal behavior and greater impulsivity in adulthood, consistent with findings in peer-reared monkeys. We have observed familial transmission of impulsivity where greater parental impulsivity and/or greater provocation from an impulsive child may increase the probability of physical or sexual abuse\textsuperscript{51}. Overly sensitive stress response systems in the brain and body are reported in abused populations and may be the neurobiological consequences of abuse and neglect, as demonstrated in animal studies of maternal separation\textsuperscript{52}. Thus adverse rearing might contribute to the neurobiological anomalies associated with components, such as impulsivity and aggression, in the diathesis for suicidal behavior in adulthood.

**Treatment and prevention**

If suicidal behavior occurs as the outcome of stress-diathesis, management of suicidal patients necessitates addressing both aspects; diagnosis and treatment of psychiatric disorders which act as stressors, and treatment to reduce the diathesis, or propensity, to attempt suicide. As we have seen, diathesis, or predisposition, has an element of biological determination. Diathesis includes more hopelessness or pessimism perhaps related to the noradrenergic system, and more lifetime impulsivity partly related to impaired serotonergic input into ventromedial prefrontal cortex region of the brain. Because it is
related to these biological systems, the diathesis or propensity for suicidal behavior is a potential therapeutic target, and a reduction of the diathesis for suicidal behavior has been observed in the clinical effects of lithium, clozapine and psychotherapy called dialectical behavior therapy, which have been shown to reduce suicidal behavior. Both lithium and clozapine act on the serotonergic system and raising serotonergic activity may reduce risk of serious suicidal behavior by decreasing aggressive behavior and impulsivity.

There are many promising areas for future neurobiological research into reducing the diathesis for suicidal behavior. These include genetic and neurochemical studies, efforts to identify a genetic haplotype indicating risk for suicidal behavior, development of brain imaging and neuropsychological tests of decision making to measure risk of attempting suicide when depressed, and the development of treatments to ameliorate the risk of suicidal acts while waiting for antidepressants and antipsychotic medications to work. Another promising direction is use of animal models of impulsive and aggressive behaviors in the identification of candidate genes, investigation of genetic and rearing effects, and testing pharmacological treatments to ameliorate aggressive/impulsive behavior that extrapolation may reduce probability of suicidal behavior.

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A little-known fact is that more people die by suicide than from homicide in the United States – and New York – each year. Though not all suicides are preventable, most who die from suicide have made previous attempts, and a substantial number have consulted physicians in the weeks leading up to the event; thus, many may be preventable, if appropriate attention is devoted to identifying and intervening with those at immediate risk. (Note: Since the underlying biological and psychosocial causes of suicidal behavior are addressed in the OMH suicide prevention plan, this document will focus only on the role of physicians in early identification and referral).

A commonly held misconception, even among many physicians, is that it is somehow embarrassing to a patient to be asked about suicidal thoughts or plans – or worse, insulting; the patient will respond, “What do you think I am, crazy?” An extension of this misconception, also mistaken, is that patients will therefore deny or conceal their suicidal thoughts. In fact, the overwhelming majority of patients experience considerable relief at being asked: there is finally an opportunity to express their terrifying concerns to the person they consider responsible and most capable of providing for their overall health. Therefore, they are forthcoming in response to being asked.

Within this framework, three questions immediately arise: Who are the most appropriate professionals to pose the question? What is an effective way to pose it? What is the appropriate next step, if the answer is positive?

Generalist and specialist physicians of all types, in their role as public health agents, make up the “front line” on this. The routine initial or follow-up visit is the appropriate setting for a physician to inquire about suicide. There need be no more index of suspicion than for any other general health issue, such as changes in diet, activity, sleep, discomfort, or somatic concern.

Broaching the subject can be as general and unexceptional as that to any other organ system. Individual styles vary, but the question may take the form of, for example, “Since your last visit, would you say that, for the most part, you have been happy with your life?” The follow-up question is simply, “Are you saying then, that you have or have not had any thoughts of suicide?” A negative response is sufficient to end the line of inquiry. If the response is positive, it is imperative to ask: “And have you made any plans to do something to carry them out?”

Positive responses to inquiries about suicidal thoughts or plans should trigger a referral to a psychiatrist, just as positive indications should be referred to other systemic pathology outside the realm of the physician’s usual practice. It should also be
acknowledged that the front-line physician is no more responsible for effecting the patient's acceptance of such a referral than that of any other referral to a specialist.

Given that there are approximately 150,000 suicide attempts by teenagers in New York State each year (though only 70 completed suicides), the pediatricians would face a significant work load increase in accordance with such a practice of inquiry; other primary-care physicians might not be similarly affected.

There is no question but that inquiring about suicidal thoughts in the course of routine visits represents a significant departure from current practice. Therefore, some resources must be dedicated to making it possible. The most direct is the provision of at least annual lectures to residents and to departmental physicians.

In the context of the national awareness of suicide, inaugurated three years ago in the Surgeon General's Report on Mental Health and likely to be given particular emphasis by the current President in his upcoming public health initiatives, it is not unlikely that pharmaceutical companies would be willing to underwrite such an effort. The goal, after all, is to reduce the rate of suicide in this state and to set a model for the rest of the nation.
Resilience and self-help are a cornerstone of the public health strategy to reduce the number of incidents of suicide in New York. Resilience is the human capacity to deal with, overcome, learn from or even be transformed by adversity (Grotberg: 1999). In the words of a leading neuroscientist: “People don’t come preassembled, but are glued together by life.” (LeDoux: 1996).

“Like the immune system, the emotional system evolves continuously, taking experiences and situations and attaching emotional value to them in subtle gradations of risk and reward. Moderate stress enhances learning. Risk is an integral part of life and learning.” (Gonzales: 2003)

I. Findings.

Human Nature and Nurture.

Human nature is a powerful source of an individual’s ability to cope with challenges and threats. Parents provide their children with genes as well as a home environment, but infants’ minds come equipped with certain perceptual and behavioral biases. (Restak: 1988) Discoveries in the sciences of mind, brain, genes and evolution challenge the notion that human nature is irrelevant to how we think, feel and behave. Human nature is central to all three, as is human nurture. (Pinker: 2002)

Resilience can be developed through practice, but the extent and depth of its development will depend on individual, genetic and environmental forces. Resilience is promoted by external support – access to care, aids to autonomy – as well as internally, through pride, self-respect and the ability to empathize. Role models are important in the development of resilience at all ages, from early childhood onward.

According to the American Psychological Association (2003), resilience is ordinary, not extraordinary. People commonly demonstrate resilience and bounce back from adversity. The response of many New Yorkers to the September 2001 terrorist attack and individual efforts to rebuild their lives is more typical than atypical. Many people react to traumatic events with a flood of strong emotions and a sense of uncertainty and anxiety. Yet in the face of adversity, most people adapt well over time to even life-altering situations. What enables them to do so? It involves resilience. Being “resilient” does not mean that a person doesn’t experience difficulty or distress. Emotional pain and sadness are common in people who have suffered major adversity or trauma in their lives. In fact, the road to resilience is likely to involve considerable emotional distress. Resilience involves behaviors, thoughts and actions that can be learned and developed in anyone. For this reason, promoting resilience is an essential element in New York’s suicide prevention strategy. (APA/DHC: 2003)
B. Factors Promoting Resilience

Multiple factors contribute to an individual’s resilience. Many studies have shown that a prime factor is having caring and supportive primary relationships within and outside the family. Relationships that create love and trust, provide role models, and offer encouragement, reassurance and hope help to bolster a person’s resilience. Resilience is also enhanced by the capacity to make realistic plans and take steps to carry them out and having a positive view of one’s own journey.

People react differently to various traumatic and stressful life events. They also use different approaches and strategies. Cultural differences also produce variations and preferences in how individuals communicate and deal with adversity. Growing cultural diversity provides the public with additional approaches to building resilience. (APA/DHC: 2003)

C. Origins of Resilience

According to Grotberg (2002), resilience comes from three sources: external supports that promote resilience; inner strengths that develop over time and sustain those who are dealing with adversities; and interpersonal, problem-solving skills that deal with the actual adversity. Specifically, these are:

I Have
(External Supports)
1. One or more persons within my family I can trust and who love me without reservation.
2. One or more persons outside my family I can trust without reservation.
3. Limits to my behavior
4. People who encourage me to be independent.
5. Good role models
6. Access to health, education, and the social and security services I need
7. A stable family and community

I Am
(Inner strengths)
1. A person most people like
2. Generally calm and good-natured
3. An achiever who plans for the future
4. A person who respects myself and others
5. Empathic and caring of others
6. Responsible for my own behavior and accepting of the consequences
7. A confident, optimistic, hopeful person, with faith

I Can
(Interpersonal and problem-solving skills)
1. Generate new ideas or new ways to do things
2. Stay with a task until it is finished
3. See the humor in life and use it to reduce tensions
4. Express thoughts and feelings in communication with others
5. Solve problems in various settings – academic, job-related, personal and social
6. Manage my behavior – feelings, impulses, acting-out
7. Reach out for help when I need it. (Grotberg: 2002)

D. Approaches to Teaching Resilience

1. Penn Resiliency Project (Positive Psychology for Youth Project)

This Project seeks to prevent depression by giving children the tools to deal with challenges faced in high school and life. It uses psychology, to optimize human potential. Research shows that children who are resilient – who bounce back from problems because they are good at seeing them from multiple perspectives – and who
accurately understand their role in the situation fare better after trauma.

The curriculum flows from an Adversity Beliefs and Consequences model (ABC model). Step A: Identify “push-button adversities,” challenges in the important areas of an adolescent’s life: school, friendships and family. Step B: Capture what it is you say to yourself in the heat of the moment. This is an internal radio station, often a litany of negative thoughts about the adversity. “I’m not good enough to get the grade.” Step C: Examine how inaccurate beliefs shape the quality of your feelings and behavior – the consequences. Did you get the low grade because you were too busy to study during the semester? Will your negative reaction keep you from pursuing a genuine interest? What are the facts surrounding the adversity? Does your reaction reflect them?

The key to the exercise is connecting Steps B and C and separating fact from interpretation. “It’s your beliefs that drive you...They will determine how you respond.” If the Project can help children “evaluate themselves more realistically and less harshly, that’s important. It can loosen them from the grip of pressures they face.” As one of the students put it: “People have the idea that being happy means skipping through the flowers...But happy is being happy with who you are.” (Simon: 2004)

2. Natural Therapy
Another prominent model promoting resilience involves Natural Therapy. Based on the premise that most of life’s difficulties require telling or hearing the truth, this approach teaches that living in a lie eclipses the joy of the world and lowers a person’s self-esteem. Concealing lies drain people’s energy so they don’t have enough strength to do their best. Lies complicate. The truth simplifies. The truth has the power to heal, to protect, to guide. Living in the truth is living free and at one’s best. Moreover, the greatest pleasures come only when you are aware of yourself and know your strengths and limitations. Our capacity to enjoy pleasure is limited by our self-acceptance. More than anything else, it is our openness with ourselves that allows us to enjoy life fully. “Peace of mind comes with self-acceptance. It is not conferred by achievement, it is the gift you give to yourself.” (Viscott: 1996)

3. Enhancing Natural Support Networks
Local communities of neighborhoods have individuals, organizations and institutions where people go to seek advice, information and support. These are the resources that influence and enhance community life by providing numerous support mechanisms. Some of the informal community sources of support that regularly dispense advice and support – such as barbers, hairdressers and taxi drivers – are not usually recognized for providing this service, but they constitute part of a natural support network for people around them. Besides providing information, they serve as listening posts that are in themselves a valuable form of natural support.

These networks are valuable for both individuals and groups affected by a common threat, such as a terrorist attack or natural disaster. While these lay persons typically lack formal training as counselors or providers, they do come in contact with large numbers of the public. As such, they can be a valuable adjunct to a community’s crisis-response. Properly trained, they could help local communities heal themselves. Such a proposal was made to sustain and broaden the community response to the World Trade Center terrorist attack and create what is termed an island of resilience in a sea of uncertainty. In the future, they could be trained and deployed to help individuals become more resilient and able to fend off future disasters and attacks. (Allen: 2003)

4. Extreme Resilience
What makes a difference in determining whether someone succumbs to a threat or survives? Who lives and who dies? A recent analysis of “deep survival” examined the attitudes and behaviors exhibited by individuals caught in life and death situations in a range of adverse environments. (Gonzales: 2003) The study revealed 12 lessons for prevailing against extreme odds.
Such conditions can produce what could be termed “extreme resilience,” the ability to think and behave successfully in the clutch of mortal danger.

1. **Perceive, believe (look, see, believe).** Extreme survivors rapidly grasp the reality of their situation and acknowledge that everything—good or bad—emanates from within. Their life is ultimately in their grasp. They move quickly through denial, anger, bargaining, depression and acceptance very quickly.

2. **Stay calm (use humor, use fear to focus).** Survivors use fear, turn it into anger, and it motivates them. They understand at a deep level about being cool and are ever on guard against the mutiny of too much emotion. They keep their sense of humor and keep calm.

3. **Think/analyze/plan.** Survivors quickly organize, set up routines, and institute discipline. They push away thoughts that their situation is hopeless. They act with the expectation of success.

4. **Take correct, decisive action.** Survivors are able to transform thought into action: take risks to save themselves and others and break down large jobs into small, manageable tasks.

5. **Celebrate your successes (take joy in completing tasks).** Survivors take great joy from even the smallest successes. Important to sustain motivation, this attitude also prevents the descent into hopelessness.

6. **Count your successes (take joy in completing tasks).** This is how survivors become rescuers instead of victims. There is always someone else they are helping more than themselves, even if that someone is not present.

7. **Play (wing, play mind games, recite poetry, count anything).** Using deeper powers of intellect can help to stimulate, calm, and entertain the mind. It can also lead to a novel solution to the problem at hand.

8. **See the beauty (remember: it’s a vision quest).** The appreciation of beauty can relieve stress and create strong motivations, as well as help to take in new information more effectively.

9. **Believe that you will succeed (develop a deep conviction that you will live.)** Survivors consolidate their personalities and fix their determination; they admonish themselves to make no more mistakes, to be very careful and to do their very best. They become convinced that they will prevail if they do these things.

10. **Surrender (let go of your fear of dying).** Survivors manage pain well. They practice resignation without giving up. It is survival by surrender.

11. **Do whatever is necessary (be determined: have the will and the skill).** Survivors have meta-knowledge: they know their abilities and do not over or under-estimate them.

12. **Never give up (let nothing break your support).** Survivors have a clear reason for going on. They are not discouraged by setbacks. They come to embrace the world in which they find themselves and see opportunity in adversity. (Gonzales: 2003, 270-274)

**II. Action Steps**

To build resilience, the following steps are recommended by the American Psychological Association:

1. **Make Connections.** Good relationships with other family members, friends, or others are important. Accepting help and support from those who care about you and will listen to you strengthens resilience. Some people find that being active in civic groups, faith-based organizations, or other local groups provides social support and can help with reclaiming hope. Assisting others
2. **Avoid Seeing Crises as Insurmountable Problems.** While you can’t change the fact that highly stressful events do happen, you can change how you interpret and respond to these events. Look beyond the present for how future circumstances may be a little better.

3. **Accept that Change is a Part of Living.** Certain goals may no longer be attainable as a result of adverse situations. Accepting circumstances that cannot be changed can help you focus on circumstances that you can alter. As one sage observer noted, “freedom is the recognition of necessity.”

4. **Move Toward Your Goals.** Develop some realistic goals and do something regularly that enables you to move towards your goals, even if it seems like a small accomplishment. Instead of focusing on tasks that seem unachievable, ask yourself, “What’s one thing I know I can accomplish today that helps me move in the direction I want to go?” One step does not make a big difference, but one step taken regularly can.

5. **Take Decisive Action.** Act on adverse situations as much as you can. Take decisive action, rather than detaching completely from problems and stresses and wishing they would just go away. Chances are they won’t, but decisive action may do just that.

6. **Look for Opportunities for Self-Discovery.** People often learn something about themselves and may find that they have grown in some respect as a result of their struggle with loss. Many people who have experienced tragedies and hardship have reported better relationships, greater sense of personal strength, even while feeling vulnerable, an increased sense of self-worth, a more developed spirituality, and heightened appreciation for life.

7. **Nurture a Positive View of Yourself.** Developing confidence in your ability to solve problems and trusting your instincts helps build resilience.

8. **Keep Things in Perspective.** Even when facing very painful events, try to consider the stressful situation in a broader context and keep a long-term perspective. Avoid blowing the event out of proportion.

9. **Maintain a Hopeful Outlook.** An optimistic outlook enables you to expect that good things will happen in your life. Try visualizing what you want, rather than worrying about what you fear.

10. **Take Care of Yourself.** Pay attention to your own needs and feelings. Engage in activities that you enjoy and find relaxing. Exercise regularly. Taking care of yourself helps to keep your mind and body primed to deal with situations that require resilience.

11. **Learn From Experience.** Focusing on past experiences and sources of personal strength can help you learn about what strategies for building resilience might work for you.

12. **Stay Flexible.** Resilience involves maintaining flexibility and balance in your life as you deal with stressful circumstances and traumatic events.

13. **Complete Your Journey.** Developing resilience is similar to taking a raft trip down a river. “Perseverance and trust in your ability to work your way around boulders and other obstacles are important. You can gain courage and insight by successfully navigating your way through white water... You can climb out to rest alongside the river. But to get to the end of your journey, you need to get back in the raft and continue.” (APA/DHC: 2003)
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I. Findings

Today’s media play a major role in influencing peoples’ images and ideas about mental illness and suicide. Negative stereotypes are too often the only image the public receives about these subjects and, in effect, become the only sources of their knowledge about them. Many New Yorkers continue to associate mental illness with people who are dangerous and pose a threat to public safety and welfare. The stigma that accompanies mental illness is a major barrier for people who are struggling to manage their illness through medication and therapy.

Despite advances in treatment that enable people to live and work successfully in the community, mental illness continues to be regarded as a social disease rather than a neurobiological disorder. This lag in the public mind does a profound disservice to thousands of New York citizens who suffer from a mental illness. Feelings of internalized shame and low self-esteem continue to plague these individuals, compounding the effects of the illness.

It contributes to the reality that only 1 person in 5 will seek professional help for an emotional disorder and choose instead to suffer silently, but not painlessly. The media must take responsibility for the misinformation and stereotyping projected daily about people with mental illness, including those who lose their lives to suicide. Fortunately, the potency of the media means they must be part of the solution as well.

Research shows that media alone do not cause suicide – healthy people, even teenagers – don’t normally “up and kill themselves” due to what they see or read. But media are unhelpful when they present an inaccurate, overly dramatized image of mental illness and its treatment, thereby discouraging help-seeking. Moreover, media can also play a real role in preventing suicide – compassionate reporting and accurate representation can both educate and reduce stigma, leading to treatment and eventually, healthy people.


1. Four years ago, the Annenberg Public Policy Center at the University of Pennsylvania, in collaboration with the American Association of Suicidology and the American Foundation for Suicide Prevention, issued a report, Reporting on Suicide: Recommendations for the Media.

Highlights of the Report are these:
- The media can play a powerful role in educating the public about suicide prevention. Stories about suicide can inform readers, viewers, and listeners about the likely causes of suicide, its warning signs, trends in suicide rates, and recent treatment advances. They
can also highlight opportunities to prevent suicide. Media stories about individual deaths by suicide may be newsworthy and need to be covered, but they also have the potential to do harm.

Implementation of recommendations for media coverage of suicides has been shown to decrease suicide rates. Unfortunately, many media practices can have negative effects on the public:

1. Certain ways of describing suicide in the news contribute to what is called “suicide contagion” or “copycat suicides.” This is especially potent within the adolescent population. (See Chapter on Adolescents for more information)

2. Research suggests that inadvertently romanticizing suicide or idealizing those who take their own lives by portraying suicide as a heroic or romantic act may encourage others to identify with the victim.

3. Exposure to suicide method through media reports can encourage vulnerable individuals to imitate it. Clinicians warn the danger is even greater if there is a detailed description of the method. Research indicates that pictures or other detailed information of the site of a suicide also encourages imitation.

4. Presenting suicide as the inexplicable act of an otherwise healthy or high-achieving person may encourage identification with the victim, and engender a “copycat behavior.”

5. The media should know that 90% of suicide victims have a significant psychiatric illness at their time of death. These are often undiagnosed, untreated, or both. Mood disorders and substance abuse are the two most common diagnoses.

6. When both mood disorders and substance abuse are present, the risk for suicide is much greater, especially for adolescents and young adults.

7. Research has shown that when open aggression, anxiety or agitation is present in individuals who are depressed, the risk for suicide increases significantly.

8. The cause of an individual suicide is typically more complicated than a recent painful event, such as a breakup of a relationship or the loss of a job. Social conditions alone do not explain a suicide.

9. People who appear to become suicidal in response to such events, or in response to a physical illness, generally have significant mental problems, though they may be well-hidden.

II. Action Steps for Working with the Media

1. If you don’t know what good and bad examples of how the media reports on suicide are, educate yourself. Read the Annenberg Report and go to the American Foundation for Suicide Prevention’s web site for current examples (www.afsp.org).

2. Once you understand the issues and have some examples to back yourself up, tell others. Helping the media understand the issue and educating them about how they might do a better job is a concrete way that you can bring about change.

3. Reach out to the news and health editors at your local newspapers – big or small – and at your local broadcast newsrooms. Often a suicide in a specific neighborhood or borough is reported in the neighborhood paper and not the major paper. If you live in a college town, get in touch with the editor of the student newspaper or student-run radio and television station: young adults need this information as well.

4. Get phone, fax and e-mail contact information for these individuals, but open your communication with something written: a letter, fax or e-mail that explains who you are and why you
care about suicide prevention (and its coverage). If you can help your reader understand why you are writing and that you are truly invested in suicide prevention, they will take you more seriously. Include a copy of *Reporting on Suicide* with your letter.

5. Offer to meet with editors, reporters and copy editors at your local media outlets. Each of these groups plays a key role in how the media represents suicide: the editor by assigning the story to a reporter, a reporter by telling that story and a copy editor by writing the headline and photo captions for that story.

6. Maintain ongoing communication and dialogue with your local news agencies. Let them know you are available to consult as an “expert” or that you can help them get the information they need when reporting on a suicide. Keep them abreast of mental health and suicide related legislative news at the state and federal levels.

7. In addition to working with your local media outlets, get in touch with professors at the local university or community college. Offer to speak to journalism classes or at schools of communications. We need to educate today’s students before they begin working as professional journalists.

8. If you find examples of “bad” reporting in your local news outlets, let them know in a calm, intelligent, educational manner. Refer them to the Annenberg Report. Help them to understand where they went wrong and how they could have done better without alienating them. Provide examples of how they could have done better and make yourself available for ongoing communication about the issue.

9. If you find examples of “good” reporting...praise them. Many mental health associations, including the National Mental Health Association, offer media awards for positive representations of mental health in the press and fictional media. If it’s very good, nominate it for an award.

10. Use the media to educate your local community by asking local health editors to assign stories about depression and mental illness at any time of the year, but specifically when a suicide occurs in your community. Stories about warning signs for suicide, stories that profile local organizations or individuals who work in suicide prevention, and stories about mental health and suicide related legislation can all be effective uses of media to de-stigmatize mental health, educate the public and, ultimately, combat suicide. If information about warning signs and prevention is presented along side a story about a local suicide your community will learn something from the tragedy.

11. If a local mental health organization is having a rally or educational event, invite the media. This is a great opportunity to educate them and to provide them with “content” for a story.

12. If a television program or (fictional) film misrepresents suicide or mental illness, media watchers can do several things:

   • Write a letter to the production company that created the program and the distribution outlet. Most films are produced and distributed by studios but some are produced by one company and then distributed by a studio or distribution company. All of this information is found in the opening credits of the film...take notes. To comment on a television program, look for the production company’s credit at the end of the show and write to the broadcast outlet (the television channel).

   • Write a letter to the editor of your local newspaper about the program or film, ask a local columnist to do an opinion piece, or find out if your local news station will let you read a
commentary on air. Many television stations do program commentary by local residents.

- Hold an awareness event and invite local media to cover the event.

13. Deliver the message yourself. Give presentations to local houses of worship, community centers and libraries. Collaborate with institutions in the community, and ask them to help spread the word about suicide and mental illness...Talk helps to spread information and de-stigmatize the issues. If you live in a college or university town, volunteer to coordinate a public awareness campaign on campus. If your community has a web site, ask for a link to the local suicide prevention council. Better yet, ask the webmaster to include information about suicide and mental illness.

III. Guidelines for Media Coverage of Suicides *

1. In covering a story about suicide, find out if the victim ever received treatment for depression or any other mental illness. Did the victim have a substance abuse problem? Conveying the message that effective treatments for most of these conditions are available – but underutilized – may encourage those with such problems to seek help.

2. Acknowledging the deceased person’s problems and struggles as well as the positive aspects of his/her life or character contributes to a more balanced picture.

3. During the period immediately following a suicide death, grieving family members or friends may have difficulty understanding what happened. Responses may be extreme, problems may be minimized, and motives may be complicated.

4. Studies of suicide based on in-depth interviews with those close to the victim indicate that, in their first, shocked reaction friends and family may find a loved one’s death by suicide inexplicable or they may deny that there were warning signs. Accounts based on these initial reactions are often unreliable.

5. Thorough investigations generally reveal underlying problems unrecognized even by close friends and family members. Most victims do, however, give warning signs of their risk for suicide.

6. Some informants are likely to suggest that a particular individual – a family member, school employee, health service provider – played a role in the victim's death by suicide. Thorough investigation almost always finds multiple causes for suicide and fails to corroborate a simple attribution of responsibility.

7. A concern exists about dramatizing the impact of suicide through descriptions and pictures of grieving relatives, teachers or classmates. This may encourage potential victims to see suicide as a way of getting attention or as a means of retaliation against others.

8. Using adolescents on TV or in print media to tell the stories of their suicide attempts may be harmful to the adolescents themselves or may encourage other vulnerable young people to seek attention this way.

IV. The Significance of Language.

1. A cautionary note on language: referring to a “rise” in suicide rates is usually more accurate than calling such a rise an “epidemic,” which implies a more dramatic and sudden increase than what we generally find in suicide rates. Similarly, research has shown that the use of the word “suicide” in headlines and reference to the cause of death as “self-inflicted” increases the likelihood of contagion.

Notes:

* From the American Foundation for Suicide Prevention and the Annenberg School of Communications and Public Policy (2001)
2. Unless the death took place in public, the cause of death should be reported in the body of the story, not in the headline.

3. In deaths that will be covered nationally, such as celebrities, or those apt to be covered locally, such as persons living in small towns, consider phrasing headlines such as “Marilyn Monroe dead at 36” or “John Smith dead at 48.” How they died could be reported in the body of the article.

4. In the body of the story, it is preferable to describe the deceased as “having died by suicide” rather than as “a suicide,” or having “committed suicide.” The latter two expressions reduce the person to the mode of death, or connote criminal or sinful behavior.

5. Contrasting “suicide deaths” with “non-fatal attempts” is preferable to using terms such as “successful,” “unsuccessful” or “failed.”

VI. Special Situations.

1. Celebrity deaths by suicide (e.g. Marilyn Monroe, Kurt Cobain) are more likely than non-celebrity deaths to produce imitations. While suicides by celebrities will receive prominent coverage, it is important not to let the glamour of the individual obscure any mental health problems or use of drugs.

2. Homicide – suicide coverage should be aware that the tragedy of the homicide can mask the suicidal intent of the act. Feelings of depression and hopelessness present before the homicide and suicide are often the impetus for both.

3. Suicide pacts are mutual arrangements between two people who kill themselves at the same time, and are rare. They are not simply the act of loving individuals who do not wish to be separated (e.g. Romeo and Juliet). Research shows that most pacts involve an individual who is coercive and another who is extremely dependent.

VI. Stories To Consider Covering.

1. Trends in suicide rates
2. Recent treatment advances
3. Individual stories of how treatment was life-saving
4. Stories of people who overcame despair without attempting suicide
5. Myths about suicide
6. Warning signs of suicide
7. Actions that individuals can take to prevent suicide by others

References

For reporting on Suicide – Recommendations for the Media:
American Foundation for Suicide Prevention www.afsp.org or 1-888-333-AFSP
The Annenberg Public Policy Center of the University of Pennsylvania www.appcpenn.org or (215) 898-7041
American Association of Suicidology www.suicidology.org or (202) 237-2280
Articles and Papers: Goldsmith, SK; Pellmar, TC; Kleinman AM; Bunney, WE; Reducing Suicide: A National Imperative (Washington: The National Academies Press, 2002) www.nap.edu
Gould, M.; Jamieson, P.; Romer, D., Media Contagion and Suicide Among the Young American Behavioral Scientist, Vol.46, No.9, May 2003, 1269-1284
Mann, J. John, MD, A Current Perspective of Suicide and Attempted Suicide, Annals of Internal Medicine, 2002; 136: 302-311
Web Site: The Advertising Council provides advice to not-for-profits that want to work with the media on their web site. www.adcouncil.org
The problems of mental illness and suicide have reached crisis proportions in the United States and throughout the world. Mental illness is now the leading cause of disability worldwide, accounting for nearly 25% of all disability across major industrialized countries. Suicide claims more than 30,000 lives in the United States every year.

Findings
More Americans suffer from depression than coronary heart disease (7 million), cancer (6 million) and AIDS (200,000) combined. About 15 percent of the population will suffer from clinical depression at some time during their lifetime. Depression is a very serious disease and is one of the leading causes of suicide. Thirty percent of all clinically depressed patients attempt suicide, and half of them ultimately succeed. However, depression is one of the most treatable of psychiatric illnesses. Some estimates suggest that between 80 and 90 percent of people with depression respond positively to treatment, and almost all patients gain some relief from their symptoms. But first, depression has to be recognized (AFSP). Other mental health disorders such as schizophrenia, anxiety and alcohol and substance abuse also carry an increased risk for suicide.

Psychological autopsy studies have reliably shown that 90% of people who die by suicide have a diagnosable mental illness at the time of their death. (Shaffer, D.: 1996) as in any other area of medicine, if we knew what caused 90% of mortality associated with a particular illness, we would certainly implement widespread screening for the associated risk factors. Since the risk factors for suicide are both identifiable and treatable, screening for untreated mental health disorders should be an important component of any suicide prevention program (Shaffer: 1994). Advances in the area of efforts to prevent suicide should promote voluntary mental health screening for all ages in order to find those most at risk for suicide and link them to further evaluation and services.

The President’s New Freedom Commission for Mental Health (2003) called special attention to the need for mental health screening in schools and primary health care. Accordingly, these two areas will be of special focus in this chapter as they relate to mental health screening across the lifespan. Voluntary mental health screening is important at any age, starting with adolescence and continuing through old age. Undetected mental illness and suicide is a tragedy that we all need to work towards preventing in every stage of life.

Mental Health Screening for Adolescents
It is estimated that one in ten youth suffer from a mental health problem serious enough to cause impairment, yet only one in five of these receive any treatment. Sai-
cide is the third leading cause of death among young people aged 13-19 years, and more teens die from suicide than all natural causes combined. Each year an additional 600,000 youth require medical services as a result of suicide attempts (CDC: 2002). Mental health screening represents a way to find these youth early and link them to treatment long before suicide seems like their only solution.

The President’s New Freedom Commission on Mental Health (2003) sent a strong message to schools and parents about the importance of mental health in academic achievement, stating: “The mission of public schools is to educate all students. However, children with serious emotional disturbances have the highest rate of school failure. While schools are primarily concerned with education, mental health is essential to learning as well as to social and emotional development. Because of this important interplay between emotional health and school success, schools must be partners in the mental health care of our children.”

The President’s Commission named the Columbia University TeenScreen Program as a model screening and early intervention program. The Columbia University TeenScreen Program works by creating partnerships with schools and communities across the nation to implement their evidence-based mental health screening program. The Columbia TeenScreen Program provides consultation, training, screening tools, software and technical assistance free of charge to schools and communities who want to implement mental health screening.

The Columbia University TeenScreen Program uses a two-stage process to identify at-risk youth. First, all youth who have parental consent, and who themselves assent to participation, complete a brief mental health check-up. There are several screening instruments available through the TeenScreen program, both computerized and paper/pencil, which screen for mental health problems and suicide risk. Teens who “screen negative” are debriefed and dismissed from the screening, and youth who “screen positive” are advanced to the second stage where they are interviewed by a mental health professional to determine if an outside referral for further evaluation would be beneficial. If this is recommended, the youth and his/her family are then provided assistance with the referral process. Follow up contact with the family continues through the first clinical appointment.

Signs of Suicide (SOS) is another national school-based suicide prevention program that incorporates two prominent suicide prevention strategies into a single program, combining a curriculum that aims to raise awareness of suicide and its related issues with a briefing screening for depression and other risk factors. The educational component is expected to reduce suicidality by increasing students’ understanding of and promoting more adaptive attitudes toward depression and suicidal behavior. The self-screening component enables students to recognize depression and suicidal thoughts and behaviors in themselves and prompts them to seek assistance.

The program’s main educational materials are a video (featuring dramatizations depicting the signs of suicidality and depression, recommended ways to react to someone who is depressed and suicidal, as well as interviews with real people whose lives have been touched by suicide) and a discussion guide. There are additional materials included for training of school personnel, including videos and step-by-step instructions for implementation. The screening tool is optional but recommended and is included in the training packet. The screening tool used by SOS is the seven-item Brief Screen for Adolescent Depression (BSAD). The BSAD includes a scoring system that allows the student to score his or her own questionnaire and to determine personally whether to seek help based on the results. The SOS Program has been shown in a randomized, controlled study to significantly reduce the suicide attempt rate among those who participated in their program in the three months following the intervention by 40%. (Aseltine & DeMartino, 2004)
A recently published article about the safety of asking about suicide ideation and attempt has shown that there is no evidence of iatrogenic effects of suicide screening. Neither distress nor suicidality increased among the general student group or among the high school students – in fact the findings suggested that asking about suicidal ideation or behavior may have been beneficial for students with depression symptoms or previous suicide attempts (Gould, M. et al.: 2005)

**Mental Health Screening for College Students**

Suicide is the second leading cause of death among college-age students. Among college students, 7.5 of every 100,000 take their own lives and the National College Health Risk Behavior Study (1995) found that 11.4% of students seriously consider attempting suicide. To tackle this problem, the Jed Foundation and the American Foundation for Suicide Prevention (AFSP) have been actively working to develop and implement effective suicide prevention screening programs for college students.

To leverage the anonymity of the Internet and its popularity among young adults, the Jed Foundation has created Ulifeline.org. Ulifeline is an anonymous, web-based resource that provides students with a non-threatening and supportive link to their college mental health or counseling center. Ulifeline was created to give students more knowledge about mental health and the signs and symptoms of emotional problems. The website includes a library of mental health information and an interactive screening tool to help students uncover whether they, or a friend, are at risk. Currently, more than 160 universities are participating in the Ulifeline network, including Columbia, Harvard, MIT, Northwestern and the University of Arizona.

The American Foundation for Suicide Prevention is implementing a college screening project designed to identify and refer for treatment students at risk for suicide. To date, the project has targeted students in five successive semesters at Emory University in Atlanta, and is currently being pilot-tested at The University of North Carolina at Chapel Hill (UNC/CH). The college screening project uses a screening instrument known as the Depression Screening Questionnaire. Students responding to the online questionnaire identify themselves by a self-assigned User ID.

Based on their responses to specific questions, a computer program places each student in one of three tiers, according to the level of their psychological problems, and sends an email with this information to a counselor affiliated with the university’s mental health services. The counselor then accesses and reviews each questionnaire and provides an assessment. An individually tailored counselor’s assessment is then sent back to the student’s User ID on the secure website. In this assessment, the counselor will recommend students whose questionnaire responses suggest psychological difficulties to come in for a face-to-face evaluation by a counselor. The questionnaires of students identified as experiencing the most significant problems are assessed within 24 hours of receipt. Students then access their personalized assessment and are given the option of communicating anonymously with a counselor online.

**Voluntary Mental Health Screening for Adults**

Screening for Mental Health, Inc. is a nonprofit organization developed to coordinate nationwide mental health screening programs and to ensure cooperation, professionalism, and accountability in mental health screenings.

National Depression Screening Day, held every October during Mental Illness Awareness Week, is designed to call attention to the illnesses of depression, bipolar disorder, PTSD, and anxiety on a national level, to educate the public about their symptoms and effective treatments, to offer individuals the opportunity to be screened for the disorders, and to connect those in need of treatment to the mental health system. Follow-up studies of the National Depression Screening Day are demonstrating that the program is effective in motivating those
who screen positive for the illness to seek treatment. Recent data indicates that as many as 65% of those who score positive and are referred for a full evaluation follow through on the recommendation.

**Voluntary Mental Health Screening for Older Adults**

Suicide disproportionately impacts the elderly, with the highest suicide rates of any age group occurring among persons aged 65 years and older. According to the American Association of Geriatric Psychiatry, depression affects 15 percent of adults older than 65 in the United States. Depression is not just a condition that occurs when people get older, but rather, it is a medical illness that is treatable. There are over 40 million Americans over the age of 65, and more than 6 million are affected by depression.

Risk factors for suicide among the elderly include the presence of a mental illness (especially depression and alcohol abuse); the presence of a physical illness; social isolation (especially being widowed in males); and the availability of firearms in the home (AFSP).

It is estimated that 20% of elderly over 65 years who die by suicide visited a physician within 24 hours of the act; 41% visited within a week of their suicide; and 75% have been seen by a physician within one month of their suicide (National Strategy for Suicide Prevention: 2001).

Regular mental health screening of this population in primary care would allow physicians the opportunity to quickly and reliably screen for depression among this age group and offer treatment. One current mental health screening program for the elderly is run in association with National Depression Screening Day. “Older Adult Outreach” is a part of National Depression Screening Day and brings the depression and anxiety screening to places where elderly people can participate, including retirement communities, assisted living facilities, social clubs and nursing homes.

**Action Steps**


2. Support the efforts of the Columbia University TeenScreen Program in New York schools, SOS, the Jed Foundation and the American Foundation for Suicide Prevention with college students, Screening for Mental Health, Inc. in their National Depression Day efforts for adults, and Older Adult Outreach in their work with the elderly.

3. Validated, self-administered screening tools for depression should be routinely used in primary care offices with elderly patients.

4. Screen chemical dependency patients for depression or mood changes, and violence toward an intimate partner or spouse.

5. Screening programs are an important strategy in a campus suicide prevention program. Voluntary screening for specific conditions associated with suicide, especially depression and substance abuse, can identify students at risk and facilitate referral to appropriate treatment services. The Internet provides an excellent mechanism for reaching college students because of high access and usage. Voluntary screening programs that allow for anonymity until he or she is ready to self-identify, and that provide a personalized response from a trained clinician, appear to be the most successful.

6. Support research on mental health screening to improve the capacity to identify mental illness in its early stages, and to promote adoption of mental health checkups.
References
American Association of Geriatric Psychiatry www.aagppa.org
American Foundation for Suicide Prevention (AFSP) www.afsp.org
The Jed Foundation www.jedfoundation.org
Screening for Mental Health, Inc. www.mentalhealthscreening.org
On January 1, 2005, the National Suicide Prevention Lifeline came into existence. It is a national, 24-hour, 7-day a week, toll-free suicide prevention service available to all those in suicidal crisis who are seeking help. Individuals seeking help can dial 1-800-273-TALK (8255). Callers to the Lifeline will receive suicide prevention counseling from staff at the closest available certified crisis center in the network. It is administered through the Mental Health Association of New York City, an organization with experience in crisis, information, and referral help management. More than 109 crisis centers in 42 states currently participate in the National Suicide Prevention Lifeline.

In New York State, the list of participating crisis centers includes:

- Long Island Crisis Center (Bellmore)
- Crisis Services (Buffalo)
- Covenant House Nineline (New York City)
- HELPLINE/Jewish Board of Family and Children’s Services (NYC)
- LifeNet (New York City)
- Dutchess County Department of Mental Hygiene/HELPLINE
- Life Line: A Program of DePaul (Rochester)

Approximately 30,000 lives are lost to suicide each year in the United States. About 1,300 lives (or 1 in 25 deaths by suicide nationally) are lost in New York annually. “The purpose and promise of this national suicide hotline is to be there for people in their time of need,” said Lifeline Director, Dr. John Draper. “Working with our federal, state and local partners, we will be able to build on our strength and expand this national hotline to reach suffering individuals in ways that each of us could not do alone.”

“For many people, crisis hotlines serve as an entry point into the mental health system,” said Dr. Robert Glover, Executive Director of NASMHPD. “By expanding the National Suicide Prevention Lifeline into underserved regions and by linking crisis centers to a national database of mental health resources, we can get people the help they need and reduce suicide in this country.”
Suicide Hotlines And Public Access
Alan Ross, Executive Director
The Samaritans of New York

The recognition that suicide poses a major health threat that demands a proven means of prevention came to the public’s attention almost simultaneously in the United States and England a little over 50 years ago. While in California psychologist Edward Schneidman was pouring over hundreds of “suicide notes” at a county coroner’s office, Schneidman came to the conclusion that suicides could and should be prevented. Soon thereafter, the first recognized crisis hotline in the United States was set up as the Los Angeles Suicide Prevention Center. The same initiative led to the establishment of the field of “suicidology,” and the American Association of Suicidology (AAS).

In London, an Anglican minister, Chad Varah, who was trained in psychotherapy, was making some remarkable discoveries of his own. He had set up a walk-in site for those in his parish who were experiencing some form of emotional or spiritual crisis. He discovered that many of the people who came to see him would sit in the waiting room, have a cup of tea with one of the “church ladies” (community volunteers who oversaw much of the church’s daily operations), and, after talking to them and pouring out their hearts about their troubles, trials and tribulations, would experience a sense of catharsis, and leave his office feeling no further need to see the “professional” counselor/minister. And so the non-religious Samaritans volunteer hotline movement was born. Today, there are 350 such centers in 32 countries.

Findings
Today, suicide prevention hotlines tend to fall into one of four categories: 1. All-volunteer lay “humanistic” emotional support. 2. Combination volunteer/lay emotional support and clinical service. 3. Completely clinical “professional help” service. 4. Information and referral service.

A Characteristics And Functions
At their best, 24-hour suicide prevention hotlines respond to a wide range of inquiries from New Yorkers from all walks of life, ranging from simply having a bad day, to feeling overwhelmed by some “reversal” in their life including a major trauma, personal loss, chronic physical and mental illnesses. These hotlines provide:

1. Free of charge an immediately available, caring, professionally trained volunteer or staff member who will talk about what callers are feeling and, most importantly, listen to what they are going through 24 hours a day.

2. An ongoing “bridging service,” i.e., a place callers can turn 24 hours a day, while they are seeking other forms of professional care or personal support, and as a transition service as they are moving from one form of treatment to another.

3. An immediately accessible individual who will talk to callers and assist them in “calming down,” stabilizing their situation (whether the result of anxiety, panic attack, waiting for their medication to take effect, or a care giver to arrive) without requiring them to seek out more formal and/or dramatic professional attention.

4. Emotional support, information and, when appropriate, professional referrals, including immediate emergency medical attention, as the extent of a caller’s problems, suicidal behavior, and degree of risk is assessed and determined.

B Community Benefits
1. A majority of callers to suicide prevention hotlines come from the chronically sick, elderly, homebound, disabled and isolated. Many are MICA clients (See Chapter on Co-Occurring Disorders), or those who suffer from alcohol and/or substance misuse. Others are those who suffer from alcohol and/or substance misuse. Others are dealing with issues tied to violence, child and sexual abuse. Frequently, callers are suffering from grief following a recent loss, traumatic event or personal tragedy.
lines are often an outlet for those in the lesbian, gay, bisexual and trans-gendered communities (LGBT), as well as “at risk” youth and those with AIDS.

2. On a community level, suicide prevention hotlines and crisis centers provide mental and public health consumers with a safety net: a place they can turn to when they are afraid to go somewhere else, or feel they have no place else, whether it is 2 o’clock in the morning, after attending a counseling session, while seeking professional help or after exhausting those clinical or professional services that have specified limits. That net extends as well to lay and professional mental health service providers, in that 24-hour hotlines offer an additional level of support and care that is available as a “back up” to other care and services they are providing to consumers.

3. At a practical level, suicide prevention hotlines and crisis centers save millions of dollars by providing callers with an immediate, personal response that acts as a pressure release valve, often diffusing individuals’ crisis events and stabilizing their situation, thereby, preventing the potentially unnecessary – and costly – dispatching of ambulances, use of hospital emergency rooms, utilization of hospital medical staff, etc. Finally, hotline services reduce the demand for and drain on other social service, mental health, emergency response and medical staff, facilities and agencies.

Role In The National Strategy for Suicide Prevention

Three objectives of the National Strategy for Suicide Prevention (NSSP) bear directly on the significant role played by suicide prevention hotlines and crisis centers in addressing this serious public health problem:

1. Develop broad-based support for suicide prevention
2. Develop and implement community-based suicide prevention programs
3. Increase access to and community linkages with mental health and substance abuse services

Suicide hotlines and crisis centers’ role in furthering the National Strategy is supported by the finding in the President’s New Freedom Commission on Mental Health report that a key goal is to “increase and improve a diverse mental health workforce across the country through public-private partnerships based on multidisciplinary training models.” This goal builds on the research and findings of the Institute of Medicine report which calls for “collaborative and cooperative efforts” to implement effective suicide prevention initiatives and the evaluation of the US Air Force highly successful program which found that a key component of its effectiveness was in “creating competent communities,” utilizing leadership, professionals, peers and caring members of the community in addressing the needs of those at risk and providing them with a myriad of services.

The two national organizations that have received federal appropriations for certifying, evaluating and “linking” suicide prevention hotlines: the AAS and the Kristin Brooks Hope Center have estimated that there are 600 suicide-related crisis hotlines throughout the country, but the exact number and quality of such services offered in any one state remains a matter of speculation.

This is due in part to the absence of a designating authority overseeing hotlines (suicide prevention included), the ease with which any individual or organization can set up a hotline and the lack of coordination and networking of hotlines.

II. Action Steps

1. Ensure availability of “suicide hotlines” and “warm lines” statewide. Such services are heavily used by certain risk groups, from female adolescents and middle-aged men to elders. Ensure statewide access to them is a matter of equity.

2. Enhance the quality of suicide prevention hotlines and warm lines statewide by establishing minimal operating standards and formal risk-assessment pro-
tocols, providing comprehensive qualitative training for lay and professional hotline crisis counselors, and stabilizing their funding.

3. Enhance the coverage and benefits of suicide prevention hotlines and warm lines in serving the public by improving their linkages to clinical mental health, public health, police and rescue agencies and promoting awareness of their availability in the community.
Limiting access to lethal means of self-harm is an effective strategy to prevent self-destructive behavior, including suicide. Some suicidal acts are impulsive, resulting from a combination of psychological pain or despair coupled with easy availability of the means to inflict self-injury: firearms, carbon monoxide, medications, sharp objects, tall structures. By limiting the individual’s accessibility to the means of self-harm, a suicidal act may be prevented. The goal is to separate in time and space the individual experiencing an acute suicidal crisis from easy access to lethal means of self-injury and personal harm. The hope is by making it harder for those intent on self-harm to act on that impulse, one can buy time for the crisis to pass and for healing and recovery to occur.

A study by Dr. Richard Seiden of 515 people who were prevented from jumping from the Golden Gate Bridge to a near-certain death found that 26 years later, 94% of the would-be suicides were either still alive or had died of natural causes. The study, Where Are They Now? (1978) “confirmed previous observations that suicidal behavior is crisis-oriented and acute in nature. It concluded that if a suicidal person can be helped through his/her crises, one at a time, chances are extremely good that he/she won’t die by suicide later.” (Friend: 2003)

The value of means restriction also pertains to adolescent behavior. “When vulnerable kids crack, the weapons that are at hand make the consequences of that vulnerability more serious.” (JJ Mann in Goode: 1999) According to the Centers for Disease Control and Prevention (CDC), the rate of firearm death in the United States of children ages 0 to 14 is nearly 12 times higher than in the 25 other industrialized nations combined. More than 800 Americans, young and old, die each year from guns shot by children under the age of 19.

In New York, firearms were used in 33% of all suicides in 2002, and in approximately 28% of those between 15-24 years of age. (CDC: 2005) A 2004 study examined the association between youth-focused firearm laws and suicides among youth in 18 states. The study’s author concluded that as many as 300 lives have been saved as a result of laws that require guns to be safely stored away from children. Laws that raised the required age of gun buyers and owners, however, did not significantly reduce suicide rates. (Webster et al.: 2004)

Firearms are the most common method of completed suicides nationwide (54%), followed by suffocation (20%), poisoning (17.5%), falls (2.3%), cut/pierce (1.8%), and drowning (1.2%) (CDC: 2005). This is true for men, women and adolescents who complete suicide. In New York, firearms are also the predominant means of suicide, but by a
much slimmer margin. Suicide by firearms seems to be associated with their availability in the home and with victim intoxication. Many homes contain guns and nearly half (43%) of all homicides and suicides occur in a home. Most victims are shot: 67% of the homicides and 54% of the suicides in 2002 (CDC: WISQARS, 2005). In some studies, handguns pose the greatest risk.

Several studies have shown that the mere presence of a firearm in a home significantly increases the risk of completed suicide. This holds true for the population as a whole and for every age group. (Miller, Hemenway and Azrael: 2004) A recent national study (2003) found that having a gun at home is a risk factor for adults to be fatally shot (gun homicide) and to die by one’s own hand (gun suicide). The adjusted odds ratio for suicide by gun increased by a factor of 16 compared to homes with no guns. (Wiebe: 2003) Another study concluded that the purchase of a handgun from a licensed dealer was associated with becoming a suicide victim (Miller, Hemenway and Azrael: 2004).

Most children older than age 7 have the strength to pull the trigger of a firearm, especially a handgun, so that restricting access to a loaded weapon would also decrease the chances of an accidental shooting leading to death or injury. Finally, “methods used in fatal suicide attempts differed from those commonly used in attempts overall.” (Miller, Hemenway and Azrael: 2004) When it comes to surviving a suicide attempt, the choice of means employed is critical. Most victims who use a firearm do not survive. Other means are more forgiving. Regardless of the means employed, two routes to means restriction are: education and technology.

**Educational Initiatives**

Educating the public is an important strategy for shaping behavior. The impact of stricter gun control laws on suicide rates has been evaluated in a small number of studies. A gun control law in Ontario was followed by a decrease in firearm suicides. A District of Columbia handgun control law was followed by a decrease both in homicides (-25%) and suicides (-23%). New York City has one of the most stringent handgun control laws of any jurisdiction in the country. It also has one of the lowest suicide rates as well.

To further reduce the rate of suicide by firearm, the American Academy of Pediatrics recommends that parents and others who possess firearms should be educated to:

- keep the gun unloaded and locked up;
- lock and store bullets in a separate location;
- make sure children don’t have access to keys;
- ask police for advice on safe storage and gun locks;
- remove all firearms from the homes of adolescents and others judged by a physician to be at suicidal risk.

Those who don’t own a gun should be educated to:

- talk with children about the risks of gun injury outside the home;
- tell children to stay clear of guns when they are in the homes of friends;
- ask parents of children’s friends if they keep a gun at home;
- if they do, urge them to empty it out and lock it up.

Parents and/or guardians of children and adolescents experiencing substance abuse or emotional disturbance problems should be informed that these individuals may use lethal firearms or another means of self-injury if these means are not safely secured. To reduce the threat of ingesting poison, parents should be made aware of safe methods for storing and dispensing common pediatric medications, as well as household toxics. Physicians should be encouraged to prescribe medications that are efficacious but not lethal for those that...
are lethal, e.g. desipramine and other tricyclic antidepressants, when treating an at-risk suicidal patient.

**Safety Technologies**

“Every two weeks, on average, someone jumps off the Golden Gate Bridge” into the 55-degree water of San Francisco Bay some two hundred and twenty feet below. “It is the world’s leading suicide location.” Since the 1950’s, the idea of building a barrier to prevent would-be jumpers from completing their suicide has been hotly debated. Dr. Lanny Berman, the executive director of the American Association of Suicidology, says, “Suicidal people have transformational fantasies and are prone to magical thinking, like children and psychotics...Jumpers are drawn to the Golden Gate because they believe it’s a gateway to another place. They think that life will slow down in those final seconds, and then they’ll hit the water cleanly, like a high diver.” (Friend: 2003). They rarely do. Most die by multiple blunt-force trauma. Others drown in the three hundred and fifty feet of water beneath the bridge. Only 2 in 100 jumpers survive.

“Survivors often regret their decision in midair, if not before. Ken Baldwin and Kevin Hines both say they hurdled over the railing, afraid that if they stood on the chord they might lose their courage. Baldwin was twenty-eight and severely depressed on the August day of 1985 when he told his wife not to expect him home until later. “I wanted to disappear,” he said. “So the Golden Gate was the spot. I’d heard that the water just sweeps you under.” On the bridge, Baldwin counted to ten and stayed frozen. He counted to ten again, then vaulted over. “I still see my hands coming off the railing,” he said. As he crossed the chord in flight, Baldwin recalls, “I instantly realized that everything in my life that I’d thought was unfixable was totally fixable – except for having just jumped.” (Friend: 2003)

Through the years, efforts to thwart would-be jumpers have been made, but no physical barrier exists today to do so. Objections have been raised to installing a barrier above the four-foot high railing on the grounds of aesthetics, obstructed views, and cost. Even though they are decidedly low-tech, barriers have worked on other high structures. “The Empire State Building, the Duomo, St. Peter’s Basilica, and Sydney Harbor Bridge were all suicide magnets before barriers were erected on them. At all of these places, after the barriers were in place the number of jumpers declined to a handful, or to zero.” (Friend: 2003)

The current system for preventing suicide on the Golden Gate is what officials call the “non-physical barrier.” This includes numerous security cameras, thirteen telephones, which potential suicides or alarmed passers-by can use to reach the bridge’s control tower. The most important element is randomly scheduled patrols by the California Highway Patrolmen and Golden Gate Bridge personnel in squad cars and on foot, bicycle, and motorcycle.” (Friend: 2003) Despite these countermeasures, the jumpers continue to plunge at the rate of one suicide every two weeks. More recently, The Board of Directors of the Bridge has voted to explore installing a barrier and is seeking $2 million for studies and preliminary designs of a barrier. (Blum: March 20, 2005)

While New York does not have the Golden Gate, it does have at least two bridges like it: the George Washington and Verrazano Narrows. Neither attract would-be suicides the way that the Golden Gate does. In fact, the suicide rate in New York City, where both bridges are located, is below the statewide average. Within the New York City rate, however, is an interesting contrast: suicides by jumping were highest in Manhattan, site of the tallest buildings in the world, and lowest in Staten Island, largely devoid of buildings over 7 stories high. (Marzuk et al.: 1992) In another study in New York, 81 percent of all suicides jumped from their own residences (Fischer et al.: 1993)

Following five student suicides, New York University has turned to physical barriers to deny access to jumping-off sites on campus. More than 179 balconies will now have restricted access. NYU’s safety con-
sultant called the move “a rational step.” “What you have is a systems approach that makes it less easy for someone to take impulsive action. It is no different from putting up fences to prevent suicide on the Golden Gate Bridge.” (Arenson: March 30, 2005) The move to restricted access is not without controversy: the student newspaper at NYU described the installation of barriers as “a face-saving way for NYU to ensure that students don’t end their lives on NYU’s campus, rather than a way to reach out to suicidal students and offer them help and guidance.” (Arenson: March 30, 2005) Meanwhile, the University has also expanded counseling services, promoted mental health literacy, and increased access to information on depression and related disorders for its students.

Another example of technology successfully reducing suicide deaths is the conversion in England in 1963 from deadly coke gas to a less lethal natural gas for home use. There was little substitution to more available means such as hanging or drowning and within a few years, the overall suicide rate was reduced by one-third. (Seiden: 1978) To make a major impact on our own suicide rate, safety technologies that make discharge of firearms less likely should be made more widely available. A law signed by Governor Pataki in 2000 has helped to achieve this goal. It requires firearms retailers to include a child safety locking device with all purchases; post notices regarding safe storage of guns in their place of business; and include gun safety information with the purchase of any gun. Failure to comply with this law is punishable as a class A misdemeanor.

This law also places a ban on assault weapons; raises the minimum age to obtain a permit to purchase a handgun to 21 years old; implements a DNA for Handguns program; establishes a gun trafficking interdiction; and directs a study to be conducted on “smart gun” technology. In signing this law, Governor Pataki said: “While New York State leads the nation with a 39 percent drop in violent crime since 1994, we still have too much gun violence in our communities. Each year more New Yorkers are killed by guns than die in car crashes – and that must change. This new law will help.” (Pataki: 2000) Recent statistics on the use of firearms in suicides show this change is occurring.

A recent study, published in the Journal of the American Medical Association on February 9, 2005 found that locked guns appear to offer the most protection against accidental death and injury or during a suicide attempt. Any one of the four storage methods, including keeping guns and ammunition in different locations, cuts the risk of death and injury by between 55 and 73 percent. (Grossman et al: February 9, 2005) The study found that when guns are stored unloaded, locked and separate from ammunition, this practice offers the most protection against accidental or suicidal use.

“Doctors who treated suicidal teens should use the study to reinforce the effectiveness of keeping guns securely locked and inaccessible,” said Jerry Reed, executive director of the Suicide Prevention Action Network. “It just seems appropriate we would look at this just like we would storing poison under the sink.” Finally, we should recognize the limits of means restriction. In New Jersey, there has been a rash of ‘suicides by locomotive’, where people deliberately place themselves in front of moving commuter trains traveling at high speeds. Because rail lines are so extensive, fences are not a real deterrent to someone who is determined to gain access to the railroad tracks. Death on the tracks – at a rate of about 25 a year – has become a regular occurrence. The New Jersey Transit Authority has responded by providing a regular counseling program for train crews who respond to these grisly suicidal incidents. (Smothers: 2003)

As noted, a possible outcome of restricting one specific means of self-harm is the substitution of another means in its place. This has apparently been the case for American adolescents, ages 10-14, between 1992-2001 (CDC: 2004). Over this period, rates of suicide using firearms and poisoning decreased, whereas suicides by suffocation increased. By 2001, suffocation (asphyxia/hanging) had surpassed firearms to become the most common method of suicide death for this age
group. The reasons for this change in suicide methods are not fully understood. However, tougher handgun laws, the private nature of suffocation, its widespread availability, and its high lethality suggest that population-based prevention efforts must address the underlying reasons for suicidality to avoid the potential for method substitution. (CDC: 2004) In 2002, suicide was the 3rd leading cause of death for persons age 15-19 in New York. (CDC: 2005)

Given the many means of ending one’s life, restricting access by confining those at suicidal risk to institutional settings has been considered. In most cases, this is a difficult proposition to justify. While many people who die by suicide possess multiple risk factors, many more will not die by suicide. Confinement in a safe and secure facility for the vast majority of these at-risk individuals would be counterproductive. “The great number of false positives would result in commitment of large numbers of patients not in need of such treatment (and control). This inability to predict the outcome would probably be the result of any attempt to predict a rare occurrence.” (Kaufman and Doty: 2002)

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Means Restriction
### 10 Leading Causes of Violence-Related Injury Deaths, 2001, All Races, Both Sexes

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Produced by: Office of Statistics and Programming, National Center for Injury Prevention and Control, CDC.
Data Source: National Center for Health Statistics (NCHS) Vital Statistics System.
Special Populations
I. FINDINGS
Over the past two decades, research on youth suicide has yielded invaluable information on who is at risk for suicide, shaping our prevention strategies. The key findings are:

A. Overall Rates and Secular Patterns in New York State
- Over 150,000 New York State teenagers attempt suicide each year, and approximately 70 die by suicide.
- More than 1 out of 10 tenth graders in New York State will attempt suicide this year.
- New York State ranks fourth in the nation on the number of suicide deaths among 10 to 24 year olds (See Table 1).
- During the past decade, there has been little change in the youth suicide death rates in New York State. However, there has been a slight tapering off among boys and whites since 1994, paralleling the decrease in national rates (See Tables 3 and 4).

B. Risk Factors
- 90% of adolescents who die by suicide have a mental disorder at the time of their death.
- The majority of youth who die by suicide do not receive treatment for their psychiatric disorder. This is particularly distressing because dialectical behavior therapy, cognitive-behavior therapy, and treatment with antidepressants have been identified as promising treatments of youth suicide.
- A prior suicide attempt is one of the strongest predictors of completed suicide.
- Although suicidal ideation and attempts are more common among girls, five times more teenage boys than girls commit suicide. This may partly reflect a sex-related method preference: methods favored by girls and women, such as overdoses, tend to be less lethal in the U.S. Boys are apt to use more lethal means, such as firearms.
- The most common diagnoses in young people who die by suicide are mood disorder, alcohol or drug abuse (in boys), and conduct disorder.
- Most suicide deaths are triggered by getting into trouble – leading to a legal or disciplinary problem – or breaking up with a girlfriend or boyfriend.
- Many suicidal teens have parents and other family members who have been
grappling with their own suicidality and mental health problems.

- A disproportionate number of teen suicides are either school dropouts or youngsters who have had difficulties at school.

- Same-sex sexual orientation is a risk factor for suicidal behavior. However, most gay and lesbian youth report no suicidality at all.

- Sexual and physical abuse are associated with an increased risk of suicidal behavior, but other social and psychological factors may account for much of the increased risk.

- Teenagers are more susceptible to suicide contagion/imitation than adults.

C. Protective Factors

Protective factors are influences that buffer the impact of risk factors. They are not merely the opposite or low end of risk factors, but different factors that actively promote positive behavior that insulates against the consequence of risk factors. Despite the burgeoning research literature during the past two decades on risk factors for youth suicide, there remains a paucity of empirical information on protective factors. Promising protective factors identified from recent research include:

- Family cohesion: Increasing family cohesion appears protective for suicide attempts. Teenagers who describe family life in terms of a high degree of mutual involvement, shared interests, and emotional support were several times less likely to be suicidal than are adolescents from less cohesive families, even those with the same levels of depression or life stress.

- Religiosity: The protective value of religiosity against suicide, suicidal ideation, and perceived acceptability of suicide among adolescents has recently been reported. Furthermore, maternal religiosity appears to be a protective factor against offspring depression, independent of maternal bonding, social functioning, implying that maternal religiosity might protect against suicide also.

II. Action Steps

These recommended action steps are based on the key risk factors for youth suicide, which provide a set of identified, modifiable risk factors to target, and the recognition that vulnerable youth are often not identified nor referred for appropriate mental health services. Those action steps that are supported by the largest body of empirical evidence have been selected. The action steps include a range of options for implementation by either health or mental health departments, hospital and emergency rooms, schools, community organizations and advocacy groups, schools, and/or parent groups. An illustrative, but not exhaustive, set of resources follow each action step, to guide those interested in implementing a particular recommendation in their clinical or community setting.

A. Enhance Support Systems for Vulnerable Youth

(1). Parent Education Programs

Stakeholder: Parents and Other Adults

Psychoeducational programs are critical for parents of youth who have declared their risk vis-a-vis a suicide attempt or by engaging in risky behaviors, such as alcohol or drug use. An emergency room contact provides a prime opportunity to target these parents. Parents should be trained to be key support persons by educating them about adolescent psychopathology, treatment, signs of risk, availability of professional resources and emergency services, and communication/support strategies. Such psychoeducational programs would supplement usual mental health services.

Resource: Youth-Nominated Support Team (YST), Cheryl King, Ph.D (Kingca@med. Umich.edu).

(2) School Re-entry Guidelines and Training

Stakeholder: Schoold

A teenager’s re-entry into school after a suicide attempt and/or psychiatric hospitalization is a particular stressful time for the ado-
lescent. Rumors among the study body often arise in the aftermath of such an event, making re-entry a time of potential humiliation and increased stigmatization. School guidance personnel are often at a loss as to how best to meet the needs of the returning student. Enhanced liaison between the treatment provider/team and a designated case manager at the school would be essential components of the guidelines.

Resource: Intensive Day Treatment (IDT) Program, Rockland Children’s Psychiatric Center (Dr. Barry Kutok, RCCSBLK@omh.state.ny.us;www.sharingsuccess.org/code/eptw/pdf_profiles/idt.pdf).

(3) Peer-Helper Programs
Stakeholder: School
Although empirical evaluations of peer-helper programs are quite limited, they could potentially provide a source of support for a vulnerable youth. For example, peer-helper procedures incorporated into a school-reentry program could enhance the levels of support provided to the returning student. The responsibilities of the peer helper are best limited to listening and reporting and possibly warning signs, rather than counseling. It is imperative that peer helpers be carefully supervised by school guidance personnel who have undergone extensive suicide prevention training to determine the level of risk, and to make referrals.

Resource: Youth-Nominated Support Team (YST) (Cheryl King, Ph.D.) (kingca@med.umich.edu).

(4) Post-Attempt Treatment Program
Stakeholder: Rarents and Other Adults
Following a suicide attempt, it is essential that clinicians and staff in Emergency Departments/E.R.s are adequately trained to assess continued risk. In addition, these staff have a critical role in immediately linking the teen and family to mental health resources for follow-up and continued treatment. They must be knowledgeable about the availability of and access to specific resources in their particular community. Community mental health treatment providers must also have systems in place to prioritize follow-up appointments for teens who have made a suicide attempt.

Resource: The American Foundation for Suicide Prevention (AFSP website: www.afsp.org) has developed educational posters highlighting suicide risk factors and management guidelines for staff in Emergency Departments and E.R.s.

B. Implement Case-Finding with Accompanying Referral and Treatment
(1.) Screening Programs
Stakeholder: Service Providers
One valuable case-finding strategy to increase the recognition and referral of suicidal youth involves direct screening of children and teens in various settings (e.g., schools, pediatricians’ offices). A questionnaire or other screening instrument, which targets depression, substance abuse, and suicidal ideation and behavior, can be used as a universal prevention tool to identify high-risk adolescents and young adults from among a general population of student/patients, or can be used as targeted prevention strategy by providing an assessment to youngsters already thought to be at possible risk by school guidance counselors or pediatricians. Two vulnerable populations of teenagers, often neglected in suicide prevention efforts, include youngsters who have dropped out of school or are at risk for dropping out and those youth who are in county level probation, detention, and correctional programs and facilities. Recognition and identification of heightened suicide risk in these teenagers, with accompanying treatment plans, is critical.

Resources: Teen Screen (Leslie McGuire, MSW, www.teenscreen.org); Signs of Suicide (SOS) Prevention Program (Douglas Jacobs, MD djacobs@mentalhealthscreening.org)

(2.) Gatekeeper/Caregiver Training Programs
Stakeholder: Service Providers
The inability of potential gatekeepers/caregivers to be “first-aid” resources to youth at risk of suicide has been an impetus for the development of training programs for community-based caregivers, including school personnel, clergy, police, and community volunteers. Such programs aim to develop the knowledge, attitudes and skills to identify individuals at risk, determine the levels of risk, and to make referrals.

Professional Education Programs

Stakeholder: Service Providers

Training primary care physicians and pediatricians about suicide risk, assessment and treatment is an essential suicide prevention strategy. Despite the frequent prescription of SSRIs by primary care physicians and pediatricians, they admit to inadequate training in the treatment of childhood depression. Training medical professionals in the appropriate use of antidepressant and mood-stabilizing drugs has been found to reduce the suicide rate, at least among female adults. The demonstrated effectiveness of such educational programs should encourage their dissemination.


Postvention/Crisis Intervention in Schools

Stakeholder: Schools

A timely response to a suicide is likely to reduce subsequent depression and suicidal ideation and behavior in fellow students. The major goals of postvention/crisis intervention programs is to assist survivors in the grief process, identify and refer those individuals who may be at risk following the suicide, provide accurate information about suicide while attempting to minimize suicide contagion, and implement a structure for ongoing prevention efforts.

Resource: Services for Teens at Risk (STAR) Center Postvention. Standards Guidelines (Mary Margaret Kerr, Ed.D. Director, STAR- Center Outreach (kerrmm@msx.upmc.edu)

C. Develop Risk Reduction Plans

(1). School-Based Risk Reduction Plans

Stakeholder: Schools

Teaching cognitive and social problem-solving techniques to children as they enter puberty can yield a “psychological immunization” against depressive symptoms. Cognitive interventions begun in late childhood may prevent depressive symptoms from developing in early adolescence.

Resource: Penn Resiliency Project (PRP) 3815 Walnut Street, Philadelphia, PA 19104 (215) 573-4128

(2). Firearms Restriction Procedures

Stakeholder: Parents and Other Adults

Firearms used in youth suicides are often obtained from the home environment. Firearm safety counseling to parents of high-risk youth is one essential strategy for youth suicide prevention. Such programs emphasize safe storage and/or removal of firearms from the home. Injury prevention education in emergency rooms can lead parents to take new action to limit access to lethal means. The adult male in the household or the actual gun owner has been found to be the most appropriate person to counsel.

Resource: Love Our Kids, Lock Your Guns (LOK) (tamera_coyne-beasley@med.unc.edu)

(3). Alcohol Restriction Policies

Stakeholder: Government

Substance abuse is a significant risk factor for suicidal behavior, particularly among older adolescent males. Strategies to “tighten” teenage access to alcohol have successfully decreased youth suicidal behavior. Such efforts have included increasing the minimum drinking age from 18 to 21 years, which resulted in a substantial decrease in youth suicide deaths. Additional efforts to make drinking more difficult among teenagers include stricter enforcement of such laws in bars, liquor stores, and other establishments selling beer. Increased surveillance of cases of drinking while intoxicated may also enhance case finding of at-risk teens.


(4). Media Education

Stakeholder: Youth/Peers

Given the substantial evidence for suicide contagion and imitative behavior among teenagers, recommended prevention strategies involve educating media profes-
sionals. Such action steps are described elsewhere in the Media section of the New York State Suicide Prevention Plan.

D. Enhance Protective Factors

(1) Promoting Youth Development

Stakeholder: Schools

Experience and research have shown that young people need a set of personal and social assets that will increase their healthy development and well-being, and facilitate a successful transition from childhood through adolescence into adulthood. These essential assets have been grouped into four broad categories: physical, intellectual, psychological and social development (Community Programs to Promote Youth Development, 2002). Continued exposure to positive experiences, settings, and people as well as opportunities to gain and refine life skills support youth in the acquisition of these assets. In addition, it helps them gain strategies to deal with the many challenges they will be confronted with in life. Examples of opportunities that can assist youth in acquiring and building these assets include:

- Clear expectations for behavior as well as opportunities to make decisions, to participate in governance and rule making, and to take on leadership roles as they mature.
- Opportunities for young people to experience supportive adult relationships.
- Opportunities to learn how to form close, durable relationships with peers that support and reinforce healthy behaviors.
- Opportunities to feel a sense of belonging and feeling valued.
- Opportunities to develop positive social values and norms.
- Opportunities for skill building and mastery.
- Opportunities to develop confidence in his or her ability to master the environment.
- Opportunities to make a contribution to one’s community and develop a sense of mattering.
- Strong links between families, schools and broader community resources.


Resource

Comprehensive reviews of research on youth suicide risks and preventive interventions, which provide an empirical base for the findings and action steps for this portion of the New York State Suicide Prevention Plan include the following:


### Table 1.

**STATE RANK 2000 BY BURDEN**

<table>
<thead>
<tr>
<th>STATE</th>
<th>DEATHS</th>
<th>POPULATION</th>
<th>RATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Texas</td>
<td>127</td>
<td>4,651,016</td>
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<tr>
<td>California</td>
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<td>7,272,728</td>
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<tr>
<td>Florida</td>
<td>184</td>
<td>3,416,845</td>
<td>6.67</td>
</tr>
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<tr>
<td>Pennsylvania</td>
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<td>2,123,825</td>
<td>7.29</td>
</tr>
<tr>
<td>Illinois</td>
<td>155</td>
<td>2,155,088</td>
<td>6.66</td>
</tr>
<tr>
<td>Ohio</td>
<td>151</td>
<td>2,258,764</td>
<td>6.32</td>
</tr>
<tr>
<td>Georgia</td>
<td>143</td>
<td>1,717,665</td>
<td>8.33</td>
</tr>
<tr>
<td>Michigan</td>
<td>138</td>
<td>2,135,651</td>
<td>6.64</td>
</tr>
<tr>
<td>Arizona</td>
<td>135</td>
<td>1,968,237</td>
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<td>North Carolina</td>
<td>124</td>
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<td>Indiana</td>
<td>116</td>
<td>1,322,812</td>
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<tr>
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<td>Colorado</td>
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<td>Virginia</td>
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<td>Maryland</td>
<td>81</td>
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<tr>
<td>Louisiana</td>
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<td>970,632</td>
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<tr>
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<td>New Mexico</td>
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<td>16.60</td>
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**CDC WISQARS (accessed 6/17/03; page last reviewed 3/15/03)**

### Table 2.

**NEW YORK COUNTY SUICIDE RANK**

<table>
<thead>
<tr>
<th>COUNTY</th>
<th>QUANTITY</th>
<th>RATE</th>
</tr>
</thead>
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<td>Kings</td>
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<td>(4.2)</td>
</tr>
<tr>
<td>Suffolk</td>
<td>161</td>
<td>(8.6)</td>
</tr>
<tr>
<td>Bronx</td>
<td>157</td>
<td>(3.3)</td>
</tr>
<tr>
<td>Queens</td>
<td>157</td>
<td>(3.3)</td>
</tr>
<tr>
<td>New York</td>
<td>149</td>
<td>(3.3)</td>
</tr>
<tr>
<td>Monroe</td>
<td>125</td>
<td>(5.6)</td>
</tr>
<tr>
<td>Erie</td>
<td>125</td>
<td>(4.7)</td>
</tr>
<tr>
<td>Nassau</td>
<td>115</td>
<td>(4.7)</td>
</tr>
<tr>
<td>Westchester</td>
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<td>(4.9)</td>
</tr>
<tr>
<td>Onondaga</td>
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<td>(6.4)</td>
</tr>
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<td>Richmond</td>
<td>48</td>
<td>(5.8)</td>
</tr>
<tr>
<td>Orange</td>
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<td>(6.4)</td>
</tr>
<tr>
<td>Saratoga</td>
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<td>(8.5)</td>
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<tr>
<td>Niagara</td>
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<td>(8.5)</td>
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<tr>
<td>Albany</td>
<td>33</td>
<td>(8.5)</td>
</tr>
<tr>
<td>Oneida</td>
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<td>(8.6)</td>
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<td>Chautauqua</td>
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<td>(8.8)</td>
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<td>Dutchess</td>
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<td>(4.6)</td>
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<tr>
<td>St. Lawrence</td>
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<tr>
<td>Broome</td>
<td>22</td>
<td>(5.3)</td>
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<tr>
<td>Rockland</td>
<td>22</td>
<td>(5.3)</td>
</tr>
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</table>

**CDC Wonder (accessed 4/2/03)**
Table 3.

YOUTH SUICIDE RATES IN NEW YORK
—By Gender, Ages 10–24, 1981–2000—

Rate per 100,000


Year

CDC WISQARS (accessed 6/17/03; page last reviewed 3/15/03)

Table 4.

YOUTH SUICIDE RATES IN NEW YORK

Rate per 100,000


Year

CDC WISQARS (accessed 6/17/03; page last reviewed 3/15/03); 1986–1988 unstable for blacks

43
The research contributing to our understanding of who is at risk for suicide and how to prevent and treat suicide will be critically evaluated. A comprehensive understanding of this information is critical to clinicians who deal with the mental health problems of children and adolescents. Each year, one in five teenagers in the United States seriously considers suicide (Grunbaum et al., 2002); 5% to 8% of adolescents attempt suicide, representing approximately 1 million teenagers, of whom nearly 700,000 receive medical attention for their attempt (Grunbaum et al., 2002); and approximately 1,600 teenagers die by suicide (Anderson, 2002). Only by recognizing who is at risk for suicide, and knowing how to prevent suicidal behavior and provide treatment for suicidal individuals, will mental health practitioners and those designing educational and public health prevention programs have sufficient armamentaria to combat this major public health and clinical problem in youths. The current review is based on a comprehensive, but not exhaustive, review of the research on youth suicide conducted in the past decade. Preference was given to population-based epidemiological and longitudinal investigations and controlled prevention/intervention studies.

OVERALL RATES AND SECULAR PATTERNS

Suicide was the third leading cause of death among 10- to 14-year-olds and 15- to 19-year-olds in the United...
States in 2000 (Anderson, 2002). While the rates of completed suicide are low (1.5 per 100,000 among 10- to 14-year-olds and 8.2 per 100,000 among 15- to 19-year-olds), when nonlethal suicidal behavior and ideation are taken into account, the magnitude of the problem becomes obvious. The surge of general population studies of suicide attempts and ideation has yielded reliable estimates of their rates (e.g., Andrews and Lewinsohn, 1992; Ferguson and Lynskey, 1995; Ferguson et al., 2000; Garrison et al., 1993; Gould et al., 1998; Grunbaum et al., 2002; Lewinsohn et al., 1996; Roberts and Chen, 1995; Sourander et al., 1991; Swanson et al., 1992; Wichstrom, 2000; Windle et al., 1992). Of these studies, the largest and the most representative is the Youth Risk Behavior Survey (YRBS) (Grunbaum et al., 2002), conducted by the Centers for Disease Control and Prevention (CDC). The YRBS indicated that during the past year, 19% of high school students “seriously considered attempting suicide,” nearly 15% made a specific plan to attempt suicide, 8.8% reported any suicide attempt, and 2.6% made a medically serious suicide attempt that required medical attention. These results are consistent with those cited in the epidemiological literature.

Gender

Paradoxically, although suicidal ideation and attempts are more common among females (Garrison et al., 1993; Gould et al., 1998; Grunbaum et al., 2002; Lewinsohn et al., 1996) in the United States, completed suicide is more common among males. Five times more 15- to 19-year-old boys than girls commit suicide (Anderson, 2002). The same pattern of sex differences does not exist in all countries (World Health Organization, 2002). While completed suicide is more common in 15- to 24-year-old males than females in North America, Western Europe, Australia, and New Zealand, sex rates are equal in some countries in Asia (e.g., Singapore), and in China, the majority of suicides are committed by females.

The YRBS (Grunbaum et al., 2002) indicated that girls were significantly more likely to have seriously considered attempting suicide (23.6%), made a specific plan (17.7%), and attempted suicide (11.2%) than were boys (14.2%, 11.8%, 6.2%, respectively); however, no significant difference by gender in the prevalence of medically serious attempts (3.1% females, 2.1% males) was found.

Both psychopathological factors and sex-related method preferences are considered to contribute to the pattern of sex differences (Shaffer and Hicks, 1994). Completed suicide is often associated with aggressive behavior and substance abuse (see discussion below), and both are more common in males. Methods favored by women, such as overdoses, which account for 30% of all female suicides yet only 6.7% of all male suicides (CDC, 2002), tend to be less lethal in the United States. However, in societies where treatment resources are not readily available or when the chosen ingestant is untreatable, overdoses are more likely to be lethal. Whereas in the United States, only 11% of completed suicides in 1999 resulted from an ingestion, in some South Asian and South Pacific countries, the majority of suicides are due to ingestions of herbicides, such as paraquat, for which no effective treatment is available (Haynes, 1987; Shaffer and Hicks, 1994).
Adolescents (Appendix)

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Ethnicity

Youth suicide is more common among whites than African Americans in the United States (Anderson, 2002), although the rates are highest among Native Americans and generally the lowest among Asian/Pacific Islanders (Anderson, 2002; Shiang et al., 1997; Wallace et al., 1996). Latinos are not overrepresented among completed suicides in the United States (Demetriades et al., 1998; Gould et al., 1996; Smith et al., 1985). The historically higher suicide rate among Native Americans is not fully understood, but proposed risk factors include low social integration, access to firearms, and alcohol or drug use (Borowsky et al., 1999; Middlebrook et al., 2001). The historically lower suicide rate among African Americans has been attributed to greater religiosity and differences in “outwardly” rather “inwardly” directed aggression (Gibbs, 1997; Shaffer et al., 1994). However, the difference in suicide rates between whites and African Americans has decreased during the past 15 years because of a marked increase in the suicide rate among African-American males between 1986 and 1994.

The YRBS (Grunbaum et al., 2002) found that African-American students were significantly less likely (13.3%) than white or Latino students (19.7% and 19.4%, respectively) to have considered suicide or to have made a specific plan (African-Americans: 10.3%; whites: 15.3%; Latinos: 14.1%). Latino students (12.1%) were significantly more likely than either African-American or white students to have made a suicide attempt (8.8% and 7.9%, respectively); however, there was no preponderance of medically serious attempts among Latinos (3.4%) compared with whites (2.3%) or African Americans (3.4%). Although some studies have found higher rates of suicidal ideation and attempts among Latino youths (Roberts et al., 1997; Roberts and Chen, 1995), Grunbaum et al. (1998) and Walter et al. (1995) did not find a higher prevalence of either among Latinos. These equivocal findings highlight the need for further research in this area.

Secular Trends

Secular changes in the incidence of a disease are important because they may give an indication of causal and/or preventative factors. Following a nearly threefold increase in the adolescent male suicide rate between 1964 and 1988, the consistent increase in the white male suicide rate ceased and in the mid 1990s started to decline. Rates in African-American males, while still lower than among whites, showed no sign of a plateau or decrease until 1995. At that time the decline gathered pace and included both white and African-American males and females. The rate among white males, nearly 20/100,000 in 1988, had fallen to approximately 14/100,000 by the year 2000 (Fig. 1).

The reasons for the decline are by no means clear. One of the more plausible reasons for the earlier increase had been the effects of greater exposure of the youth population to drugs and alcohol. Alcohol use had been noted to be a significant risk factor for suicide since the first psychological autopsy study (Robins et al., 1959), and at least in some studies (Shaffer et al., 1996) it has been a significantly more important risk factor for males, the group that had showed the dramatic increase. However, repeat benchmark studies that use similar measures and sampling methods such as the YRBS (CDC, 1995, 1996, 1998, 2000; Grunbaum et al., 2002) give no indication of a decline in alcohol or cocaine use during this time. Another reason posited for the earlier increase was an increased availability of firearms (Brent et al., 1991). Legislation restricting access to firearms was passed in 1994 (Ludwig and Cook, 2000), at the time that the decrease became more marked and the rate of handling firearms among high school students declined (CDC, 1995, 1996, 1998, 2000; Grunbaum et al., 2002). However, the proportion of suicides by firearms, a plausible proxy for method availability (Cutright and Fernquist, 2000), did not change between 1988 and 1999. There has been a decline ranging from 20% to 30% in the youth suicide rates in England, Finland, Germany, and Sweden, where firearms account for very few suicides (Krug et al., 1998), and a systematic examination of the proportion of suicides committed with firearms over a long period of time has shown that the proportion is only weakly related to overall changes in the rate (Cutright and Fernquist, 2000).

Another plausible cause of the reduction has been the extraordinary increase in antidepressants being prescribed for adolescents during this period. Olfson et al. (2002b) showed that between 1987 and 1996 the annual rate of antidepressant use increased from approximately 0.3% to 1.0% of those aged 6 to 19 years in the United States. Selective serotonin reuptake inhibitors (SSRIs) affect not only depression (see “Psychopharmacological Interventions” below), but also aggressive outbursts, and have been shown in adults to reduce suicidal thinking. It is unlikely that the increase in the prescription of antidepressants is an indication of a more general increase in access or use of mental health services. During the period from 1987 to 1997, the number of adolescents who received psycho-
therapy actually declined (Olfson et al., 2002a). The delay in the onset of the decline in African-American suicides is compatible with a treatment effect because of African Americans' greater difficulty in accessing treatment resources (Goodwin et al., 2001). Another indication that antidepressant treatment may be a factor in the recent decline is the finding in Sweden that the proportion of suicide victims who received antidepressant treatment is lower than the rest of the depressed population (Isacsson, 2000). Firm conclusions, however, are not possible given the ecological nature of the supporting data. Randomized clinical trials will be necessary before the decline in rates can be confidently attributed to treatment with antidepressants.

**RISK FACTORS**

**Personal Characteristics**

*Psychopathology.* More than 90% of youth suicides have had at least one major psychiatric disorder, although younger adolescent suicide victims have lower rates of psychopathology, averaging around 60% (Beautrais, 2001; Brent et al., 1999; Groholt et al., 1998; Shaffer et al., 1996). Depressive disorders are consistently the most prevalent disorders among adolescent suicide victims, ranging from 49% to 64% (Brent et al., 1993a; Marttunen et al., 1991; Shaffer et al., 1996). The increased risk of suicide (odds ratios) for those with an affective disorder ranges from 11 to 27 (Brent et al., 1988, 1993a; Groholt et al., 1998; Shaffer et al., 1996; Shafi et al., 1988). Female victims are more likely than males to have had an affective disorder (Brent et al., 1999; Shaffer et al., 1996). Substance abuse is another significant risk factor, especially among older adolescent male suicide victims (Marttunen et al., 1991; Shaffer et al., 1996). A high prevalence of comorbidity between affective and substance abuse disorder has consistently been found (Brent et al., 1993a; Shaffer et al., 1996). Disruptive disorders are also common in male teenage suicide victims (Brent et al., 1993a; Shaffer et al., 1996). Approximately one third of male suicides have had a conduct disorder, often comorbid with a mood, anxiety, or substance abuse disorder. Discrepant results have been reported for bipolar disorder: Brent et al. (1988, 1993a) reported relatively high rates, whereas others reported no or few bipolar cases (Apter et al., 1993a; Marttunen et al., 1991; Rich et al., 1990; Runeson, 1989; Shaffer et al., 1994). Despite the generally high risk of suicide among people with schizop-

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Adolescents (Appendix)

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phrenia, schizophrenia accounts for very few of all youth suicides (Brent et al., 1993a; Shaffer et al., 1996).

The psychiatric problems and gender-specific diagnostic profiles of youth suicide attempters are quite similar to the profiles of those who complete suicide (e.g., Andrews and Lewinsohn, 1992; Beautrais et al., 1996, 1998; Gould et al., 1998). However, despite the overlap between suicidal attempts and ideation (Andrews and Lewinsohn, 1992; Reinherz et al., 1995) and the significant prediction of future attempts from ideation (Lewinsohn et al., 1994; McKeown et al., 1998; Reinherz et al., 1995), the diagnostic profiles of attempters and ideators are somewhat distinct (Gould et al., 1998). Substance abuse/dependence is more strongly associated with suicide attempts than with ideation (Garrison et al., 1993; Gould et al., 1998; Kandel, 1988). Recent studies have found an association between posttraumatic stress disorder and suicidal behavior among adolescents (Giaconia et al., 1995; Mazza, 2000; Wunderlich et al., 1998), but in the largest and most representative of the studies (Wunderlich et al., 1998), the association was not maintained after adjusting for comorbid psychiatric problems. Panic attacks have also been reported to be associated with an increased risk of suicidal behavior in adolescents, even after adjusting for comorbid psychiatric disorders and demographic factors (Gould et al., 1996; Pilowsky et al., 1999). The negative finding by Andrews and Lewinsohn (1992) may be due to a gender specificity of the association: panic attacks may increase suicide risk for girls only (Gould et al., 1996). Inconsistent findings have been reported in the adult literature (Johnson et al., 1990; Warshaw et al., 2000; Weissman et al., 1989).

Prior Suicide Attempts. A history of a prior suicide attempt is one of the strongest predictors of completed suicide, conferring a particularly high risk for boys (30-fold increase) and a less elevated risk for girls (3-fold increase) (Shaffer et al., 1996). Between one quarter to one third of youth suicide victims have made a prior suicide attempt (see Groholt et al., 1997). Similarly strong associations between history of suicidal behavior and future attempts have been reported in general population surveys and longitudinal studies (Lewinsohn et al., 1994; McKeown et al., 1998; Reinherz et al., 1995; Wichstrom, 2000) and clinical samples (Hulten et al., 2001; Pfeffer et al., 1991), with risk for an attempt increasing between 3 and 17 times for those with prior suicidal behavior.

Cognitive and Personality Factors. Hopelessness has been linked with suicidality (Howard-Pitney et al., 1992; Marcenko et al., 1999; Overholser et al., 1995; Rubenstein et al., 1989; Russell and Joyner, 2001; Shaffer et al., 1996); however, it has not consistently proven to be an independent predictor, once depression is taken into account (Cole, 1988; Howard-Pitney et al., 1992; Lewinsohn et al., 1994; Reifman and Windle, 1995; Rotheram-Borus and Trautman, 1988). Poor interpersonal problem-solving ability has also been reported to differentiate suicidal from nonsuicidal youths (Asarnow et al., 1987; Rotheram-Borus et al., 1990), even after adjusting for depression (Rotheram-Borus et al., 1990). Social problem-solving has been found to partially mediate the influence of life stress on suicide, although life stress was a stronger predictor than social problem-solving (Chang, 2002). Aggressive-impulsive behavior has also been linked with an increased risk of suicidal behavior (Apter et al., 1993b; McKeown et al., 1998; Sourander et al., 2001). In a Finnish school study (Sourander et al., 2001), aggressive 8-year-olds were more than twice as likely to think about or attempt suicide at age 16.

Sexual Orientation. Recent cross-sectional and longitudinal epidemiological studies found a significant two- to sixfold increased risk of nonlethal suicidal behavior for homosexual and bisexual youths (Blake et al., 2001; Faulkner and Cranston, 1998; Garofalo et al., 1998; Remafedi et al., 1998; Russell and Joyner, 2001; see McDaniel et al., 2001, for a recent review). In a study of a nationally representative sample of nearly 12,000 adolescents, those who reported same-sex sexual orientation also exhibited significantly higher rates of other suicide risk factors (Russell and Joyner, 2001). After adjusting for these risks, the effects of same-sex sexual orientation on suicidal behavior remained, but were substantially mediated by depression, alcohol abuse, family history of attempts, and victimization. Notably, most youth who reported same-sex sexual orientation reported no suicidality at all: 84.6% of males and 71.7% of females.

Biological Factors. Over the past 25 years, a substantial body of knowledge has accrued, indicating abnormalities of serotonin function in suicidal and in impulsive, aggressive individuals, regardless of psychiatric diagnosis. Earlier studies focused on simple indices of serotonin activity, such as the reduced concentration of serotonin metabolites in the brain and cerebrospinal fluid (CSF) in suicide victims or among suicide attempters compared with age- and gender-matched controls (see Oquendo and Mann, 2000). More recently, neuroanatomical studies have shown a reduction in the overall density of sero-
Adolescents (Appendix)

YOUTH SUICIDE RISK AND INTERVENTIONS

Serotonin 1A receptors and serotonin transporter receptors (which regulate serotonin uptake) in the prefrontal cortex. Most recently, Arango and her colleagues (2001) found significant reductions in the number and binding capacity of serotonin 1A receptors in the dorsal raphe nucleus, from which serotonin innervation of the prefrontal cortex arises (Arango et al., 2001).

To explain the often-replicated finding that serotonin dysregulation is associated with suicidality regardless of diagnosis, Mann et al. (1999) suggested that the dysregulation is a biological trait that predisposes to suicide—a stress-diathesis model. Thus a mentally ill person with the diathesis is more likely to respond to a stressful experience in an impulsive fashion that may include a decision to commit suicide.

Despite the great volume of work, unanswered questions remain. The behavioral correlates of low-serotonin states are assumed to include irritability, impulsivity, and emotional volatility, but most studies address diagnosis rather than specific symptoms and the correlation has yet to be explored in the general population. An absence of representative studies has meant that neither the relative risk of serotonin dysfunction nor the fraction of suicides attributable to serotonin underfunctioning is yet known. Finally, the examination of the association of serotonin metabolism with suicide has largely been limited to studies of adults.

The documented suicide risk associated with family history (see “Family History of Suicidal Behavior” below) has led to an active investigation of candidate genes, attempting to identify what suicidogenic factor might be inherited. Given the substantial body of data that point to reduced serotonin neurotransmission in suicide (see above), the target of most recent association studies has been polymorphisms in three genes that play important roles in the regulation of serotonin. One gene is tryptophan hydroxylase (TPH), the rate-limiting enzyme for the biosynthesis of serotonin. Early studies (Mann and Stoff, 1997; Nielsen et al., 1994, 1998) reported a relationship between attempted suicide and a polymorphism on intron 7 of the TPH gene. Since then, a large number of studies with inconsistent findings have been carried out on suicidal patients with various diagnoses with and without suicidality. The Utah Youth Suicide Study has been the main study to have examined adolescents (Bennet et al., 2000), and it has failed to find an association. There are several possible reasons for the inconsistent findings, including the probable heterogeneity and complexity of the suicide phenotype; that the genetic effect is small and requires examination of large samples; or because a single genetic variant is less important than patterns of variance (Marshall et al., 1999). Support for this is offered by haplotype analyses (haplotypes are clusters of genes that are usually found together) that have shown a distinctive profile among both suicide completers (Turecki et al., 2001) and attempters (Rotondo et al., 1999) in samples in which single-gene polymorphisms did not differ significantly from those of controls.

The other two candidate genes that have been studied are the serotonin transporter (SERT) gene and the serotonin 1A receptor gene. Polymorphisms in these genes have been reported in completed and attempted suicide (Arango et al., 2001; Courret et al., 2001; Du et al., 2001; Neumeister et al., 2002).

While biological findings currently have little impact on clinical practice, Nordstrom and colleagues’ (1994) finding that suicide attempters with low levels of CSF 5-hydroxyindoleacetic acid have a significantly higher likelihood of making further suicide attempts and/or committing suicide, coupled with the promising research on candidate genes, may eventually take suicide prediction and prevention to new, more precise levels and/or may lead to specific interventions that will reduce the impact of the predisposing trait.

Family Characteristics

Family History of Suicidal Behavior. A family history of suicidal behavior greatly increases the risk of completed suicide (Agerbo et al., 2002; Brent et al., 1988, 1994a, 1996; Gould et al., 1996; Shaffer, 1974; Shafi et al., 1985) and attempted suicide (Bridge et al., 1997; Glowinski et al., 2001; Johnson et al., 1998). Because suicide and psychiatric illness almost always co-occur, account has to be taken of whether apparent familiarity reflects suicide specifically or instead an association with parental psychiatric illness (Brent et al., 1996). Most recently, the Danish Registry study (Agerbo et al., 2002) found youth suicide to be nearly five times more likely in the offspring of mothers who have completed suicide and twice as common in the offspring of fathers, adjusting for parental psychiatric history.

The Missouri Adolescent Twin Study (Heath et al., 2002) addressed the question of inheritance versus environment among teenage suicide attempters. One hundred thirty twin pairs had been affected by a suicide attempt within the total representative sample of 3,416
female adolescent twins. After controlling for other psychiatric risk factors, the twin/cotwin odds ratio was 3.6 (95% confidence interval [CI] 1.75–17.8) for monozygotes and 4.0 (95% CI 1.3–14.7) for dizygotes, suggesting a degree of inheritance for suicidality (Glowinski et al., 2001). The heritability of youth suicide gains further support from a meta-analysis by McGuffin et al. (2001), who reexamined a large body of published twin data (all ages). They concluded that first-degree relatives of suicides have more than twice the risk of the general population, with the relative risk increasing among identical cotwins of suicides to about 11. The estimated heritability for completed suicide was 43% (95% CIs 25–60).

Parental Psychopathology. High rates of parental psychopathology, particularly depression and substance abuse, have been found to be associated with completed suicide (Brent et al., 1988, 1994a; Gould et al., 1996) and with suicidal ideation and attempts in adolescence (e.g., Fergusson and Lynskey, 1995; Joffe et al., 1988; Kashani et al., 1989). Brent and his colleagues (1994a) reported that a family history of depression and substance abuse significantly increased the risk of completed suicide, even after controlling for the victim’s psychopathology. They concluded that familial psychopathology adds to suicide risk by mechanisms other than merely increasing the liability for similar psychopathology in an adolescent. In contrast, Gould and her colleagues (1996) found that the impact of parental psychopathology no longer contributed to the youth’s suicide risk after the study controlled for the youth’s psychopathology. To date, it is unclear precisely how familial psychopathology increases the risk for completed suicide.

Parental Divorce. Suicide victims are more likely to come from nonintact families of origin (Beautrais, 2001; Brent et al., 1993a, 1994a; Gould et al., 1996; Groholt et al., 1998; Sauvola et al., 2001). However, the association between separation/divorce and suicide decreases when accounting for parental psychopathology (Brent et al., 1994a; Gould et al., 1996). Similarly, although many population-based studies have found significant univariate associations (e.g., Andrews and Lewinsohn, 1992; Fergusson and Lynskey, 1995), these associations are no longer evident or are markedly attenuated once psychosocial risk factors are taken into account (e.g., Beautrais et al., 1996; Fergusson et al., 2000; Groholt et al., 2000).

Parent–Child Relationships. Impaired parent–child relationships are associated with increased risk of suicide and suicide attempts among youths (Beautrais et al., 1996; Brent et al., 1994a, 1999; Fergusson and Lynskey, 1995; Fergusson et al., 2000; Gould et al., 1996; Lewinsohn et al., 1993, 1994; McKeown et al., 1998; Toussignant et al., 1993). However, because an underlying psychiatric problem in the youth may precipitate impaired parent–child relationships, it is necessary to disentangle these factors. While Gould et al. (1996) found that suicide victims still had significantly less frequent and less satisfying communication with their mothers and fathers than community controls, even after adjusting for their psychiatric disorders, others have found that the associations between nonlethal suicidal behavior and poor attachment and family cohesion are not independent of the youth’s psychological problems (Fergusson et al., 2000; McKeown et al., 1998). Similarly, parent–child conflict has been found to be no longer associated with completed suicide (Brent et al., 1994a) or attempts (Lewinsohn et al., 1993) once the youth’s psychopathology is taken into account.

Adverse Life Circumstances

Stressful Life Events. Life stressors, such as interpersonal losses (e.g., breaking up with a girlfriend or boyfriend) and legal or disciplinary problems, are associated with completed suicide (Beautrais, 2001; Brent et al., 1993c; Gould et al., 1996; Marttunen et al., 1993; Rich et al., 1988; Runeson, 1990) and suicide attempts (Beautrais et al., 1997; Fergusson et al., 2000; Lewinsohn et al., 1996), even after adjusting for psychopathology (Brent et al., 1993c; Gould et al., 1996) and antecedent social, family, and personality factors (Beautrais et al., 1997). The prevalence of specific stressors among suicide victims varies by age: parent–child conflict is a more common precipitant for younger adolescent victims, whereas romantic difficulties are more common in older adolescents (Brent et al., 1999; Groholt et al., 1998). Stressors also vary by psychiatric disorder: interpersonal losses are more common among suicide victims with substance abuse disorders (Brent et al., 1993c; Gould et al., 1996; Marttunen et al., 1994; Rich et al., 1988), and legal or disciplinary crises are more common in victims with disruptive disorders (Brent et al., 1993c; Gould et al., 1996) or substance abuse disorders (Brent et al., 1993c). Bullying, whether as victim or perpetrator, has also recently been demonstrated to increase the risk for suicidal ideation (Kaltiala-Heino et al., 1999).

Physical Abuse. The association between physical abuse and suicide reported in case-control psychological autopsy studies (Brent et al., 1994a, 1999) has been replicated in...
prospective longitudinal community studies (Brown et al., 1999; Johnson et al., 2002; Silverman et al., 1996), the most methodologically rigorous design to examine this issue. Childhood physical abuse has been found to be associated with an increased risk of suicide attempts in late adolescence or early adulthood, even after adjusting for demographic characteristics, psychiatric symptoms during childhood and early adolescence, and parental psychiatric disorders (Johnson et al., 2002). Interpersonal difficulties during middle adolescence, such as frequent arguments with adults and peers and having no close friends, were found to mediate the association between child abuse and later suicide attempts (Johnson et al., 2002). Johnson and his colleagues (2002) suggested that children who are physically abused may have difficulty developing the social skills necessary for healthy relationships, which leads to social isolation and/or antagonistic interactions with others, which in turn puts them at increased risk for suicidal behavior.

Sexual Abuse. Longitudinal community studies are also the most methodologically rigorous design to examine the association between child sexual abuse (CSA) and subsequent suicidality due to the serious problems of retrospective recall in this area. Two such studies have found self-reported CSA to be significantly associated with an increased risk of suicidal behavior in adolescence (Fergusson et al., 1996; Silverman et al., 1996). Because CSA may be associated with reported risk factors for suicide (e.g., parental substance abuse), it is necessary to control for such factors. Fergusson et al. (1996) found that the association between CSA and suicidality was greatly reduced but was not eliminated, after controlling for a wide range of potentially confounding factors. This suggests that the increased risk of suicide from CSA may be partly, but not entirely, accounted for by other factors.

Socioenvironmental and Contextual Factors

Socioeconomic Status. Studies of suicide victims generally have found no or small effects of socioeconomic disadvantage (Agerbo et al., 2002; Brent et al., 1988). Specifically, Agerbo et al. (2002) noted that the effect of socioeconomic disadvantage decreased after adjustment for family history of mental illness or suicide. Gould et al. (1996) also found no effect of socioeconomic status for white or Latino victims, but African-American victims had a significantly higher socioeconomic status than their general population counterparts. Youth suicide attempters, compared with community controls, have consistently been found to have higher rates of sociodemographic disadvantage, even after controlling for other social and psychiatric risk factors (Beautrais et al., 1996; Fergusson et al., 2000; Wunderlich et al., 1998).

School and Work Problems. Difficulties in school, neither working nor being in school, and not going to college pose significant risks for completed suicide (Gould et al., 1996). Beautrais et al. (1996) reported that serious suicide attempters were also more likely to drop out of high school or not attend college, and Wunderlich and colleagues (1998) reported that German school dropouts were 37 times more likely to attempt suicide, even after adjusting for diagnostic and social risk factors.

Contagion/Imitation. Evidence continues to amass from studies of suicide clusters and the impact of the media, supporting the existence of suicide contagion. Several studies have reported significant clustering of suicides, defined by temporal-spatial factors, among teenagers and young adults (Brent et al., 1989; Gould et al., 1990a,b, 1994), with only minimal effects beyond 24 years of age (Gould et al., 1990a,b). Similar age-specific patterns have been reported for clusters of attempted suicides (Gould et al., 1994). Since 1990, the effect of the media on suicide rates has been documented in many other countries besides the United States, including Australia (e.g., Hassan, 1995), Austria (e.g., Ezzersdorfer et al., 1992), Germany (e.g., Jonas, 1992), Hungary (e.g., Fekete and Mecsai, 1990), and Japan (Ishii, 1991; Stack, 1996), adding to the extensive work prior to 1990 in the United States on newspaper articles, television news reports, and fictional dramatizations. Overall, the magnitude of the suicide increase is proportional to the amount, duration, and prominence of media coverage, and the impact of suicide stories on subsequent completed suicides appears to be greatest for teenagers (see Gould, 2001; Schmidtke and Schaller, 2000; Stack, 2000).

Stack's (2000) review of 293 findings from 42 studies indicates that methodological differences among studies are strong predictors of differences in their findings. For example, although a highly publicized recent study (Mercy et al., 2001) found that exposure to media accounts of suicidal behavior and exposure to suicidal behavior in friends or acquaintances were associated with a lower risk of youth suicide attempts, the interpretability of the findings is limited because (1) the media exposure factor was a conglomerate of different types of media stories; (2) attempters may have had less exposure to media generally (e.g., read fewer books, fewer newspapers, etc.); and (3) attempters had signifi-
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supply more proximal stressors, possibly overshadowing their recollection of media exposure; (4) the timing of exposure was a 30-day interval, in contrast to most other studies, which examined a shorter interval following the exposure; and (5) nearly half of the sample was between 25 and 34 years of age, a group not particularly sensitive to imitation. Another study finding—no effect of parental suicide—was also inconsistent with the prevailing research literature. A summary of interactive factors that may moderate the impact of media stories, including characteristics of the stories, individual reader/viewer attributes, and social context of the stories, is presented by Gould (2001).

PROTECTIVE FACTORS

Family Cohesion

Family cohesion has been reported as a protective factor for suicidal behavior among adolescents in a longitudinal study of middle school students (McKeown et al., 1998) and cross-sectional community studies of high school (Rubenstein et al., 1989, 1998) and college students (Zhang and Jin, 1996). Students who described family life in terms of a high degree of mutual involvement, shared interests, and emotional support were 3.5 to 5.5 times less likely to be suicidal than were adolescents from less cohesive families who had the same levels of depression or life stress (Rubenstein et al., 1989, 1998).

Religiosity

Since Durkheim’s (1966) formulation of a social integration model, the protective role of religiosity on suicide has been a focus of scientific investigation (e.g., Howey, 1999; Lester, 1992; Neeleman, 1998; Neeleman and Lewis, 1999; Sorri et al., 1996; Stack, 1998; Stack and Lester, 1991). As noted previously, greater religiosity has been posited as underlying the historically lower suicide rate among African Americans. However, only recently has the protective value of religiosity against suicidal behavior (Hilton et al., 2002; Siegrist, 1996; Zhang and Jin, 1996) and depression (Miller et al., 1997b) been documented in adolescents and young adults. Regrettably, these studies have not controlled for potential confounders, such as substance abuse, which may be less prevalent among religious youths.

PREVENTION STRATEGIES

Youth suicide prevention strategies have predominantly been implemented within three domains—school, community, and health-care systems—and generally have one of two general goals: case finding with accompanying referral and treatment or risk factor reduction (CDC, 1994; Gould and Kramer, 2001).

School-Based Suicide Prevention Programs

Suicide Awareness Curriculum. These programs seek to increase awareness of suicidal behavior in order to facilitate self-disclosure and prepare teenagers to identify at-risk peers and take responsible action (Kalafat and Elias, 1994). The underlying rationale of these programs is that teenagers are more likely to turn to peers than adults for support in dealing with suicidal thoughts (Hazell and King, 1996; Kalafat and Elias, 1994; Ross, 1985).

Several studies evaluated school-based suicide awareness programs in the past decade (Ciffone, 1993; Kalafat and Elias, 1994; Kalafat and Gagliano, 1996; Shaffer et al., 1991, 1999; Silbert and Berry, 1991; Vieland et al., 1991). While improvements in knowledge (Kalafat and Elias, 1994; Silbert and Berry, 1991), attitudes (Ciffone, 1993; Kalafat and Elias, 1994; Kalafat and Gagliano, 1996), and help-seeking behavior (Ciffone, 1993) have been found, other studies reported either no benefits (Shaffer et al., 1990, 1999; Vieland et al., 1991) or detrimental effects of suicide prevention education programs (Overholser et al., 1989; Shaffer et al., 1991). Detrimental effects included a decrease in desirable attitudes (Shaffer et al., 1991); a reduction in the likelihood of recommending mental health evaluations to a suicidal friend (Kalafat and Elias, 1994); more hopelessness and maladaptive coping responses among boys after exposure to the curriculum (Overholser et al., 1989); and negative reactions among students with a history of suicidal behavior, including their not recommending the programs to other students and feeling that talking about suicide in the classroom “makes some kids more likely to try to kill themselves” (Shaffer et al., 1990). Other limitations of this strategy are that baseline knowledge and attitudes of students are generally sound (Kalafat and Elias, 1994; Shaffer et al., 1991), changes in attitudes and knowledge are not necessarily highly correlated with behavioral change (Kirby, 1985; McCormick et al., 1985), and that the format and content of some programs might inadvertently stimulate imitation (Gould, 2001).

To date there is insufficient evidence to either support or not support curriculum-based suicide awareness programs in schools (Guo and Harstall, 2002). Accordingly, emphasis has shifted toward alternative school-based strategies that will be presented below.
Skilled Training. In contrast to suicide awareness curriculum in schools, skills training programs emphasize the development of problem-solving, coping, and cognitive skills, as suicidal youths have deficits in these areas (e.g., Asarnow et al., 1987; Cole, 1989; Rotheram-Borus et al., 1990). It is hoped that an “immunization” effect can be produced against suicidal feelings and behaviors. The reduction of suicide risk factors (e.g., depression, hopelessness, and drug abuse) is also a targeted outcome.

Several evaluation studies have shown promising results, with some evidence for reductions in completed and attempted suicides (Zenere and Lazarus, 1997) and improvements in attitudes, emotions, and distress coping skills (Klingman and Hochdorf, 1993; Orbach and Bar-Joseph, 1993). The most systematic evaluations have been conducted by a team of researchers (Eggert et al., 1995; Randell et al., 2001; Thompson et al., 2000, 2001) who have focused on skills training and social support programs for students at high risk for school failure or dropout. Enhancements of protective factors and reductions in risk factors following the “active” interventions were consistently found, while the control “intervention as usual” did not yield an increase of protective factors. However, “intervention as usual” sometimes produced significant reductions in suicide risk behaviors (Eggert et al., 1995; Randell et al., 2001). Thus it is not clear which aspects of the skills training program were responsible for risk reduction, a limitation of other studies also (Zenere and Lazarus, 1997). While these studies yield encouraging data, additional research is sorely needed to refine the evaluation of this type of intervention.

Screening. A prevention strategy that has received increased attention is case-finding through direct screening of individuals. Self-report and individual interviews are used to identify youngsters at risk for suicidal behavior (Joiner et al., 2002; Reynolds, 1991; Shaffer and Craft, 1999; Thompson and Eggert, 1999). School-wide screenings, involving multistage assessments, have focused on depression, substance abuse problems, recent and frequent suicidal ideation, and past suicide attempts. The few studies that have examined the efficacy of self-report screening (Reynolds, 1991; Shaffer and Craft, 1999; Thompson and Eggert, 1999) found that the sensitivity of the screens ranged from 83% to 100%, while the specificities ranged from 51% to 76%. Thus, while there were few false-negatives, there were many false-positives. Although the number of false-positives could be minimized by using a more stringent cutoff criterion, the seriousness of missing a suicidal individual precludes this scheme. Thus a tolerance for false-positives is essential for such endeavors (Thompson and Eggert, 1999), necessitating second-stage assessments to determine who is at risk for suicide. Second-stage assessments usually employ systematic clinical evaluations, using interviews such as the Suicidal Behaviors Interview (Reynolds, 1990) or the Diagnostic Interview Schedule for Children (DISC), now available in a spoken, self-completion (Voice-DISC) version (Shaffer and Craft, 1999).

Although a screening strategy appears to be quite promising, a number of dilemmas still need to be addressed. First, because suicide risk “waxes and wanes” over time, multiple screenings may be necessary in order to minimize “false-negatives” (Berman and Joes, 1995). Second, school-wide student screening programs have been rated by high school principals as significantly less acceptable than curriculum-based and staff in-service programs, although most respondents in this study have had either no or minimal exposure to screening programs (Miller et al., 1999). Finally, the ultimate success of this strategy is dependent on the effectiveness of the referral. Considerable effort must be made to assist the families and adolescents in obtaining help if it is needed.

Gatekeeper Training. Programs to train school personnel as gatekeepers are based on the premise that suicidal youths are underidentified and that we can increase identification by providing adults with knowledge about suicide. Only 9% of a national random sample of U.S. high school teachers believed they could recognize a student at risk for suicide, and while the overwhelming majority of counselors knew the risk factors for suicide, only one in three believed they could identify a student at risk (King et al., 1999).

The purpose of gatekeeper training is to develop the knowledge, attitudes, and skills to identify students at risk, determine the levels of risk, and make referrals when necessary (Garland and Zigler, 1993; Kalafat and Elias, 1995). Research examining the effectiveness of gatekeeper training is limited, but the findings are encouraging, with significant improvements in school personnel’s knowledge, attitudes, intervention skills, preparation for coping with a crisis, referral practices (Garland and Zigler, 1993; King and Smith, 2000; Mackesy-Amiot et al., 1996; Shaffer et al., 1988; Tierney, 1994), and general satisfaction with the training (Nelson, 1987). As previously noted, in-service training programs are significantly more acceptable by principals than school-wide screening programs.
(Miller et al., 1999). This is consistent with the finding that 46% of school districts in Washington have gatekeeper training programs, while no districts use group screening of students (Hayden and Lauer, 2000).

**Peer Helpers.** The rationale underlying these programs is similar to that of suicide awareness programs: Suicidal youths are more likely to confide in a peer than an adult (e.g., Kalafat and Elias, 1994). The role that peers play varies considerably by program, with some limited to listening and reporting any possible warning signs and others involving counseling responsibilities. Many programs address serious mental health problems, such as drug abuse, eating disorders, and depression, with 24% of programs in Washington State involving some suicide prevention role (Lewis and Lewis, 1996). Empirical evaluations of these programs are quite limited (Lewis and Lewis, 1996) and often confined to student satisfaction measures (Morey et al., 1993). Potential negative side effects are rarely examined. To date, there is not a sufficient body of evidence documenting the efficacy or safety of peer helping programs, despite their widespread use (Lewis and Lewis, 1996).

**Postvention/Crisis Intervention.** The rationale for school-based postvention/crisis intervention is that a timely response to a suicide is likely to reduce subsequent morbidity and mortality in fellow students, including suicidality, the onset or exacerbation of psychiatric disorders (e.g., posttraumatic stress disorder, major depressive disorder), and other symptoms related to pathological bereavement (Brent et al., 1993b,e, 1994b). The major goals of postvention programs are to assist survivors in the grief process, identify and refer those individuals who may be at risk following the suicide, provide accurate information about suicide while attempting to minimize suicide contagion, and implement a structure for ongoing prevention efforts (Hazell, 1993; Underwood and Dunne-Maxim, 1997).

The existing research on school-based postvention programs is sparse. Hazell and Lewin (1993) examined the efficacy of 90-minute group counseling sessions offered to groups of 20 to 30 students on the seventh day following a suicide. No differences in outcome were found between counseled subjects and matched controls. It was unclear whether this finding was due to inclusion criteria for postvention counseling (close friends of deceased student), the intervention itself, or the duration of the distress, or whether short-term effects dissipated by the assessment at 8 months after the death. An encouraging, though small and methodologically limited, study by Poijula et al. (2001) found that no new suicides took place during a 4-year follow-up period in schools where an adequate intervention took place, whereas the number of suicides significantly increased after suicides with no adequate subsequent crisis intervention. It is imperative for crisis interventions to be well planned and evaluated; otherwise, not only may they not help survivors, but they may potentially exacerbate problems through the induction of imitation.

**Community-Based Prevention Programs**

**Crisis Centers and Hotlines.** The rationale for crisis hotlines (Mishara and Daigle, 2001; Shaffer et al., 1988; Shneidman and Farberow, 1957) is that suicidal behavior is often associated with a crisis (Brent et al., 1993c; Gould et al., 1996; Marttunen et al., 1993; Rich et al., 1988, Runeson, 1990) and telephone crisis services can provide the opportunity for immediate support at these critical times by offering services that are convenient, accessible, and available outside of usual office hours.

Evidence of their efficacy on adult suicide is equivocal (Lester, 1997), and few studies have examined the utilization or efficacy of hotlines among teenagers (Boehm and Campbell, 1995; King, 1977; Slem and Cotler, 1973). Overall, between 1% and 6% of adolescents in the community use hotlines (Offer et al., 1991; Slem and Cotler, 1973; Vierland et al., 1991) and only 4% of calls concern suicide (Boehm and Campbell, 1995). However, between 14% and 18% of suicidal youths have used hotlines (Beautrais et al., 1998; Shaffer et al., 1990). There is a dearth of information about the efficacy of telephone crisis services for teenagers and whether they adequately address suicide risk.

**Restrictions of Firearms.** The underlying rationale for means restrictions is that suicidal individuals are often impulsive, they may be ambivalent about killing themselves, and the risk period for suicide is transient (Hawton et al., 2001; Miller and Hemenway, 1999). Restricting access to lethal methods during this period may prevent suicides, although it is not clear that method restriction has substantially contributed to the recent secular change in youth suicide.

Because the most common method of committing suicide in the United States is by firearms (CDC, 2002), this review will focus on restricting their access. The presence of firearms in the home is a significant risk factor for suicide in youths (Brent et al., 1988, 1991, 1993d, 1999) and adults (Kellermann et al., 1992). Several studies have found that restrictions on guns reduced the over-
all suicide rate, as well as firearm-related suicides (e.g., Boor and Bair, 1990; Carrington and Moyer, 1994; Lester and Murrell, 1980, 1986; Loftin et al., 1991; Medoff and Magaddino, 1983), while others have found no overall effect (Rich et al., 1990) or equivocal results (Cantor and Slater, 1995; Cummings et al., 1997; Sloan et al., 1990). The equivocal findings largely reflected age-specific effects (Cantor and Slater, 1995; Sloan et al., 1990), in that restrictive gun laws had a greater impact on adolescents and young adults. Unfortunately, recent legislative initiatives such as the 1994 Brady Bill, which imposes a delay in purchasing a handgun, did not find promising results: A comparison of states that did and did not pass Brady Bill statutes showed no impact on the proportion of suicides attributable to firearms except in elderly males (Ludwig and Cook, 2000).

Less controversial means-restriction measures in the United States involve education to parents of high-risk youths. Kruesi and colleagues (1999) demonstrated that injury prevention education in emergency rooms led parents to take new action to limit access to lethal means, such as locking up their firearms. Unfortunately, Brent et al. (2000) found that parents of depressed adolescents were frequently noncompliant with recommendations to remove firearms from the home.

A common concern is that method substitution will occur following a means-restriction program. Some evidence of method substitution exists (Lester and Leenaars, 1993; Lester and Murrell, 1982; Rich et al., 1990); however, method substitution does not appear to be an inevitable reaction to firearms restriction (Cantor and Slater, 1995; Carrington and Moyer, 1994; Lester and Murrell, 1986; Loftin et al., 1991). Moreover, even if some individuals do substitute other methods, the chances of survival may be greater if the new methods are less lethal (Cantor and Baume, 1998).

**Media Education.** Given the substantial evidence for suicide contagion, a recommended suicide prevention strategy involves educating media professionals about contagion, in order to yield stories that minimize harm. Moreover, the media’s positive role in educating the public about risks for suicide and shaping attitudes about suicide should be encouraged.

A set of recommendations on reporting of suicide were recently developed by an international workgroup headed by the American Foundation for Suicide Prevention and the Annenberg School of Communication and Public Policy (American Foundation for Suicide Prevention, 2001). Guidelines for media reporting now exist in several countries. Recommendations generally include descriptions of factors that should be avoided because they are more likely to induce contagion (e.g., front page coverage) and suggestions on how to increase the usefulness of the report (e.g., describing treatment resources).

Following the implementation of media guidelines in Austria, suicide rates declined 7% in the first year, nearly 20% in the 4-year follow-up period, and subway suicides (a particular focus of the media guidelines) decreased by 75% (Eetzersdorfer et al., 1992; Eetzersdorfer and Sonneck, 1998; Sonneck et al., 1994). In Switzerland, Michel et al. (2000) found that following the implementation of guidelines, the number of articles increased but they were significantly shorter and less likely to be on the front page; headlines, pictures, and text were less sensational; there were relatively fewer articles with pictures; and their overall “Imitation Risk Scores” were lower. Given the successful strategy of engaging the media in Austria and Switzerland, efforts to systematically disseminate and evaluate media recommendations in the United States are recommended.

**Health Care-Based Prevention Programs**

Educational/Training Programs for Primary Care Physicians and Pediatricians. The need for training primary care physicians and pediatricians in the United States is highlighted by the finding that while 72% of 600 family physicians and pediatricians in North Carolina had prescribed a SSRI for a child or adolescent patient, only 8% said they had received adequate training in the treatment of childhood depression and only 16% reported that they felt comfortable treating children for depression (Voelker, 1999). Furthermore, although many suicidal young people (15–34 years) seek general medical care in the month preceding their suicidal behavior (Pfaff et al., 1999), fewer than half of physicians surveyed reported that they routinely screen their patients for suicide risk (Frankenfield et al., 2000).

Pfaff et al. (2001) demonstrated that after a 1-day training workshop for 23 primary care physicians in Australia, inquiry about suicidal ideation increased by 32.5% and identification of suicidal patients increased by 130%, although no significant change in patient management resulted and referrals of suicidal youths to mental health specialists remained low. The effectiveness of educational programs for health care professionals has also been demonstrated by the Gotland study (Rutz et al., 1992). After the implementation of an intensive postgraduate training pro-
gram aimed at improving general practitioners’ diagnosis and treatment of depression on the island of Gotland, Sweden, the adult suicide rate significantly declined. The decline was almost totally due to decreases in female suicides with major depression (the number of male suicides was unchanged). Three years after the project ended, the suicide rate returned almost to baseline rates (Rihmer et al., 1995), suggesting that ongoing repetition of the educational program is warranted. A similar educational program for pediatricians could be an effective youth suicide prevention strategy; however, other adjunctive approaches to reach at-risk males should be considered.

TREATMENT

Recent reviews (e.g., Hawton et al., 1998, 2002; Rudd, 2000) note that few studies have systematically evaluated interventions aimed at reducing suicidal ideation and behavior in children and adolescents, i.e., randomized controlled trials that obtain reliable and valid measures of outcome variables during pretreatment, posttreatment, and follow-up periods. Most treatment efficacy studies of adolescent psychiatric populations exclude suicidal individuals, possibly because the potential risks of treating high-risk youths outweigh benefits. The National Institute of Mental Health recently published guidelines that highlight a number of ethical, legal, and safety considerations associated with such studies (Pearson et al., 2001).

Treatment Service Utilization

Many adolescents contact a mental health professional before their suicidal behavior. Among suicide completers, rates of contact vary from 7% to 15% within the previous month, 20% to 25% within the previous year, and 25% to 35% over the lifetime (Brent et al., 1993a; Groholt et al., 1997; Marttunen et al., 1992; Shaffer et al., 1996). Contact rates were higher, between 59% and 78%, in a New Zealand sample of attempters admitted for 24-hour hospital stay (Beautrais et al., 1998).

Emergency/Crisis-Service Interventions and Triage

Procedures for the acute care of suicidal adolescents have been described elsewhere (American Academy of Child and Adolescent Psychiatry, 2001). These recommendations are largely based on common sense approaches and expert clinical consensus. Such guidelines emphasize that certain preconditions must be satisfied before children and adolescents are discharged from the emergency service, e.g., the need to “sanitize” the home—make firearms and/or lethal medications inaccessible to the child (Kruesi et al., 1999).

Similarly, a written or verbal “no-suicide” contract is commonly negotiated at the start of treatment in the hope that it will improve treatment compliance and reduce the likelihood of further suicidal behavior (Brent, 1997; Rotheram, 1987). However, no empirical studies have evaluated the effectiveness of no-suicide contracts (Reid, 1998).

Rotheram-Borus et al. (1999) found that the implementation of a brief set of specialized emergency room procedures increased eventual treatment adherence among Latina adolescent suicide attempters. The procedures augmented typical emergency room care by (1) using a standardized protocol for training emergency room staff, (2) presenting a 20-minute videotape to patients and their families that models realistic expectations for aftercare treatment, and (3) providing a bilingual crisis therapist to promote compliance with outpatient therapy. Suicidal adolescents receiving the specialized emergency room procedure attended 3.8 more outpatient follow-up sessions than those receiving standard aftercare. The research was not able to identify which of these components were responsible for the increase in compliance.

Inpatient Care and Partial Hospitalization

While inpatient and partial hospitalization offer intensive multidisciplinary treatments and skilled observation and support, there is no empirical evidence that either of these interventions is effective in reducing rates of suicidal ideation, nonlethal attempts, or completed suicide among adolescents.

Outpatient Follow-up Treatment

Generally low rates of compliance with outpatient treatment among adolescent suicide attempters (e.g., Piacentini et al., 1995) make such investigations difficult to implement. Dropout rates as high as 59% have been reported (Spirito et al., 1992). King et al. (1997) found that compliance rates were highest for medication follow-up (66.7%), relative to rates for individual therapy (50.8%) and family therapy/parent psychoeducation (33.3%). Results of that study also indicate that non-compliance is associated with parental psychopathology and family dysfunction.

Psychotherapy

Hawton et al. (1998, 2002) reviewed all randomized controlled trials targeting suicide attempters. Of 23 stud-
Psychopharmacological Interventions

To our knowledge, there have been no psychopharmacological studies that have specifically targeted suicidal adolescents. However, it is likely that in spite of the absence of documented support, the use of SSRIs is common among teenagers who have been referred for suicidal ideation or after they have made an attempt. Rates of prescription of antidepressants among teenagers are extremely high (Olfson et al., 2002b) and almost certainly include adolescents who have attempted suicide. Indeed, this practice may be a factor leading to the dramatic and encouraging decline in youth suicide rates over the past decade (Isacsson, 2000). There are few a priori reasons not to treat suicidal adolescents with SSRIs, providing their progress and response to the medication is closely monitored.

SSRI antidepressants have been shown to reduce suicidal ideation in both depressed (Leitza et al., 1996) and nondepressed adults with cluster B personality disorders (Verkes et al., 1998) and in individuals who have made a limited number of previous suicide attempts. SSRIs have been shown to be more effective than placebo in treating depressed teenagers (Emslie and Mayes, 2001; Emslie et al., 1997; Keller et al., 2001), they are consider-ably less dangerous in overdose than are tricyclic antidepressants (Ryan and Varma, 1998), and there is evidence that they reduce the frequency of impulsive and aggressive behaviors (Cozaccu and Kavousi, 1997), which are a common occurrence in suicidal teenagers.

In rare instances, ruminative suicidal ideation combined with akathisia can occur during the course of antipsychotic (Hamilton and Opler, 1992) or SSRI treatment (King et al., 1991; Teicher et al., 1990). This complication has been reported to respond to propranolol (Adler et al., 1985; Chandler, 1990). When SSRI treatment is started, parents should be routinely advised to inform the psychiatrist if akathisia develops; the suicidal teenager should likewise be advised to inform parents or physicians if there is an upsurge in suicidal ideation.

In adults with bipolar or other major affective disorders, long-term lithium treatment significantly reduces the recurrence of suicide attempts (Tondo et al., 1997) and sudden withdrawal from lithium increases the risk of suicide independent of any effect on other symptoms of mania (Tondo and Baldessarini, 2000). Similarly, clozapine is effective in reducing suicidality in adults with schizophrenia even when there is no apparent effect or impact on other symptoms of schizophrenia (see Meltzer, 2001). The antisuicidal effects of lithium and clozapine have not been assessed in children or adolescents. If lithium is being used to treat an adolescent, it would be wise to observe the same degree of caution as has been used in adults with respect to sudden withdrawal of the medication.

CONCLUSIONS

The past decade has witnessed a surge in research on youth suicide risk. The current review has underscored youth psychiatric disorder, a family history of suicide and psychopathology, stressful life events, and access to firearms as key risk factors for youth suicide. Exciting new findings have emerged on the biology of suicide in adults, but, while encouraging, these are yet to be replicated in youths. Factors that had been previously thought to be risks for youth suicide, such as divorce and impaired parent–child relationships, have been found to be largely explained by underlying psychiatric problems in the youth and/or parents, whereas other risk factors, such as same-sex sexual orientation and sexual abuse, while mediated by other psychosocial risks, have recently been found to make an independent contribution to youth suicide.

Despite the burgeoning research literature on risk factors, there remains a paucity of information on protec-
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tive factors. Family cohesiveness and religiosity may be somewhat protective, but much more work needs to be done before we can have confidence that they mitigate the impact of accumulating risk factors. Future research needs to increasingly identify factors that protect against suicidal behavior so that they may be enhanced.

Several promising empirically based prevention strategies have been identified, including school-based skills training for students, screening for at-risk youths, education of primary care physicians, media education, and lethal-means restriction; however, these strategies need continuing evaluation studies before their efficacy can be established.

Because the decline in youth suicide seems likely to be a product of more widely administered and more effective treatment, the burden on professionals to identify depressed and suicidal teenagers and bring them to treatment is greater than ever before. Well-designed studies on candidate medications and psychotherapies must be conducted as a matter of urgency.

Given the complexity of the mechanism of youth suicide, it seems likely that no one prevention/intervention strategy, by itself, is enough to combat this critical problem. Rather, a comprehensive, integrated effort, involving multiple domains—the individual, family, school, community, media, and health care system—is needed.

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I. Findings
An estimated 14 million students presently attend more than 4,500 colleges and universities in the U.S. This includes about 8 million students between the ages of 18-24, representing about one-quarter of all 18-24 year-olds in the country. Because college student suicide rates are not officially tracked on either a national or state level, the current knowledge base on suicide and suicidal behavior among this population is based on studies of selected universities, surveys of university officials, and surveys of college students themselves. The key findings of this accumulated research are:

A. Overall Rates and Secular Patterns in the U.S.
• Suicide appears to be only about half as frequent among college and university students as among an age, gender, and race-matched population. Students are estimated to have a suicide rate of 7.5 per 100,000, compared to 15 per 100,000 for young adults in the general population.

• At this rate, about 1,100 suicides are estimated to occur each year, placing suicide as the second leading cause of death among college students, following accidents. Suicide is the third leading cause of death among all youth ages 15-24, following accidents and homicides.

• Based on self-report data collected by the CDC in 1995 (National College Health Risk Behavior Survey), about 11% of college students ages 18-24 have seriously considered suicide within the past year. About 8% have made a suicide plan, and almost 2% have made a suicide attempt.

• In a 2002 survey of college and university counseling center directors, 85% reported increasing numbers of students with serious mental health problems and increased demands for campus-based psychological services.

B. Overall Rates in New York State
• Over 1.1 million students are currently enrolled in 264 institutions of higher education in New York State.

• 80% are enrolled as undergraduates and 20% as graduate or professional students. 70% attend full time and 30% part time. About 42% are male and 58% are female.

• Based on national estimates, approximately 83 suicides are likely to occur each year among college and university students in New York State, 59 among undergraduates and 24 among graduate and professional students.

• Extrapolating from CDC’s National College Health Risk Behavior Survey, more
than 122,000 college students in New York State are estimated to seriously consider suicide each year. It is expected that almost 89,000 have a suicide plan, and over 22,000 make a suicide attempt.

- There is considerable diversity among institutions of higher education in New York State (see Tables 1 and 2). The 61 campuses of the State University (SUNY) constitute about 23% of the 264 colleges and universities in NY State, and enroll about 37% of the total number of students. The 19 campuses of the City University (CUNY) constitute about 7% of the institutions and enroll over 19% of all students. 184 private colleges and universities, which make up 70% of the higher education institutions in the state, enroll the remaining 44% of students. Almost 35% of NY State’s colleges and universities are located within the five boroughs of New York City. Demographic differences among institutions likely have an impact on the distribution of suicide deaths and suicidal behavior among the state’s college and university population.

C. Risk Factors

- As with all adolescents and young adults, over 90% of college students who die by suicide are believed to have a mental disorder at the time of their death.

- The most common diagnoses in college students who die by suicide appear to be depression, bipolar disorder, schizophrenia, and substance abuse.

- Overall, the suicide rate for male students is estimated to be more than twice that for females (10.0/100,000 vs. 4.5/100,000), and 75% of college student suicide deaths occur among males. Few gender differences are seen, however, in suicide attempts and suicidal ideation among this population.

- Suicide deaths among college students are frequently triggered by relationship losses or difficulties adjusting to new expectations and settings. Perfectionism and an inability to tolerate failure may also be risk factors for this population.

- Suicidal ideation in college students is associated with other injury-related risk behaviors, such as carrying a weapon, engaging in physical fights, and not using seat belts. More than 75% of those who seriously consider suicide drink alcohol, often heavily. Students who report suicidal ideation are significantly more likely than students who do not to drive after drinking, ride with someone who has been drinking, and boat or swim after drinking.

- Many college students who die by suicide, however, appear to be largely depressed, quiet, socially isolated, and may draw little attention to themselves.

- A number of special groups within the overall college population have particular risk factors. These include international students, who may have little social or emotional support at a time that they are making a major life transition; gay, lesbian, bisexual and transgendered students, who on some campuses may experience discrimination and social isolation; and older students, who often experience difficulties in returning to school.

- Graduate students appear to have a much higher suicide rate than undergraduates (10.6/100,000 vs. 6.6/100,000). Although undergraduate males have a much higher rate than undergraduate females (9.3/100,000 vs. 3.4/100,000), the suicide rate for female graduate students approaches that for male graduate students (9.1/100,000 vs. 11.6/100,000). Intense academic competition, mounting financial burdens and uncertainties about future employment are likely contributing factors for all graduate students.

- Overall, it is estimated that only 20% of suicidal students are receiving psychotherapy or antidepressant medication. In 2002, schools with active counseling centers reported that less than a
third of students who died by suicide had received treatment at their centers.

- College students appear to be particularly susceptible to suicide contagion/imitation. In recent years, a number of suicide clusters, usually involving jumping from heights, have been reported on college campuses. Within New York State, apparent suicide clusters have occurred at Cornell University and New York University.

D. Protective Factors
Although to date few, if any, factors have been definitively established to protect college students from suicide risk, factors thought to be particularly important for this population include:

- Availability of effective and appropriate clinical services for mental disorders, including alcohol and drug use.
- A campus atmosphere that encourages help-seeking and early identification of problems that may put students at risk for mental disorders and suicide.
- A sense of campus community and social connectedness.
- Restricted access to lethal methods of suicide, including barriers to jumping and prohibitions against possession of firearms on campus.

II. Action Steps
Based on what is currently known about risk and protective factors related to college suicide, the following action steps are recommended for implementation by campus officials. Relatively few suicide prevention programs have been developed specifically for college students, and thus available resources to guide campuses in implementing a particular recommendation are limited. Where such resources are available, they are noted. Although the recommendations focus on a number of discrete actions, the most effective approach to suicide prevention on college and university campuses is a comprehensive strategy that includes multiple coordinated activities targeting one or more constituencies within the overall campus community (e.g., administrators, faculty, counselors, students). Such a comprehensive approach has been endorsed by the American Foundation for Suicide Prevention and by the Jed Foundation.

A. Enhance Support Systems for Vulnerable Students
(1) Efforts to Stimulate Change in Campus Culture
Broad efforts aimed at bringing about changes in the way mental illness and suicide are perceived on campus are an essential component of suicide prevention. Social marketing strategies can be effectively employed by campus leaders including the President’s Office, Student Affairs administrators, deans, mental health services personnel, and campus media, to destigmatize mental illness, remove barriers to identifying and treating students in need of mental health services, and encourage help-seeking.

Higher Education Center for Alcohol and Other Drug Prevention (www.edc.org/hec).
Suicide Prevention Resource Center (www.sprc.org).

(2) Post-Attempt Treatment Programs
It is essential that campuses establish clear, non-punitive procedures for assessing a student’s continued risk following a suicide attempt. Campus personnel should be specifically trained to link the suicidal student to evaluation and treatment resources, either on or off campus. These individuals must be thoroughly knowledgeable about the availability of and access to all campus and community resources. Campus mental health services should have clear procedures in place to ensure that students who have made a suicide attempt are given priority access to evaluation and treatment services.

Resource: The American Foundation for Suicide Prevention (AFSP) (www.afsp.org) has developed educational posters highlighting suicide risk factors and management guidelines for emergency personnel.
(3) Campus Policies Regarding Students with Mental Illness
Campus leadership should initiate a comprehensive review of existing policies that affect students with identified mental health needs, including those who have made a suicide attempt or expressed suicidal ideation or attempt. Policies that are discriminatory or punitive should be revised and, where lacking, clear policies should be established to provide medical leaves for students with mental health needs and non-punitive procedures for subsequent re-entry. Relevant personnel should be fully trained to comply with such policies, and in matters pertaining to confidentiality and related legal issues.

Policies regarding campus-based treatment services should also be reviewed and revised as needed to insure that the quantity and quality of available services are appropriate to the needs of seriously disturbed students. Colleges and universities which are unable to provide such services should develop appropriate community referral networks.


(4) Peer-Helper and Other Support Programs
Programs are needed that provide support to students who have made a suicide attempt or are struggling with depression or other mental disorders. Such programs, focusing on support from peers, residence advisers, student affairs personnel, or others within the campus community, might be effectively incorporated into a campus reentry program. The responsibilities of peers and other lay helpers are best limited to listening and reporting possible warning signs, rather than counseling. It is imperative that lay helpers be carefully supervised by fully trained mental health professionals, preferably those within the campus’s own mental health services.

Resource: Youth-Nominated Support Team (YST) (Cheryl King, Ph.D.) (kingca@med.umich.edu)

(5) Outreach to Students Who Leave Campus for Mental Health Reasons
Students who leave college following a suicide attempt or because of mental health problems often struggle with their own responses to perceived failure (shame, guilt, embarrassment, etc.). In addition, they may face negative reactions from parents, siblings and friends at home, as well as increased social and emotional isolation. In light of research evidence that youth who are “drifting” - neither in school or working - are at particular risk for suicide, efforts should be made by colleges to maintain links with students who leave for mental health reasons, and encourage them to re-enter at the appropriate time.

B. Implement Case-Finding with Accompanying Referral and Treatment
(1.) Screening Programs
Screening programs are an important strategy in a campus suicide prevention program. Currently, screening techniques lack precision to identify with certainty those who will attempt suicide or die by suicide. However, screening for specific disorders associated with suicide (particularly depression and substance abuse) can identify students at risk for suicide and facilitate referral to appropriate treatment services. Screening can be either universal (targeting all students on campus) or directed towards particular groups most at risk (e.g. male students, graduate students, international students, etc.). The Internet provides an excellent mechanism for reaching college students because of high access and usage. Screening programs that allow the student to maintain anonymity until he or she is ready to self-identify, and that provide a personalized response from a trained clinician appear to be most successful.

Resources: American Foundation for Suicide Prevention’s College Screening Program (www.afsp.org). Depression Screening Day Program (Douglas Jacobs, MD djacobs@mentalhealth-screening.org). ULifeline, Jed Foundation (www.jedfoundation.org).

(2.) Residence Advisor and Other Gatekeeper/Caregiver Training Programs
Training programs that increase the ability of potential gatekeepers to identify and refer for treatment at-risk students are an
important part of campus suicide prevention. Because of their daily proximity to a substantial number of students, residence hall advisers are in a unique position to recognize signs of suicide risk. Other gatekeepers might include faculty, athletic personnel and student life personnel. Suicide prevention training should focus on developing the knowledge, attitudes and skills to identify individuals at risk, determine the levels of risk, and to make referrals.


(3.) Student Education to Increase Recognition of Depression and Other Disorders

An important aspect of a campus suicide prevention strategy is increasing students’ recognition of depression and other mental disorders that convey risk, both in themselves and their friends. The structure of college and university life offers numerous opportunities to educate students about depression and suicide: student orientation sessions, classrooms, residence hall meetings, Greek organizations, and other student groups and extracurricular activities. Films, lectures, discussions and question-and-answer sessions are all helpful strategies for raising students’ awareness of suicide, suicide risk factors, available treatment options, and strategies for peer support.


(4.) Postvention/Crisis Intervention on Campuses

Given the very real potential for contagion and imitation, it is critical that campuses respond effectively and appropriately following a student suicide. The major goals of postvention/crisis intervention programs are to assist students in the grief process, identify and refer those individuals who may be at risk following the suicide, provide accurate information about suicide while attempting to minimize suicide contagion, and implement a structure for ongoing prevention efforts. Particularly helpful are individual or small group sessions in which students have an opportunity to talk about the suicide decedent and explore their own emotional reactions to the suicide. Campus-wide memorials or other large-scale gatherings that honor the decedent may have the unintended consequence of encouraging imitation among vulnerable students. Although such events can provide an opportunity to deliver the message that depression and other conditions that heighten suicide risk are treatable conditions, it is perhaps safest for campuses to avoid them wherever possible.

Resource: Services for Teens at Risk (STAR) Center Postvention, Standards Guidelines (Mary Margaret Kerr, Ed.D. Director, STAR-Center Outreach, kmrrm@msx.upmc.edu)

C. Develop Risk Reduction Programs

(1). Means Restriction on Campus

College and university officials should undertake a comprehensive analysis of all structures and activities that may provide an opportunity for suicide, and take appropriate actions to limit students’ access to potentially lethal means. This may involve a range of activities including constructing barriers on balconies, rooftops and bridges; and establishing clear policies and procedures that restrict the availability and use of alcohol, illicit drugs and firearms on campus.


(2). Media Education

Given the substantial evidence for suicide contagion and imitative behavior among students, students and relevant community personnel involved in print, radio and television media that serve the campus population should be educated in how to responsibly report on suicide. Such action steps are described elsewhere in the Media section of the New York State Suicide Prevention Plan.
D. Enhance Protective Factors
(1) Social Network Promotion
Promoting a sense of belonging among all students is an important element of suicide prevention. Administrators, faculty, staff and student leaders should explore ways of encouraging the development of smaller groups within the larger campus community, and reaching out to student groups who may experience isolation and a lack of connectedness (e.g. racial and ethnic minorities, international students, gay and lesbian students, commuter students, older students, etc.).


(2) Life Skills Development
Programs to improve students’ management of the rigors of college life, and to equip students with tools to recognize and manage triggers and stressors should be developed and incorporated into student orientation, residence hall meetings and other student life venues.


E. Enhance Effectiveness of Campus Mental Health Services
(1) Professional Education Programs
Training campus mental health personnel about suicide risk, assessment and treatment is an essential suicide prevention strategy. Many mental health professionals have inadequate training in working with seriously depressed or suicidal individuals. On-going professional education by suicide experts, and opportunities to collaborate with colleagues in the treatment of seriously disturbed students can improve the effectiveness of campus mental health services.

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Recommendations/Action Steps by Stakeholder Group
The following recommendations/action steps are taken from the preceding section (II). In this section they have been organized under different stakeholder groups.

Administration
Efforts to Stimulate Change in Campus Culture (II A.1)
Broad efforts aimed at bringing about changes in the way mental illness and suicide are perceived on campus are an essential component of suicide prevention. Social marketing strategies can be effectively employed by campus leaders including the President’s Office, Student Affairs administrators, deans, mental health services personnel, and campus media, to de-stigmatize mental illness, remove barriers to identifying and treating students in need of mental health services, and encourage help-seeking.


Screening Programs (II B.1)
Screening programs are an important strategy in a campus suicide prevention program. Currently, screening techniques lack precision to identify with certainty those who will attempt suicide or die by suicide. However, screening for specific disorders associated with suicide (particularly depression and substance abuse) can identify students at risk for suicide and facilitate referral to appropriate treatment services. Screening can be either universal (targeting all students on campus) or directed towards particular groups most at risk (e.g. male students, graduate students, international students, etc.). The Internet provides an excellent mechanism for reaching college students because of high access and usage. Screening programs that allow the student to maintain anonymity until he or she is ready to self-identify, and that provide a personalized response from a
trained clinician appear to be most successful.

Resources: American Foundation for Suicide Prevention’s College Screening Program (www.afsp.org). Depression Screening Day Program (Douglas Jacobs, MD djacobs@mentalhealthscreening.org). ULifeline, Jed Foundation (www.jedfoundation.org).

Means Restriction on Campus (II C.1)
College and university officials should undertake a comprehensive analysis of all structures and activities that may provide an opportunity for suicide, and take appropriate actions to limit students’ access to potentially lethal means. This may involve a range of activities including constructing barriers on balconies, rooftops and bridges; and establishing clear policies and procedures that restrict the availability and use of alcohol, illicit drugs and firearms on campus.


Outreach to Students Who Leave Campus for Mental Health Reasons (II A.5)
Students who leave college following a suicide attempt or because of mental health problems often struggle with their own responses to perceived failure (shame, guilt, embarrassment, etc.). In addition, they may face negative reactions from parents, siblings and friends at home, as well as increased social and emotional isolation. In light of research evidence that youth who are “drifting” - neither in school or working - are at particular risk for suicide, efforts should be made by colleges to maintain links with students who leave for mental health reasons, and encourage them to re-enter at the appropriate time.

Faculty/Staff
Residence Advisor and Other Gatekeeper/Caregiver Training Programs (II B.2)
Training programs that increase the ability of potential gatekeepers to identify and refer for treatment at-risk students are an important part of campus suicide prevention. Because of their daily proximity to a substantial number of students, residence hall advisers are in a unique position to recognize signs of suicide risk. Other gatekeepers might include faculty, athletic personnel and student life personnel. Suicide
prevention training should focus on developing the knowledge, attitudes and skills to identify individuals at risk, determine the levels of risk, and to make referrals.

Resources: Question, Persuade and Refer (QPR) (www.qprinstitute.com).
Applied Suicide Intervention Skills Training (ASIST), Living Works Education (www.livingworks.net).

Public Safety Department
Means Restriction on Campus (II C.1)
College and university officials should undertake a comprehensive analysis of all structures and activities that may provide an opportunity for suicide, and take appropriate actions to limit students’ access to potentially lethal means. This may involve a range of activities including constructing barriers on balconies, rooftops and bridges; and establishing clear policies and procedures that restrict the availability and use of alcohol, illicit drugs and firearms on campus.


Residential Life Staff
Residence Advisor and Other Gatekeeper/Caregiver Training Programs (II B.2)
Training programs that increase the ability of potential gatekeepers to identify and refer for treatment at-risk students are an important part of campus suicide prevention. Because of their daily proximity to a substantial number of students, residence hall advisers are in a unique position to recognize signs of suicide risk. Other gatekeepers might include faculty, athletic personnel and student life personnel. Suicide prevention training should focus on developing the knowledge, attitudes and skills to identify individuals at risk, determine the levels of risk, and to make referrals.

Resources: Question, Persuade and Refer (QPR) (www.qprinstitute.com).
Applied Suicide Intervention Skills Training (ASIST), Living Works Education (www.livingworks.net).

Social Network Promotion (II D.1)
Promoting a sense of belonging among all students is an important element of suicide prevention. Administrators, faculty, staff and student leaders should explore ways of encouraging the development of smaller groups within the larger campus community, and reaching out to student groups who may experience isolation and a lack of connectedness (e.g. racial and ethnic minorities, international students, gay and lesbian students, commuter students, older students, etc.).


Life Skills Development (II D.2)
Programs to improve students’ management of the rigors of college life, and to equip students with tools to recognize and manage triggers and stressors should be developed and incorporated into student orientation, residence hall meetings and other student life venues.


Student Counseling Services/Campus Mental Health Professionals
Post-Attempt Treatment Programs (II A.2)
It is essential that campuses establish clear, non-punitive procedures for assessing a student’s continued risk following a suicide attempt. Campus personnel should be specifically trained to link the suicidal student to evaluation and treatment resources, either on or off campus. These individuals must be thoroughly knowledgeable about the availability of and access to all campus and community resources. Campus mental health services should have clear procedures in place to ensure that students who have made a suicide attempt are given priority access to evaluation and treatment services.

Resource: The American Foundation for Suicide Prevention (AFSP) (www.afsp.org) has developed educational posters highlighting suicide risk factors and management guidelines for emergency personnel.
Postvention/Crisis Intervention on Campuses (II B.4)

Given the very real potential for contagion and imitation, it is critical that campuses respond effectively and appropriately following a student suicide. The major goals of postvention/crisis intervention programs are to assist students in the grief process, identify and refer those individuals who may be at risk following the suicide, provide accurate information about suicide while attempting to minimize suicide contagion, and implement a structure for ongoing prevention efforts. Particularly helpful are individual or small group sessions in which students have an opportunity to talk about the suicide decedent and explore their own emotional reactions to the suicide. Campus-wide memorials or other large-scale gatherings that honor the decedent may have the unintended consequence of encouraging imitation among vulnerable students. Although such events can provide an opportunity to deliver the message that depression and other conditions that heighten suicide risk are treatable conditions, it is perhaps safest for campuses to avoid them wherever possible.

Resource: Services for Teens at Risk (STAR) Center Postvention.

Standards Guidelines (Mary Margaret Kerr, Ed.D. Director, STAR-Center Outreach, kerrmm@msx.upmc.edu)

Professional Education Programs (II E.1)

Training campus mental health personnel about suicide risk, assessment and treatment is an essential suicide prevention strategy. Many mental health professionals have inadequate training in working with seriously depressed or suicidal individuals. On-going professional education by suicide experts, and opportunities to collaborate with colleagues in the treatment of seriously disturbed students can improve the effectiveness of campus mental health services.


Outreach to Students Who Leave Campus for Mental Health Reasons (II A.5)

Students who leave college following a suicide attempt or because of mental health problems often struggle with their own responses to perceived failure (shame, guilt, embarrassment, etc.). In addition, they may face negative reactions from parents, siblings and friends at home, as well as increased social and emotional isolation. In light of research evidence that youth who are “drifting” - neither in school or working - are at particular risk for suicide, efforts should be made by colleges to maintain links with students who leave for mental health reasons, and encourage them to re-enter at the appropriate time.

Students

Peer-Helper and Other Support Programs (II A.4)

Programs are needed that provide support to students who have made a suicide attempt or are struggling with depression or other mental disorders. Such programs, focusing on support from peers, residence advisers, student affairs personnel, or others within the campus community, might be effectively incorporated into a campus reentry program. The responsibilities of peers and other lay helpers are best limited to listening and reporting possible warning signs, rather than counseling. It is imperative that lay helpers be carefully supervised by fully trained mental health professionals, preferably those within the campus’s own mental health services.

Resource: Youth-Nominated Support Team (YST) (Cheryl King, Ph.D.) (kingca@med.umich.edu)

Student Education to Increase Recognition of Depression and Other Disorders (II B.3)

An important aspect of a campus suicide prevention strategy is increasing students’ recognition of depression and other mental disorders that convey risk, both in themselves and their friends. The structure of college and university life offers numerous opportunities to educate students about depression and suicide: student orientation sessions, classrooms, residence hall meetings, Greek organizations, and other student
groups and extracurricular activities. Films, lectures, discussions and question-and-answer sessions are all helpful strategies for raising students’ awareness of suicide, suicide risk factors, available treatment options, and strategies for peer support.


Media Education (II. C.2)
Given the substantial evidence for suicide contagion and imitative behavior among students, students and relevant community personnel involved in print, radio and television media that serve the campus population should be educated in how to responsibly report on suicide. Such action steps are described elsewhere in the Media section of the New York State Suicide Prevention Plan.

Social Network Promotion (II D.1)
Promoting a sense of belonging among all students is an important element of suicide prevention. Administrators, faculty, staff and student leaders should explore ways of encouraging the development of smaller groups within the larger campus community, and reaching out to student groups who may experience isolation and a lack of connectedness (e.g. racial and ethnic minorities, international students, gay and lesbian students, commuter students, older students, etc.).


Life Skills Development (II D.2)
Programs to improve students’ management of the rigors of college life, and to equip students with tools to recognize and manage triggers and stressors should be developed and incorporated into student orientation, residence hall meetings and other student life venues.


Outreach to Students Who Leave Campus for Mental Health Reasons (II A.5)
Students who leave college following a suicide attempt or because of mental health problems often struggle with their own responses to perceived failure (shame, guilt, embarrassment, etc.). In addition, they may face negative reactions from parents, siblings and friends at home, as well as increased social and emotional isolation. In light of research evidence that youth who are “drifting” - neither in school or working - are at particular risk for suicide, efforts should be made by colleges to maintain links with students who leave for mental health reasons, and encourage them to re-enter at the appropriate time.

Parents
Efforts to Stimulate Change in Campus Culture (II A.1)
Broad efforts aimed at bringing about changes in the way mental illness and suicide are perceived on campus are an essential component of suicide prevention. Social marketing strategies can be effectively employed by campus leaders including the President’s Office, Student Affairs administrators, deans, mental health services personnel, and campus media, to de-stigmatize mental illness, remove barriers to identifying and treating students in need of mental health services, and encourage help-seeking.


Suicide Prevention Resource Center (www.sprc.org).
cide, efforts should be made by colleges to maintain links with students who leave for mental health reasons, and encourage them to re-enter at the appropriate time.

**Local Community Means Restriction on Campus (II C.1)**

College and university officials should undertake a comprehensive analysis of all structures and activities that may provide an opportunity for suicide, and take appropriate actions to limit students’ access to potentially lethal means. This may involve a range of activities including constructing barriers on balconies, rooftops and bridges; and establishing clear policies and procedures that restrict the availability and use of alcohol, illicit drugs and firearms on campus.

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**Table 1: New York State Colleges and Universities**

<table>
<thead>
<tr>
<th>Level</th>
<th>SUNY</th>
<th>CUNY</th>
<th>Independent</th>
<th>Total (%)</th>
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</thead>
<tbody>
<tr>
<td>Two-Year</td>
<td>29</td>
<td>6</td>
<td>52</td>
<td>87 (33.0%)</td>
</tr>
<tr>
<td>Four-Year</td>
<td>32</td>
<td>13</td>
<td>132</td>
<td>177 (67.0%)</td>
</tr>
<tr>
<td>Total (%)</td>
<td>61</td>
<td>19</td>
<td>184 (69.7%)</td>
<td>264 (100.0%)</td>
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**Table 2: New York City Colleges and Universities**

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<th>Level</th>
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<th>CUNY</th>
<th>Independent</th>
<th>Proprietary</th>
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<th>Percent (%) of State Total</th>
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<td>Two-Year</td>
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<td>6</td>
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<tr>
<td>Four-Year</td>
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<td>10</td>
<td>67</td>
<td>37.9</td>
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<tr>
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<td>19</td>
<td>50</td>
<td>19</td>
<td>92</td>
<td>34.8</td>
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**Source:** New York State Education Department, Office of Research & Information Systems (August 12, 2004)
I. Findings

The relationship between the family unit and a suicidal adolescent family member is both complex and compelling. Despite a historical bias that emphasized how a negative family life could pose a risk to their offspring’s mental health, there is growing evidence that a family’s influence can and should be considered as a protective factor against their adolescent’s suicidal behavior. The key seems to turn on whether family influences - genetic, biological or environmental - are, on balance, essentially positive or negative for the family member’s mental health. The capacity of the family unit to exert influence is undeniable; the content of that relationship varies from family to family. It is also not static, in that like individuals, family life can change over time in response to inner growth and external forces. Research has begun to examine the under-studied half of the equation - that of families as protective forces against suicidal behavior, including repeated attempts by their adolescent members.

The Family as Risk Factor

Psychiatric research has well established a family history of mental illness or suicide and general family dysfunction presently both increase the risk that an adolescent will become suicidal.

- A 1996 report that adolescent suicide victims had significantly less frequent and less satisfying communication with their mothers and fathers;
- Family aggression has been noted to be prevalent in suicidal children in the general community and in clinical settings.
- A family history of suicidal behavior greatly increases the risk of completed suicide by an offspring. It may reflect a genetic factor rather than family chaos and psychopathology.
- Families of suicide attempters and completers share an increased risk of affective illness, substance abuse, assaultive behavior and suicide attempts. (Brent, 1997)
- The families of adolescent suicide attempters are characterized by substantial levels of dysfunction (Spirito et al., 1989)
- There is a strong and specific association between deliberate self-poisoning in adolescence and family dysfunction (Harrington et al., 1998)
- A family history of suicidal behavior has been shown to increase suicide risk even when controlled for poor
parent-child relationships and parental psychopathology.

- High rates of parental psychopathology, especially depression and substance abuse, have been associated with completed suicide in adolescence.

The Family as Protective Factor

Psychiatric research has long established that a past suicide attempt is a powerful predictor of a subsequent attempt at virtually any age. Regrettably, psychiatric research has not paid sufficient attention to:

- The interrelationships between family variables, adolescent feelings and behaviors, and adolescent suicidality. (Brinkman et al., 2000)

- The impact the return of an adolescent to the family after a suicide attempt has on the family's system and dynamics.

- The positive role the adolescent's family can play in the prevention of another suicide attempt. While many studies have investigated the communication and behaviors of the family as background to the initial suicide attempt by an adolescent, very few have gone on to evaluate the post-suicide attempt family environment, or to gauge the family's capacity to serve as a protective force against a repetition of the first attempt.

- Brinkman-Sull et al., (2000) observed that adolescent suicide risk factors focused primarily on psychiatric symptoms of the suicide attempter, neglecting the impact of the family. They further point out that in the follow-up period following a first attempt, the suicidal adolescent is more likely than not to be living apart from a parent or parents.

- The scant attention afforded the family as a primary source of prevention for the adolescent who has attempted suicide is remarkable, in view of the fact that it is the family with which an adolescent spends much, if not most, of his/her time; the family that knows the adolescent best; and the family that exerts a critical influence - environmentally, genetically, and biologically - upon their offspring.

While school personnel, mental health professionals, and others with whom the suicidal adolescent interacts must be part of any comprehensive suicide prevention strategy, it is arguably family members who are in the best position to reduce the risk of repeated attempts because they are there, with the at-risk adolescent.

- Gould et al., (2003) point out that adolescent suicide prevention strategies have "...primarily been implemented within three domains – school, community, and health-care system." Many of these strategies, including suicide awareness curricula, skills training, screening and gatekeeper training, are undoubtedly valuable. However, corresponding research on and implementation efforts with the family's role in the secondary prevention of adolescent suicide has not been done. Moreover, little research has been done on the closely related question of the impact of the adolescent's first suicide attempt on the family. As Magne-Ingvar and Ojehagen, (1999) observed, “Most follow-up studies after a suicide attempt focus on the situation of the patient (but)... a suicide attempt also affects significant others.”

Because the family is the first line of defense in the secondary prevention of adolescent suicide, it is the family that bears the stress of adapting to the suicidal adolescent and acting to prevent another attempt. This adaptation can take the form of constant, close observation of the adolescent, driven by concern, fear and guilt, as well as by practical need; insistence on the adolescent's compliance with outpatient treatment, including medication management and making scheduled appointments with therapists.

Both adaptation and action inevitably exhaust family members, and underscore
the need for both respite care and treatment.

II. Action Steps.
I. Modifying Suicidal Behavior.
To overcome the propensity for first suicide attempts to lead to subsequent others will require a coordinated strategy by the family employing a range of protective elements. Ideally, evidence-based models of how families succeed in preventing adolescent suicide attempts can guide families and treatment professionals alike. The reality is given the paucity of both evidence and models, family members must depend on their own experience and intuition to prevent another attempt.

While invariably each family will respond differently to this challenge, there are recommended practices that have worked for other families faced with this challenge.

- Closely observe the adolescent's behavior and mood.

- Pay Close Attention to all the adolescent's references to suicide. Pay particular attention to any reference to another attempt.

- Encourage the adolescent to attend outpatient treatment.

- Facilitate the adolescent's compliance with treatment recommendations, including taking medication as prescribed.

- Communicate often with the treatment professionals involved.

- Remove all firearms from the home.

- Secure other potentially lethal agents, e.g. poisons and prescribed and over-the-counter medications, away from the adolescent.

- Attempt to keep the adolescent away from alcohol and illegal drugs.

Implementing any of these measures with an adolescent is likely to be very difficult.

Individuals who have attempted suicide tend to be non-compliant with treatment, and many, perhaps most adolescents do not readily share their thoughts and feelings with parents. Moreover, these suggested steps require the family to vigilantly observe the adolescent's behavior and affect - observation which the adolescent may interpret as interference and control. For the family, there is no easy or sure path to the prevention of a second suicide attempt.

III. The Need for more Knowledge.
There is a need for more research on the impact of an adolescent's suicide attempt on their family. Similarly, there is a need for more research on the ways that families cope in the aftermath of such an attempt. Much research has been focused on the family's role, both genetic and environmental, in the etiology of adolescent suicide. Similarly, there has been research on the effect of a completed adolescent suicide on surviving family members. Yet the family system after the adolescent returns home from an initial suicide attempt remains largely unknown.

Once an adolescent has attempted suicide, the risk of a second attempt increases dramatically. Once the adolescent has attempted suicide, parents and other family members are directly confronted with the very real possibility that they might lose their loved one to another attempt. Families may well be key to preventing another such attempt. Many, if not most, families are willing to face their fear and meet the challenge, but they need the guidance that can only come from the psychiatric research community, and the support that must come from their extended family, communities and the wider society.

III. Action Steps
1. Respite care for families having a suicidal individual is a critical service, as is therapy for family members and other care-providers. Respite care comes in many forms, including natural supports such as that provided by family and close friends. Whenever possible, such
resources should be the first option sought.

2. Much research has been focused on the family’s role, both genetic and environmental in the etiology of adolescent suicide. However, there has been scant research conducted on the positive/protective role that families can play in recovery of a suicidal adolescent family member. This gap in our knowledge should be filled.

REFERENCES
Sorrow

Sorrow is a word that I never knew
till I thought about the gun, the trigger you
placed at your temple as you defied strife.
Steadily pulling the trigger, you ended your life.

I wish little brother, as you'd marched tall to die
that you'd stopped for a moment to whisper
"goodbye."
‘Cause sometimes when I’m lonely and missing
you most
an agonizing feeling seems to clutch at my throat.

This feeling that I speak of is quite common now...
breathing becomes difficult as I think about how
much sorrow it took for you to choose death.
Are you peaceful now Eddie, are you finally
at rest?

Has the land of the dead made up for your pain?
Did the sacrifice of living prove more of a gain?
Or, as the bullet of death fiercely slammed through
your head
did you whimper and beg to be living instead?

These are where my feelings of agony dwell
As I wonder if death wasn’t more of a hell.
Not only for you, but also for me
‘cause I couldn’t help you and I’ll never be free...

I’ll never be free of this feeling which haunts
Which clutches my throat and constantly taunts
that I couldn’t help you enough just to give
you faith in tomorrow - give you faith just to live.

I’ll pray that the angels have now taken you home
And have found you true happiness, true peace
of your own.
And I’ll pray I’ll find peace - so that one day I’ll be
set free of the haunting of your memory...

Mary Jean Reed-Coleman, MSW, President
Samaritans USA
I. Findings

“On October 30, 1979, Edgar Francis Reed celebrated his 17th birthday. Three weeks later, on November 20, he went out alone into the wooded area behind his grandmother’s house. With him, he carried a very heavy heart and his dad’s hunting rifle. In a single, deafening blast - with one bullet to the head - he took his own life. In that single decision, when he became a statistic, I became a survivor. Shame, sorrow, stigma, silence, survivor; I didn’t choose it. It chose me.”

Mary Jean Reed-Coleman, July 2003

A. Prevalence

- Based on over 752,000 suicides from 1972 - 1997, it is estimated that the number of survivors of suicides in America is 4.5 million (1 of every 59 Americans in 1997). (Hoyert, Kochanek & Murphy, 1999)

- Centers for Disease Control and Prevention (CDC) reported 28,322 American deaths as suicides in the year 2000. Conservative estimates are that 6-10 people are intimately affected by each death. However, a study by the Baton Rouge, LA Crisis Intervention Center (Bland, 1994), the combination of possibly affected individuals reached over 28 people per suicide. In some families, the estimated numbers exceed 50 people (Coleman, 2003). Since, on average, 1,200 New Yorkers die by suicide each year, the latter estimate means approximately 60,000 people qualify as suicide survivors each and every year. This is equivalent to the population of the city of Utica (pop. 59,947, July 1, 2002).

B. Bereavement

“Death by suicide is not a gentle deathbed gathering; it rips apart lives and beliefs, and it sets its survivors on a prolonged and devastating journey.”

(Dr. Kay Redfield Jamison, 1999)

- Research suggests that for those left behind, losing a loved one to suicide is one of the most devastating losses of all to bear (Bailey, Kral & Dunham, 1999; Campbell, 1997; Hogan, 2001; Kneiper, 1999; Jamison, 1999; Leenaars and Wenckstern, 1998). It has long been believed that survivors of a loved one’s suicide anguish in feelings of blame, anger, responsibility, guilt, and abandonment (Ellenbogen and Gratton, 2001).

- Survivors tend to possess greater psycho-social vulnerabilities that cause specific complications in the grieving and recovery process. The Surgeon General’s Call To Action to Prevent Suicide (1999) notes that suicide evokes complicated and uncomfortable reactions in most of us. Too often, blame is placed on the victim. This stigmatizes the surviving family members and friends. These reactions add to the survivors’ burden of hurt, intensify their isolation, and shroud suicide in mystery. Unfortunately, secrecy and silence only diminishes the accuracy and amount of information available about persons who have completed suicide - information that might help prevent other suicides (Satcher, 1999).

- To understand the complicated bereavement associated with suicide, one must first acknowledge the long history of the stigma of suicide and the litany of acts and rituals practiced throughout the world to “mark the shameful act.” To prevent the suicide’s ghost from wandering, corpses have been decapitated, buried outside the city limits or in tribal territories, burned, beaten with chains, thrown to wild beasts, or buried at crossroads with a stake through the heart. (Berman and Jobes, 1991).

- Survivors of suicide were often forced to forfeit goods and property (theirs as well as the victim’s) and on occasion, family survivors of the victim were required to pay a fine to the suicide’s in-laws in redemption for the “shame brought to their name” (Berman and Jobes, 1991).
• Early theologians regarded suicide as a taboo. Over time, these theological perspectives were translated into both criminal and civil laws (Grollman, 1988). Statutes were enacted to deter others from attempting suicide. Not until 1961 was the act of suicide removed by the English Parliament as a type of felony. While recently, the belief that suicide is a crime has been changed, it continues to plague those left behind in its wake. Too often, “suicide became the family secret, the neighbor’s gossip, and a source of blame and public shunning.” (Berman and Jobes, 1991) Despite eradication from the law books, these pressing social stigma issues are lingering leftovers from the Victorian era (1840-1900). Although society no longer openly punishes suicide survivors, it is still profoundly difficult for them to break their silence and give their sorrow words (Knieper, 1999).

• Does suicide bereavement differ from mourning after other types of death? Comparative research has yet to establish a difference in kind. There are three facets to consider: different grief reactions, postvention and needs assessment.

1. Different grief reaction: Are there any significant trends within the survivors’ population? The grief response may indeed run deeper for suicide than for other modes of death.

2. Postvention: Postvention consists of activities that help reduce the aftereffects of the traumatic event in the lives of survivors. “Postvention is prevention for the next generation” (Schneidman, 1997).

3. Needs Assessment: Survivors’ needs will tell us if there are any unique problems and kinds of help required. “If we can identify what is different about suicide from other losses, yet common to most or all suicide bereavement, we should be able to plan more targeted and effective interventions in the population.” (Jordan, 2001).

• Future research that addresses these and related questions will certainly assist social workers working to help guide people through what is one of the most difficult grief experiences. And it may even help suicide survivors find answers to the one question that does unite them – “why?”

C. Responding to Bereavement: A Practice Model

• Research on the needs of suicide survivors is limited. Within this population, it is hard to obtain random samples, quantitative data is incomplete and a low response rate is characteristic. Ellenbogen and Gratton found that research was hampered by concepts that are not operationalized, sample sizes that are too small, measures misused, underlying theories left unclear, refusal rates are high, and white, upper/middle class female grievers over-represented. Besides, why should we presume that a specific set of reactions will be elicited by every act of completed suicide? (Ellenbogen and Gratton, 2001)

• Provini, Everett and Pfeffer, 2000 state: “relatively little is known about the perceptions of the needs and types of help desired by adults who have experienced suicides by relatives.” We do know that survivors ask the same questions, search for motives, and the reason for the death. They often deal with issues of sin and whether their loved one has an afterlife. Many even deny that it was a suicide. Because of guilt and often little social support, many do not share the suicide with those around them. However, research suggests that a primary need of survivors is to share thoughts and feelings in a ‘safe’ environment where they will not be judged.

• Kay Redfield Jamison poses the questions: “How do people survive such impassable grief and rage? How do they keep from being destroyed by guilt and sorrow that they sacrifice the remainder of their own lives for the
one lost earlier to suicide?” There are many ways: the support of family and friends, religious faith, the passage of time, psychotherapy or counseling. One of the most effective has been through the establishment of self-help groups for those who have survived another’s suicide.” (Jamison, 2001) (See chapter on Resilience)

Support groups are effective for at least four reasons:

1. **Normalization.** One of the most significant and helpful realizations for a survivor of suicide to have is that his feelings are normal, given the situation. In a group setting, it is reassuring to hear that others share their fears and their losses, and that it is not pathological to feel this way. In fact, it is perfectly normal.

2. **Understanding.** This begins when the person starts to open up. By telling his/her story – by verbalizing it - they are beginning a process of organizing thoughts and feelings. This may be the first step in understanding the “whys,” “what ifs,” and “why didn’t I?”

3. **Monitoring.** The third benefit is monitoring suicide risk. Given the link between the suicide of a family member and the increased risk for other family members, this is a critical benefit. Peer support groups may simultaneously provide healthy role models for grieving survivors while increasing social support.

4. **Finally, making sense of the suicide of a loved one is an emotional journey.** Support groups provide educational resources to help educate survivors regarding the nature of suicide and suicide bereavement. Coming together to share and interact with other survivors may be their first step in the journey toward healing.

There are three issues to consider regarding the impact on survivors of the mode of death:

1. **Results suggest bereaved suicide survivors endure overwhelming psychosocial changes, placing them at a higher health risk than those whose loved ones died of natural causes (Constantino, Sekula, and Rubinstein, 2001).** Suicide survivors may avoid intense emotional or stressful situations, but when they can’t be avoided the individual may shut down emotionally. This can lead to additional health problems. A wide range of symptoms has been identified: tearfulness, sleep disturbances, irrational behavior and depression. Regarding this latter condition, up to 50% of bereaved individuals can develop major depression.

2. **Those working in suicide postvention must recognize that the cognitive sets of the individuals and his/her thoughts about the current situation can serve to increase or decrease their own susceptibility to suicide.** Survivors may fear the possibility that they too will complete suicide. A family history of suicide is a significant risk factor. In 1864, Professor John Ordronaux lectured an audience of students at Columbia College in New York City “so potent in fact is the influence of hereditary transmission in the production of suicide that not less than one-sixth of all recorded cases have been traced to this source.” This statistic has transcended time. (Jamison, 1999)

3. **Survivors are left to sort out the complex emotions of trying to understanding what has happened.** They may over or under-react to daily life situations, perhaps in socially unacceptable ways. These reactions can pose obstacles to daily functioning and interfere with personal happiness and relationships. Some survivors suffer from low self-esteem, not only from the reactions and stigma of family and friends, but from misunderstanding their own grief related responses. Some may abuse
drugs and alcohol as a maladaptive way of coping with their loss.

The problem: How do we best offer emotional support, compassion, assist in promoting self-help and resiliency, and encourage family and community networks?

IV. Action Steps:
• We must understand that surviving the loss of a loved one is a slow process that doesn’t come easily or painlessly. The survivor must be heard, feel understood, to be able to reconnect to a community.

• Science of biology has enabled a deeper understanding of suicide and the factors that correlate with suicidal behavior, and the possibility of a genetic foundation. Those who lose loved ones to suicide are at greater risk for complicated grief. The impact of suicide and the isolation from support networks places survivors of suicide at much greater risk for suicide themselves.

• Survivors need short and long term help themselves. Communities need to be pro-active and not reactive to the needs of survivors. Social supports and the access to them are important considerations. A service contract for working with groups of suicide survivors must ensure availability, accessibility, accountability, integrity, quality, and comprehensive coordination.

• Survivors may need a variety of services, including a mix of access to suicide prevention/crisis hotlines; support groups composed of others who share grief experience; referrals to professional counselors; destigmatizing suicide through education.

• Implementation is not a one-time effort. Postvention programs must extend over a number of months and require constant monitoring and improvement. The biggest hurdle may be that their grief is so absorbing that survivors do not seek help when most in need. It is critical to find way to reach them using police, EMTs, coroners, funeral home directors – rather than waiting for them to call.

• Outcome measures should help identify if the time schedule and means of engagement are reaching those who actually need assistance. Process evaluation is critical to gauge the effectiveness of the intervention.

• Success in suicide postvention will probably arise by tailoring interventions to specific client needs. Most important, there is no cookbook. There is no universal principle regarding how to respond in postvention. One can speak of understanding, but never with precision. When the subject matter is postvention after suicide, we can be no more accurate or scientific than the available ways of responding and the subject matter permit. Yet, understandably, the yearning for a universal prevention law persists. A sweeping psychological statement with a ring of truth, such as ‘postvention is group therapy’ becomes a dictum, a platitude. The search for a singular universal response to trauma is chimera. There is no one method of postvention. (Leenaars & Wenck, 1998).

• One survivor has concluded after 20 plus years of life after a suicide: Grief is something that never truly goes away. It remains one of the few things that still has the power to silence us. Loss is forever and two decades after Eddie’s death, I still find myself sometimes crying out at his continuous presence of his absence. However, what was once a massive, weighty ball of grief has now become smaller and more manageable. It gets tucked away into one of my pockets. It’s there so I remember that I must not forget. But certainly the outcome of any postvention support may well be the reaching out of “old survivors” to “new survivors” as they begin their journey…” (Coleman, 2003)
Appendix

Eddie
I found myself sad, when asked if I had any poems about my brother.
I’d not written a one, since he picked up that gun, nor had I written of mother.
She too passed away, though not the same way; death’s hand still won the deal.
Brought now to attention, I sit down with intention, to share the thoughts that I feel.

My feelings is, that his life was his, and...I guess that gave him the right,
What I don’t understand, with a gun in his hand, was why he wasn’t willing to fight.
As his lowest level, he turned to the devil, without even knowing he had.
He hated here, I say through a tear, as I too have felt that sad.

So I can see, how it came to be, but that doesn’t lesson the pain.
And I have to ask, regarding the past, was there all that much to gain?
A mother destroyed, a family’s void, and they all say “rest in peace.”
Then that is that, no going back; it’s all in the suicide lease.

I wish he could, have seen something good,...that the demons didn’t bind him.
Because today he would be, a father probably, with the torment he felt behind him.
We’d all have spaghetti, with Uncle Eddie, invited for dinner at 3:00.
And then after we ate, we’d all stay up late, and watch a little t.v.

And occasionally, he might share with me a football game, or a beer.
But his horrible choice, silenced the voice, which I now would treasure to hear.
I know what he hated, but I wish he had waited, because life often turns on a dime.
And I now wouldn’t be, presently, grieving my brother in rhyme.

So I guess you could say, that still today, some twenty years after the fact,
I mourn him still, and always will, until I get him back.

Sandi Reed-Barrett
November 2001
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I. Findings
There were 258,455 births in New York in 2000. While new mothers are not generally considered to be at high risk of suicide, serious postpartum mood disorders that require hospitalization are associated with death from natural and unnatural causes.

A. Prevalence and Patterns
• Postpartum depression (PPD) is the most common disorder after childbirth. More women develop depression following birth than at any other time.

• PPD is a treatable illness, but it is often unidentified by health care professionals.

• 50-80% of new mothers get the “baby blues,” depressive symptoms which resolve within 12 days after birth. 20% of these women will develop PPD.

• 10-15% of mothers - 22% of multiethnic inner city mothers - develop PPD.

• .1%-.2% (one in 1,000 or 2 in 1,000) of new mothers develop postpartum psychosis, a serious disorder characterized by paranoia, mood shifts, and/or hallucinations or delusions. Immediate medical attention is required.

• Besides the symptoms experienced by the mother, PPD may affect the mother-infant interaction and may lead to problems as the baby grows.

• Like all health and mental health services, screening and treatment for PPD must be culturally appropriate to be effective.

B. Risk Factors for PPD
• Previous incidence of PPD (50% will re-develop PPD)

• Previous depression (25% will develop PPD)

• Previous bipolar disorder

• Depression during pregnancy

• Depression or bipolar disorder in the family

• Previous significant premenstrual syndrome (PMS)

• Stressful situations, including difficult childbirth, health problems in the baby or mother, marital discord, lack of assistance with baby care, and lack of emotional support

C. Barriers to Identifying and Treating PPD
• In general, those who screen for PPD (e.g. obstetricians) do not provide evaluation and treatment (e.g. mental health clinics). This makes access to appropriate care more complex.
• Stigma of mental health treatment
• Medical personnel receive little or no training in identifying PPD
• Family members may fail to recognize PPD
• Mothers may not seek treatment due to lack of energy caused by the illness, stigma and/or feeling guilty about being depressed when she is supposed to be “happy.”

II. Current State Efforts

• The Healthy Families New York (HFNY) program provides home visiting services by trained home visitors who work with expectant families and families with newborns who have certain risk factors that may lead to child abuse and neglect and poor health outcomes. Home Visitors provide weekly home visits until the child is at least six months old and may continue less frequently based on the needs of the family until the child is five years old or in school or Head Start. Visits are aimed at promoting positive parent-child interaction and optimal child health and development. Home visitors also assist in linkage to other services to increase the families’ self-sufficiency. The HFNY program is currently located in 28 sites serving high need areas across the state.

• Association of Perinatal Networks of New York received a grant to create training programs and resources to increase awareness of PPD and increase service utilization.

• Information on PPD has been added to the Maternity Information leaflet, disseminated to all obstetric hospitals statewide, and to “Your Guide to a Healthy Birth,” which is also available to pregnant women statewide.

• The Pregnancy Risk Assessment Monitoring System (PRAMS), a national screening program, now includes a question on PPD.

• A prenatal depression question was added to the Statewide Perinatal Data System.

III. Action Steps

1. There are strong risk factors for post-partum depression (PPD), and prenatal/perinatal screening can help to identify those most likely to develop it as well as deliver services to them in the hospital with follow-up to start right after delivery. Obstetricians, pediatricians and other medical personnel in contact with new mothers should screen mothers for PPD during the child’s first year.

2. Home visiting services have been shown to be effective in improving outcomes for children. All at-risk new mothers should receive home visitations services and be screened for post-partum depression, including follow-up care for women who screen positive and an emergency protocol for women in a peri-suicidal state or homicidal state. Involvement of the new mother’s partner or support person in their treatment is highly desirable.

3. A media campaign that highlights the prevalence and risk factors for post-partum depression, linkages to service providers and training in evidence-based treatment for post-partum depression are necessary ingredients of a prevention program.

References

In late August, 2003, the 55 year old president and chief executive officer of a major bank in western New York, who was also chairman of a university board of trustees, went home from work and killed himself. It was the second suicide of a prominent local resident in less than three weeks. Colleagues and friends said both men were hard workers and high achievers who had been troubled recently by public embarrassments. While it is tempting to say that these upsetting circumstances caused the men’s suicides, experts warn, it’s not that simple. (Neville: 2003)

It is not surprising that both victims were males. Men outrank women in all of the 15 leading causes of death, except one: Alzheimer’s disease. In fact, men’s death rates are at least twice as high as women’s for suicide, homicide, and cirrhosis of the liver. At every age, according to a study published in the May 2003 issue of the American Journal of Public Health, American males have poorer health and a higher risk of mortality than females. (DR Williams, The Health of Men: Structured Inequalities and Opportunities) More of them smoke (although women are catching up), drink heavily and are far more likely to engage in behaviors that put their health at risk, from abusing drugs to driving without a seat belt. Men also drive more rollover-prone SUVs and suffer more motorcycle fatalities. (Sanjay Gupta, M.D.: 2003)

Another reason may be deeply rooted cultural belief: a “macho” world view that rewards men for taking risks and tackling danger head on. (Ibid.) In other words, males are praised for “being in control” of the situation, even when it is inherently dangerous or challenging. Could the suicide of these prominent western New Yorkers have been prompted by their sense of loss of control over a situation they were expected to master, but could not? Could they, like thousands of other successful people who die from suicide seemingly out of the blue, have actually suffered from depression? It’s likely to have been a contributing factor, if not the root cause, since mental disorders are involved in 90-95% of all suicides.

According to Dr. Richard Carmona, Surgeon General of the United States, about 6 million men have clinical depression, but research shows they are less likely to seek treatment than women. Many men do not realize that some health symptoms may be caused by depression. For generations, men have been told that they have to act tough. As a result, men tend to self-medicate, and avoid going to see a physician, even when their symptoms are acute. The result: men are four times more likely to die from suicide as women in New York. Is it another manifestation of men wanting to control the situation that they typically use more lethal means to die, thereby leaving less to chance?
The typical suicide death in New York is a white, middle-age male who resides alone, upstate, suffers from depression, and uses a firearm to end his life. Forty percent of all suicides in New York in 2000 fit this demographic profile. While elderly white males (>65) die at a higher rate, those in the middle years die in the largest numbers. (NYSDOH: 2001) By contrast, there were zero suicides among black women older than 65 and none among Hispanic women, ages 25-34 and older than age 75. (NYSDOH: 2001)

The differences between males and females with respect to suicidal behavior holds across the life course as shown in the following chart of suicide rates.

In terms of sheer numbers of deaths, middle year males experience by far the largest number of suicides in New York. This is shown in Figure 3.
There are significant differences in the suicide rates of males depending on their race as illustrated by the following:

Based on the foregoing:

In 2002, death by suicide among New York males, ages 25-54:

- Was the 3rd leading cause of death for those ages 25-34; 5th leading cause of death for those ages 35-44; and 6th leading cause of death for those ages 45-54;

- Comprised 45.7% of all suicides in New York that year (562/1228);

- Constituted 57% of all male suicides across the lifespan (562/989); and

- Occurred at a rate (13.63/100,000) that was 29% higher than for all males (10.7); 4x the rate for female cohorts (25-54), and nearly 6x the rate for females overall (2.42).

These men died at a rate (13.63/100,000) more than twice the statewide average for the general population (6.42). The rates in descended order by race:

- White (15.38/100,000)
- African-American (9.41)
- Native-American (7.19)
- Others (6.3)

Source: CDC, WISQARS, 2005

Risk factors common to both males and females in the middle years are: Major psychopathology, Depression and alcohol use/dependence, Interpersonal disruptions, Social isolation, Poor work performance and unemployment, Violence and legal problems, Variable impact of marital and parental status, Prior suicide attempts and Family history of suicide (ED Caine, MD, 2005)

A distinct sub-population of would-be suicides are white males who appear to harbor little suicidal risk. For them, untreated depression can magnify a personal reversal such as bankruptcy, arrest, a career setback or a personal scandal, and propel a person into a death spiral. Many of these individuals are outwardly successful and their record of achievement can find them ill-prepared for a perceived failure. Lacking experience in coping with “failure,” and feeling a sense of shame at letting others down - of losing all they have achieved - they see their deaths as relieving their families of a burden. In such cases, an underlying mental illness can and does distort their thinking and lead them to rationalize their self-destruction.

The fear of emotional disintegration - of lives unraveling, collapsing or falling apart - has been described as greater than the fear of death itself. For many desperate people, death seems to be the only way to attain both relief and control. (Hendin et al: 2004) A similar scenario has unfolded on college campuses where high-achieving, even brilliant students from privileged backgrounds become trapped by self-imposed perfectionistic expectations and resort to suicide.
The impact of premature death is immeasurable in many ways, especially for family and loved ones. It is also an enormous loss for the society and economy in which they live. Dr. Eric Caine and colleagues have calculated the economic value of such losses in terms of lost earnings. These lost earnings peak in value nationally at about age 37, to the sum of $1.8 billion. The YPLL for American women are fewer due to their much lower suicide rate, higher health consciousness, and less risk-taking. Overall, women are “early adopters” of good health habits, whereas men tend to be “late adopters.”

**Preventive Interventions**

Drs. Eric Caine and Yeates Conwell at the University of Rochester Center for the Study and Prevention of Suicide (CSPS) have advanced a multi-layer prevention strategy for men, ages 25-54. Following the National Strategy for Suicide Prevention, they advocate a comprehensive approach to saving men’s lives. These involve universal measures (covering the whole male population), selective (for those at risk), and indicated measures (for those in imminent danger). Taken together, these are intended to diminish the risk factors leading to suicide, and enhance the protective factors leading to life-affirming behavior.

As men move out of the early adult years into middle age, issues regarding work, career and family responsibilities grow. “Central to this task (of preventing suicide) will be the installation of interventions earlier in the course of individual episodes of (mental) illness, such that the emergence of a suicidal state is precluded... (Such activities could take place) at work sites, mental health and chemical dependency treatment settings, primary medical settings, religious and community programs, the courts and criminal justice sites, as well as state and federal supported program sites.” (Caine and Conwell: 2003) However, even as one embraces this population-based approach, it is critical to maintain a focus on those with greatest needs (i.e. high-risk groups).

Past suicide prevention efforts were decidedly one-sided, focusing almost entirely on those who were imminently suicidal and in great distress. Interventions were often in a personal crisis environment, often in emergency rooms (ERs), intensive care units (ICUs), psychiatry clinics, inpatient services, or the offices of mental health clinicians. Little attention was focused on the much larger number of asymptomatic males in the general population, who were at risk for suicide but unrecognized to be as such. As noted, compared to women, males are disinclined to seek regular checkups and physicals. Even if they did, primary care practitioners are sometimes reluctant or unable to bring up issues of mood, suicidal...
thoughts or behaviors that could lead to a diagnosis of clinical depression.

**Depression Among Men**

Depression remains a subject that neither physician nor patient seems eager to tackle. It is the leading cause of disability worldwide among persons older than 5 years. (NIMH: 2001) Major depression is second only to ischemic heart disease in terms of disease burden (morbidity and mortality) in the developed world, including the United States. The cost of reduced productivity in the workforce from untreated depression is $52 billion nationwide. (J. Clin. Psych: 2002) Major depression is the psychiatric condition most associated with suicide. (AAS: 2001) 60% of suicides occur in the context of a depressive episode and most were not being treated with antidepressants at the time of death (Mann: 2002). Depression is treatable in 80 to 90% of cases, yet only 30 to 50% of depressed individuals are diagnosed properly by their primary care physicians. A majority are “half-treated” (Kessler: 2003) There seems to be a treatment gap between what is needed for recovery and what is available.

New York health consumers are not satisfied with the situation. Last year, enrollees in New York’s health plans rated treatment of depression among the lowest of 18 physical or behavioral health condition in their coverage. According to the New York State Health Accountability Foundation, only 23% of patients on average had multiple followup visits in the first three months after being diagnosed with depression and only 44% were treated with antidepressants for at least six months.

In response, the New York Health Plan Association, which represents 19 HMO’s and eight prepaid health service plans, said they were “aggressively addressing depression treatments with providers, and future report cards should reflect improvement in that area.” (New York State HMO Report Card: 2004)

A recent nationwide study concluded that depression intervention strategies should address the fact that males have lower antidepressant prescription rates and have 4 times the suicide rate of females. Most of those who die by suicide are found to have major depressive disorder at the time of death as either untreated or receiving subtherapeutic doses of antidepressants. (Grunebaum, M.F., Ellis, S.P., Li, S, Oquendo, M.A., Mann, J.J., MD: 2004) For all types of antidepressant (SSRI, TCA, and others), women’s usage exceeds their male counterparts use by a wide margin, as shown in the following:

![Figure 6. Prescription Antidepressant Use by Medication and Gender, 1997-2000](image-url)
The following shows that this ‘usage gender gap’ holds true across the lifespan:

The ‘gender gap’ in antidepressant usage has grown in recent years, as SSRI’s have come to dominate the market of prescribed medications for depressive disorders.

Inadequate treatment for depression is not confined to New York or to the male population. Evidence indicates that primary care physicians tend to under-recognize and under-treat mood disorders in general. (IOM: 2002) Even when properly diagnosed, one recent study published in the Archives of Internal Medicine found that many depressed people were not receiving the care they need. While prescribing antidepressants remains a sound course of treatment, many doctors failed to appropriately monitor their patients, many of whom did not feel better after weeks and months of drug therapy. Previous research has found that appropriate diagnosis and quality care are lagging in the primary care setting. A lack of resources and time, reluctance on the part of primary care physicians to screen for depression, and unfamiliarity with how to administer drugs for depression are some of the reasons for this “treatment gap.” (Altan: 2004)

This inadequate treatment results in a phenomenon known as “presenteeism” whereby people show up for work but are largely unproductive because they are depressed. This problem could stem from the lack of
follow-up monitoring by doctors, the high cost of continuing treatment, or the fact that many reluctant patients don’t like to see themselves as having chronic depression and drop out of treatment too soon. (Munoz: 2003)

Adding to the gravity of the situation is the recent finding that the risk of suicide is greatest when patients begin taking an antidepressant medication. Previous thinking was that the risk was greatest in the days after antidepressant therapy was discontinued. The study found no difference in risk between newer and older drugs. “It’s starting treatment itself, more than what drug you start with, that’s the important factor.” (Carey: 2004)

Disorders of the central nervous system, such as Epilepsy, AIDS, Huntington’s Disease, head injuries and cerebrovascular accidents, carry a much higher relative risk of suicide. Many of these occur after age 25. They may trigger depression and suicidal ideation and may impair restraint or inhibition of the desire to act on such thoughts. (Mann: 2002) Moreover, a history of physical or sexual abuse during childhood, a history of head injury or neurological disorder, and cigarette smoking increase the risk of suicide. (Mann: 2002)

Public health officials in Washington appear to be following the lead of former Surgeon General David Satcher who did much to raise the profile of suicide as a national health issue. The National Institute of Mental Health has launched a campaign to raise awareness that men, too, suffer from depression and that they need to seek help (See Appendix). Called Real Men, Real Depression, the campaign includes a series of multi-media public service announcements featuring people telling their personal stories about how they confronted their own depression. Its intent is to attack the stigma that “tough guys can’t seek help.”

By taking an integrated approach - combining attention to high-risk individuals and the broader population that has not yet manifested suicidal thoughts or deeds - we can hopefully reduce the overall suicide rate for men in the middle years. In addition, an educational intervention for primary care physicians to improve recognition and treatment of mood disorders may lower suicide rates, (Ibid.) Finally, the study supports the need for enhanced screening and treatment.

We need not wait for more fundamental research findings to begin our suicide prevention work with the male population. We know enough about the risks and precursors of suicide to intervene actively and encourage those in need to seek treatment.

In the words of Charles Curie, the administrator of SAMHSA: “We need to raise (public) awareness that help is available, treatment is effective, and recovery is possible.”

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Men and Depression
Depression is a serious but treatable medical condition that can strike anyone regardless of age, ethnic background, socioeconomic status, or gender. However, depression may go unrecognized by those who have it, their families and friends, and even their physicians. Men, in particular, may be unlikely to admit to depressive symptoms and seek help. But depression in men is not uncommon: in the United States every year, depressive illnesses affect an estimated seven percent of men (more than six million men).

Depression comes in different forms, just as is the case with other illnesses such as heart disease. The three main depressive disorders are: major depressive disorder, dysthymic disorder, and bipolar disorder (manic-depressive illness). Not everyone with a depressive disorder experiences every symptom. The number and severity of symptoms may vary among individuals and also over time.

Symptoms of depression include:
• Persistent sad, anxious, or "empty" mood
• Feelings of hopelessness, pessimism
• Feelings of guilt, worthlessness, helplessness
• Loss of interest or pleasure in hobbies and activities that were once enjoyed, including sex
• Decreased energy, fatigue, being "slowed down"
• Difficulty concentrating, remembering, making decisions
• Trouble sleeping, early-morning awakening, or oversleeping
• Appetite and/or weight changes
• Thoughts of death or suicide, or suicide attempts
• Restlessness, irritability
• Persistent physical symptoms, such as headaches, digestive disorders, and chronic pain, which do not respond to routine treatment

Research and clinical findings reveal that while both men and women can develop the standard symptoms of depression, they often experience depression differently and may have different ways of coping. Men may be more willing to report fatigue, irritability, loss of interest in work or hobbies, and sleep disturbances rather than feelings of sadness, worthlessness, and excessive guilt.
Some researchers question whether the standard definition of depression and the diagnostic tests based on it adequately capture the condition as it occurs in men.

Men are more likely than women to report alcohol and drug abuse or dependence in their lifetime; however, there is debate among researchers as to whether substance use is a "symptom" of underlying depression in men, or a co-occurring condition that more commonly develops in men. Nevertheless, substance abuse can mask depression, making it harder to recognize depression as a separate illness that needs treatment.

Instead of acknowledging their feelings, asking for help, or seeking appropriate treatment, men may turn to alcohol or street drugs when they are depressed, or become frustrated, discouraged, angry, irritable and, sometimes, violently abusive. Some men may deal with depression by throwing themselves compulsively into their work, attempting to hide their depression from themselves, family, and friends; other men may respond to depression by engaging in reckless behavior, taking risks, and putting themselves in harm's way. Four times as many men as women die by suicide in the United States, even though women make more suicide attempts during their lives. In light of research indicating that suicide is often associated with depression, the alarming suicide rate among men may reflect the fact that men are less likely to seek treatment for depression. Many men with depression do not obtain adequate diagnosis and treatment, which may be life saving.

More research is needed to understand all aspects of depression in men, including how men respond to stress and feelings associated with depression, how to make them more comfortable acknowledging these feelings and getting the help they need, and how to train physicians to better recognize and treat depression in men. Family members, friends, and employee assistance professionals in the workplace also can play important roles in recognizing depressive symptoms in men and helping them get treatment.

**Seek Help for Depression**

If you are having symptoms of depression or know someone who is, seek help. There are several places in most communities where people with depressive disorders can be diagnosed and treated. Help is available from family doctors, mental health specialists in mental health clinics or private clinics, and from other health professionals.

A variety of treatments, including medications and short-term psychotherapies (i.e., "talking" therapies), have proven effective for depressive disorders: more than 80 percent of people with a depressive illness improve with appropriate treatment. Not only can treatment lessen the severity of depression, but it may also reduce the duration of the episode and may help prevent additional bouts of depression.

**For More Information**

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I. Findings
New York is arguably the most culturally diverse state in the nation. The borough of Queens in the City of New York is the most ethnically diverse large county in the United States. According to the 2000 Census, 46% of Queens residents are foreign born. Its 2.2 million residents are drawn from more than 90 countries and speak 138 different languages. However, very little is known about suicide rates, mental health status, and the effectiveness of mental health treatments in ethnic and linguistic minorities because few studies have been done on the subject.

While the following recommendations refer to the four most recognized cultural minorities (African-Americans, Hispanics, Asian American/Pacific Islanders, and Native Americans/Alaska Natives), there is great diversity within these groups. For example, Asian Americans/Pacific Islanders speak over 100 different languages; Native Americans/Alaska Natives come from over 500 tribes, Hispanic persons are from Puerto Rico, Cuba, Mexico, or any Central or South American country, and include a significant number of immigrants. African-Americans are diverse as well, with some descendants from populations that were brought to the U.S. more than 200 years ago, while others recently emigrated from the Caribbean, South America and Africa.

The following items summarize research findings and expert opinion.

General information on ethnic and racial minorities:

- While suicide rates vary between people of different cultural backgrounds, rates of mental illness are generally similar across ethnic groups.
- Evidence-based treatments have not been sufficiently tested on individuals from diverse cultures. Therefore, effectiveness across cultures is not known and cannot be assumed.
- Ethnic minorities are under-represented among recipients of mental health services. It is well documented that these individuals are less likely to seek mental health treatment than whites. Asian Americans/Pacific Islanders have the lowest utilization rate of all minorities.
- Studies have consistently documented disparities in the health and mental health treatment of minorities that remain after controlling for income, insurance, and clinical factors.
- Ethnic minorities are more likely to seek assistance from community members, natural supports, and traditional healers. When they do seek treatment,
it is more likely to be from a primary care physician than a specialist.

- Mood disorders and substance abuse disorders, both highly correlated with suicide, are very prevalent among some ethnic/racial minorities, and are believed to be more influenced by environmental factors than other mental illnesses. Ethnic minorities also have higher rates of post-traumatic stress disorder, possibly due to an elevated exposure to violence.

- Ethnic minorities who belong to other at-risk populations, e.g. lesbian, gay, bisexual or trans-gender youth, may be at increased risk for suicide.

- Ethnic minorities face inequality that includes greater exposure to discrimination and poverty, which, in turn, may contribute to mental illness.

- Cultural minorities are over-represented among populations who are poor, in jail, homeless, HIV/AIDS positive, and exposed to violence/trauma.

- Symptom presentation may be different in various cultural groups, which may lead to mis-diagnosis and inappropriate treatment. There may be “culture-bound syndromes” only seen in persons of particular ethnic groups.

- Poverty and lack of health insurance make health and mental health care less accessible to many minority persons.

- Other risk factors cited: lack of cultural and spiritual development, loss of ethnic identity (especially for Native Americans), and acculturation -the adopting of a majority culture by minorities or the loss of ethnic culture.

- While some cultural minorities have expressed greater comfort in being treated by health care professionals of the same ethnic background, there is a shortage of minority health care providers.

### A. Prevalence and Patterns

- The rate of suicide for American Indians/Alaska Natives is 1.5 times higher than the national rate. Native American males aged 15 to 24 have a rate two to three times the national suicide rate.

- The rate of suicide among African American males aged 10-14 jumped by 233% between 1980 and 1995, compared to a 120% increase for white males of the same age.

- Statistics report that whites are twice as likely to commit suicide as African-Americans. However, the incidence of “suicide by cop” has led to a mis-classification of this behavior as a homicide. Among the elderly, African-American women have a lower suicide rate than their white counterparts. Possible reasons are the protective role of spirituality among them, and their extended role as care givers to their family, especially their grandchildren.

- Asian American women have the highest suicide rate of all women over 65. Of girls in grades 5-12, Asian American/Pacific Islanders show the highest level of depressive symptoms.

- While the reported suicide rate for Hispanics is lower than the general population, a national survey found increased levels of suicidal ideation and attempts among Hispanic high school students.

### B. Risk and Protective Factors

The greatest risks for suicide in the general population as well as among ethnic and racial minorities are depression and substance abuse disorders. Exposure to violence and other traumatic events creates a suicidal risk, as does access to firearms. In addition, risk factors that disproportionately affect minorities include: poverty, immigration, violence, racism, and discrimination. Protective factors for minorities include: supportive families, strong communities, spirituality and religion.
II. Current State Efforts
New York’s initiatives include the following:

• Tiered Certification – Cultural competence is one of eight stated values underlying the certification process for OMH-licensed mental health programs. Certified programs are expected to ensure that “human rights, cultural differences and the dignity of those served are preserved.”

Following are examples of survey guidelines:

• Program employs staff who are of the same or similar ethnicity or culture as the recipients served, by: screening potential candidates for cultural competence; recruiting culturally competent staff; and providing staff training to foster staff's cultural competence and ethnic awareness.

• Multi-cultural training should include in-service training on: cultural and ethnic differences of the program recipients; culturally appropriate treatment practices; and the program’s approach to working with culturally diverse service recipients.

• OMH has compiled a directory of staff proficient in several languages that has been disseminated to all State-operated mental health programs.

• OMH Core Curriculum, a mandatory training program for all psychiatric center staff, includes a section on cultural competence.

• In 2001, OMH created the position of Cultural Competence Coordinator.

• OMH collects data on service utilization by race/ethnicity by program type, e.g. type of emergency, inpatient, outpatient, residential, and community support.

• Integrating cultural competence is part of the OMH strategy for change as stated in the agency’s 5.07 Plan. Some methods recommended are to form linkages with varied communities and to meet the language needs of the recipients to be served.

• Project Liberty, developed by OMH to meet the needs of communities, families and individuals affected by the events of 9/11, offered services, outreach and information in several languages.

• Building Effective Relations in a Diverse Workplace train-the-trainer program was provided to OMH in 2000.

• Cultural competence considerations in treatment have been the topic of statewide training programs.

III. Action Steps
1. Imbue cultural competence in all prevention strategies. New York is arguably the most culturally-diverse state. Varying cultures regard mental illness quite differently. To engage these populations, we need to appreciate those differences and design programs and services that reflect cultural understanding.

2. Develop community-based suicide prevention and mental health wellness outreach programs that are culturally appropriate, multi-disciplinary and delivered by community members.

3. Increase the cultural competence of health care and mental health care professionals and staff.

4. Implement culturally appropriate suicide screening and prevention training for medical and mental health professionals and staff, including emergency room staff.

5. Evidence-based treatments have not been sufficiently tested on individuals from diverse cultures. Therefore, their effectiveness across cultures is not known and cannot be assumed.
6. Collect and report data on access and utilization of health and mental health care, including disparity measures by race, ethnicity, primary language, socioeconomic status, age, gender, sexual orientation, geographic location, housing situation, and criminal justice involvement. Also monitor progress toward elimination of disparities, and increase the dissemination of strategies proven to be effective across cultural and linguistic groups.

7. Invest in research to identify and overcome disparities in mental health service utilization and treatment of minorities.

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I. Findings.

New York State’s mental health system is working to embrace the goals of the President’s New Freedom Commission on Mental Health (2003): that mental health is essential to overall health; mental health care is consumer and family-driven; disparities in mental health services are eliminated; early mental health screening and treatment in multiple settings are important; care offered is the best science can provide; and information technology can help us access care.

Besides preventing suicides among recipients of mental health services, we must also work toward reducing suicide attempts and disease morbidity. The burdens of mental illnesses, such as depression, alcohol dependence and schizophrenia have been seriously underestimated by traditional approaches in public health that take account only of deaths and not disability. Psychiatric conditions account for almost 11 per cent of disease burden worldwide. By 2020, it is estimated that the second leading cause of disability among the general population will be unipolar depression; among women it will be the first (World Health Organization, 1999). This is the context within which we consider how to improve the experiences of mental health recipients and reduce their mortality from suicide.

Specific groups of recipients have a significantly increased rate of suicide. Those diagnosed with depression, schizophrenia and schizoaffective disorder are at elevated risk. Estimates of suicide rates range from 6% in broadly depressive samples to as many as 25% among severely depressed or bipolar patients (Tondo et al., 2001).

Approximately 50% of patients with schizophrenia or schizoaffective disorder attempt suicide, and about 10% of them die by suicide (Meltzer, H. et al., 2003). A small proportion of those suffering from a severe mental illness actually receive treatment, so we must first ensure that individuals who seek treatment are given adequate care in hopes that their risk for suicide will be lowered. We also need to strengthen our outreach to those not currently receiving services who could benefit from them.

The U.S. mental health system is complex and connects to many sectors (public-private, specialty-general health, social welfare, housing, criminal justice, and education). As a result, care may become organizationally fragmented, creating barriers to access. The system is also financed by many funding streams, adding to the complexity, given sometimes competing incentives between funding streams. (U.S. Surgeon General, Mental Health: A Report. 1999)

One of the most compelling predictors of suicide is a previous attempt. If a recipient
of mental health services moves from one provider to another and their previous suicide attempt history is not shared, this puts the recipient at risk. We need to address the need for long-term case management and continuous care in some cases, as in depression. The chronic nature of depression places its sufferers in a life-long elevated risk for suicide. Our system needs to greatly improve its integration, communication and co-operation so that consumers are not allowed to “fall through the cracks.” Loss of hope is also an important predictor of suicide. Seriously ill patients, are vulnerable to homelessness and social isolation. Over 80% are unemployed and poverty is, for them, often the norm.

Mental health services are best delivered using a partnership approach. Forging a therapeutic alliance depends on mutual respect between a client and provider and a realistic assessment of needs and assets. Self-help should be the first pillar of recovery. This is particularly needed when the other pillars - family and community - are disconnected or dysfunctional. Key to self-help is development and use of natural support networks - individuals and organizations from which people seek advice and support. They provide a listening post that people can access when they need to talk or seek guidance and understanding. They provide information to members of their communities as a community service and would likely provide assistance to recipients living in the community. Together, they can build “islands of resilience.” (Allen: 2003)

Education of consumers, their families and the community will help advance the long term goal of reducing stigma associated with having a mental illness and receiving services for it. Increased education will empower consumers to become more active partners in their own treatment. If recipients of mental health services become engaged in their own treatment and receive education about their mental illness, its management, potential side effects of medication and alternative possibilities for intervention, they stand a better chance of recovery. Receiving education explaining how illnesses such as depression or anxiety disorders are extremely common, yet treatable, will encourage help-seeking behavior among those suffering from mental health problems. Education programs like NAMI’s “Family to Family” and “In Our Own Voice” for consumers, as well as community outreach like Red Flags, Yellow Ribbons, SOS, etc. all help bring light to issues surrounding depression and suicide risk.

Individuals diagnosed with a mental illness, particularly mood disorder, can benefit greatly from membership in a peer-led support group. A recent article by Sheffield (2003) discussed the benefits of referral to peer support groups to both patients with mood disorders and their physicians. Consumer surveys indicate that peer-led support groups improve communication between patients and physicians, increase medication compliance and reduce crises. Similar groups for family members provide relatives with accurate information, enabling them to participate constructively in treatment decisions and act as an early warning system at home. The benefits to physicians include avoiding many of the drawbacks commonly associated with the treatment of depression, such as poor professional education about depression and inadequate time to evaluate and treat depression. The author recommends that physicians should become more active in informing patients of the benefits of support groups; and mental health organizations that run support groups should seek the involvement of physicians in their communities.

By educating, involving and supporting the family of a person with a mental illness we stand a much better chance for successful outcomes. Of special importance is supporting the family of children and adolescents with mental disorders. These services enable children with mental health problems to remain at home and in the community. Families need to be educated specifically in suicide prevention - know the signs of depression and suicidal ideation, remove lethal means from the home, restrict access to alcohol, develop an emergency plan - should a family member attempt suicide.
Increasing education in the community is essential if we are to move forward in our plan to prevent suicides in New York State. New York’s citizens need to be educated and engaged in the goal of preventing suicide and treating mental illness, especially among our younger population, where suicide is the third leading cause of death among 15-24 year olds (Centers for Disease Control and Prevention, 2000). By educating and encouraging recipients of mental health services, their families and the community, in addition to moving mental health services into the community and integrating mental and physical health services, we can look forward to a future where mental illness is as widely accepted and treated as physical illness.

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Goal 8 of the *National Strategy for Suicide Prevention* is to improve access to and community linkages with mental health and substance abuse services. It is designed to prevent suicide by ensuring that individuals who are at high risk due to mental health and substance use problems can receive prevention and treatment services.

I. FINDINGS

A. Overall Rates and Patterns

- In any given year, approximately 10 million people in the United States have a substance-related disorder and at least one other mental illness. (SAMHSA/NAC, 1997)

- Approximately two-thirds of suicide completers suffered from either a mood disorder or alcoholism.

- Approximately one-half of those diagnosed with a psychiatric disorder also have a substance abuse problem (NAMI).

- 51% of suicide completers have both substance abuse and mood disorders (Suominen et al., 1996)

- Suicide in alcoholics is largely dependent on the co-occurrence of a depressive episode.

- In a Veterans Administration study, investigators found 77% of suicide completers who were diagnosed with substance abuse had an additional diagnosis, most commonly, an affective disorder (39%). Of patients who completed suicide, 5% had a co-morbid psychosis and substance abuse; 67% of people with PTSD who completed suicide had a co-morbid disorder, usually an affective disorder or substance abuse. (Lehmann, McCormick & McCracken, 1995)

- Psychological autopsies have found that over 90% of all completed suicides in all age groups are associated with psychopathology (Shaffer et al., 1996).

B. Risk Factors

The risk of suicide is often increased in people with co-occurring disorders who may present with multiple risk factors at any given time. For example, the individual may be non-compliant with medication, be infected with HIV, and experiencing command hallucinations. The individual may be at greater risk for cognitive problems due to extensive substance abuse or lack supportive relationships due to stigma associated with having a psychiatric and substance abuse disorder.

Typical risks for this population are: trauma history, cognitive/ neurological problems, family history of suicide, history of losses.
and deaths, history of medication non-compliance, impulsive behavior, history of psychosis, chronic medical problems, chronic pain, difficulty controlling or expressing anger, history of self-injury, and a criminal history.

**C. Precipitating Factors**
This includes losses of many kinds, such as physical health, vocational, financial, psychological, interpersonal (one-third had a relationship loss within six weeks of completing suicide), access to weapons, current medication non-compliance, substance abuse, suicidal ideation, shame, guilt, humiliation, command hallucinations, suicide by friend or family member, pain, hopelessness, recent trauma or abuse, family conflict.

**D. Protective Factors**
Many factors can decrease the risk for suicide by those with a dual diagnosis. Among them are: cognitive flexibility, good coping skills, strong social support, hopefulness, hobbies and interests, short-term plans, ability to develop alternatives to self-harm, good compliance with treatment, hobbies and interests, sobriety, education of primary care physicians, media education, lethal means restriction, screening of at-risk youth, and school-based skills training for students.

**E. The New York Model**
New York State has taken great strides in improving care and treatment for individuals with co-occurring disorders. Some of the evidence of progress is as follows:

1. **Evidence-Based Practices**

   The New York Model is a framework for describing symptom severity, locus of care, and level of service integration needed among mental health, substance abuse, and primary health care systems.

   The Model consists of four quadrants with the locus of care for each:

   Quadrant 1
   Less severe mental disorder/less severe substance disorder. Locus of care: primary health care settings.

   Quadrant II
   More severe mental disorder/less severe substance disorder. Locus of care: mental health system

   Quadrant III
   Less severe mental disorder/more severe substance disorder. Locus of care: alcohol and other drug treatment facility

   Quadrant IV
   More severe mental disorder/more severe substance disorder. Locus of care: “No man’s land” (joint alcohol and mental health systems).

   Individuals located in Quadrant IV are most at-risk and New York State. As such a Quadrant IV Task Force was jointly supported by the NYS Office of Mental Health (OMH) and Office of Alcohol and Substance Abuse Services (OASAS) and it produced a report, *Treatment of Co-Occurring Mental Health and Addictive Disorders in New York State: A Comprehensive View* (May 2001). The report contains an action plan that addresses problems such as the need for integrated treatment, stigma, funding issues, and staff competency.

2. Additionally, OMH has directed its psychiatric centers to provide evidence-based treatments (EBT). A SAMHSA Evidence Based Practice Implementation Kit for Co-Occurring Disorders is being developed and will be distributed to adult psychiatric centers. The Kit will include: Fidelity scales, a user’s guide, workbook, practice demonstration video tapes, and recipient outcome measures.

3. Other evidence-based practices being implemented in New York State should also have a positive impact:

   SAMHSA’s Wellness Self-Management EBP plan is beginning to be implemented in New York State’s psychiatric cen-
ers. Although the curriculum is not designed specifically for the co-occurring patient, it addresses many risk factors for suicide such as relapse, stress, medication compliance, and relationships. It can be an important part of treatment for those with a co-occurring disorder.

4. New York State has funded Dual Recovery Coordinators who bring together administrators and service providers from substance abuse, mental health, corrections, and social service agencies to address current issues in the treatment of co-occurring disorders. Action plans are being developed and efforts have already begun to improve services. Issues being addressed include: housing, standardized assessment instruments, funding, training and competencies for both agencies (OMH, OASAS).

5. Improve training and assessment to increase identification of mood disorders and suicide risk factors.

II. ACTION STEPS

1. Promote access to mental health and substance abuse treatment. Treatments for mental disorders and substance abuse are increasingly effective. The New York Model is a proven approach to improving care and treatment for individuals with co-occurring disorders. Early interventions that are evidence-based also reduce the need for emergency health care services and costs. Avoided costs could also be expected in law enforcement, corrections, and social services. Most importantly, access to early interventions could prevent pain and suffering among those affected by mental disorders and substance addiction.

2. Promote greater awareness of co-occurring psychiatric and addictive disorders, and the consequent risk of suicide to this population among providers, law enforcement, corrections, and homeless shelter personnel, general public, emergency room physicians, and family members.

3. Increased integration and co-operation between substance abuse and mental health services, and between public and private care systems. Poorly coordinated treatment among multiple providers is a real barrier to recovery. Long-term case management is one way to ensure continuity of care involving chronic illnesses like depression and addiction.

4. Dual recovery coordinators and interagency workgroups can provide integrated treatment that decreases both homelessness and hospitalization for those diagnosed with mental illness and addiction disorders. This involves treatment of both disorders in one setting at the same time. Treatment can consist of outreach, pharmacological treatment, mental health and substance abuse counseling, group treatment, family psycho-education and community-based self-help. Train more individuals in the New York Model and other evidence-based practices; provide more appropriate housing for those not yet abstinent; and assist with transportation and medical needs of the dually diagnosed.

5. Share the results of the Seeking Safety program developed by Dr. Lisa Najavits at Harvard Medical School/McLean Hospital. It is the first integrated program for persons who, in addition to being dually diagnosed, also suffer from Post-Traumatic Stress Disorder.

6. Screen chemical dependency patients for depression or mood changes, and violence toward an intimate partner or spouse.

7. Educate and train family members and community gatekeepers to detect changes in those at suicidal risk outside the clinical care systems. Signs include reduced performance in the workplace and unexplained absences from work or school. Knowing how and where to
respond and refer individuals for treatment should be part of the training. Gatekeepers would include health, mental health, substance abuse, social work and human service professionals and lay people including clergy, teachers, correctional workers, coaches, youth workers, nurses’ aides, and faith leaders.

8. Substance abuse is a significant risk factor for suicidal behavior, especially among older adolescent males. Strategies to tighten teenage access to alcohol have successfully decreased youth suicidal behavior. Besides raising the legal drinking age to 21, stricter enforcement of such laws can deter risky behavior, as can increased surveillance.

REFERENCES
Suicide among older people is a major public health problem here in New York and across the United States. In 2002, the suicide rate for elders (age 55 and up) was 24% higher than the rate for New Yorkers under the age of 55.* In coming decades it is likely to take an even greater toll on senior citizens and their families. The determined and aggressive nature of self-destructive behaviors in late life makes suicide an especially challenging problem to address. The challenge must be taken up on a variety of fronts simultaneously.

**Key Trends**

The Office of Mental Health’s (OMH) analysis of population projections prepared from 2000 U.S. Census data identifies five major trends that will have a major impact on the mental health needs of New York elders in the next ten years. (NYSOMH: 2002)

1. Increased Racial and Ethnic Diversity. While New York’s projected population growth of 4.2% between 2000 and 2015, is expected to be among the lowest in the nation, significant changes will occur in the composition: the group of older New Yorkers will increase faster, up 19%, and be more diverse than any preceding old age group in terms of ethnicity, income level, education, family configurations, living arrangements and health. Minority elderly populations will increase the fastest: black, non-Hispanic (up 27%); Hispanic (up 76%); and Asian/Pacific (up over 110%).

2. Weakened Family Support Structures. The large cohort of baby boomers moving into the older population will be more likely than the preceding cohort to enter old age without spouses, and more will be childless or parents of only children. Still, more grandparents will be involved in the raising of their grandchildren, and the most significant mental health problem for this group is depression, with one in four grandparent care givers nationally experiencing a significant level of depression.

3. Major Growth in Two Important Groups. Rapid population growth of younger and older minority populations, as well as major growth in the older worker and pre-retirement populations as the baby boomers age out is expected. Cultural factors, immigration, socioeconomic status, language and literacy will need to be considered in designing responses to the mental health needs of the elderly in the future.

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4. Dramatic Increases in Dementia. One of the fastest rising age groups will be those 85 and older. By 2010, the number of cases of Alzheimer’s disease and other dementias will have increased by at least 25 percent. Alzheimer’s disease poses an enormous burden to health service and public health resources. Also, improvements in general health and health care techniques will lengthen the survival of patients with dementia, increasing the number of severely affected patients and raising the level of morbidity among patients with dementia.

5. More Demand for Care, Less supply of Care Givers. New York’s dependency ratio is changing: there are fewer care givers available for more older persons needing care. Therefore, the family, which currently provides 80% of the long-term care services, will be providing less and the “systems of care” must provide more. At the same time, we should recognize that many senior citizens are reluctant to utilize traditional mental health services which will require OMH to work with county mental health departments to increase the accessibility of mental health services in locations where the elderly reside and spend their time, especially home and congregate living situations. Accomplishing this goal will require review of regulations and reimbursement methodologies, as well as focused training of providers in such issues as the risk/treatment of suicide. (Project 2015:: OMH: 2000)

I. Conclusions
A great deal of pre-intervention research remains to be done before we have an adequate understanding of suicide’s pathogenesis in older people. Biological, psychological, and social factors all warrant rigorous study. Even as pre-intervention research continues, however, the ongoing loss of senior citizens to suicide demands that preventive interventions be designed and implemented. Indeed, major advances in the identification of modifiable risk factors are being made, and major initiatives to test the effectiveness of specific preventive interventions are underway. The recognition and optimal treatment of clinical depressive illnesses in older people, particularly in primary care settings, must remain an area of special emphasis.

Outreach to those elders at risk in the community who avoid, or lack access to, medical care is a second important element in any comprehensive plan for late life suicide prevention. The cost-effectiveness and reproducibility of these and other strategies informed by pre-intervention research must be tested in rigorously designed randomized, controlled trials. The relatively small scale of many programs precludes their use of attempted or completed suicide as outcome measures.

Empirically established risk factors for late life suicide should be used in those circumstances as the benchmarks against which to measure success. Opportunities should be encouraged for programs to collaborate, sharing methodology and procedures, to increase the likelihood of observing a significant impact on suicide outcomes. To facilitate that effort, a national database for suicide prevention strategies should be established to serve as a clearinghouse for information regarding program design and evaluation.

Finally, biased attitudes towards aging, deficits in knowledge about depression and suicide on the parts of health care providers and their older patients, and systemic barriers to mental health care access make suicide prevention more difficult in this population than in younger age groups. A comprehensive approach to suicide prevention in late life, therefore, must include the creative input of health policy makers with regard to the financial, medicolegal, and organizational barriers to effective suicide prevention. It also should include education programs aimed both at health care providers as well as elderly consumers and their families. The objectives of the education programs should be to foster an appreciation of healthy aging, improve understanding of signs and symptoms of clinical depression, and to teach older people and their support systems about the risks, warning signs, and treatment responsive-
ness of suicidal ideation and behavior in late life.

Reduction of late life suicides is a realistic goal. Creative partnerships of primary care providers, the mental health care sector, aging services, and other agencies and insurers will be needed to achieve it.

II. Action Steps

1. State policy should reflect the fact that the suicide rate for elderly (>65) males is the highest for any sub-population in New York.

2. Depression is more prevalent among elders than the general population. However, it is not a normal part of the aging process and should be treated appropriately. Validated, self-administered voluntary screening tools for depression should be routinely used with elderly patients in primary care health offices. Diagnosis and treatment of depression in elders should be aggressively pursued in the primary care practitioner’s office.

3. Gatekeeper programs and telephone support (warm lines) systems should be implemented and evaluated as “indicated” preventive interventions for isolated, high-risk elders. These services should be part of a comprehensive network of offerings, including case-finding, acute response, multi-disciplinary assessments, and other support services.

4. Elders tend to employ more lethal means of self-harm in the act of suicide. Restricting access to such means of self-harm as firearms and household poisons could save lives.

5. Since the vast majority of elders who die by suicide have seen their health care provider within 30 days of their death, it is essential that such visits include an assessment of suicidal thoughts, intent and plans they may have.

6. Chronic pain and debilitating physical illnesses are frequent precursors to suicide among elders. Death of a spouse, loss of companions and social isolation are also contributing risk factors.

7. Greater emphasis should be placed in medical, nursing and social service training on recognizing and treating depressive disorders and suicidal states in elders.

8. Research should seek to determine whether treatments designed to mitigate hopelessness and related effects in older people are effective in lowering suicide risk.

9. Include high-risk suicidal elders in controlled clinical trials of preventive interventions, while guaranteeing the ethical conduct of the research and the rights of the subjects themselves.

III. Prevalence

Older people in the United States have a higher suicide rate than any other segment of the population. While the elderly constitute 12.7% of the population in 1998, they accounted for 19.0% of completed suicides (Murphy, 2000). The suicide rate for the general population was 11.3/100,000. Combined rates for men and women of all races rose through young adulthood to a high of 15.5/100,000 in the 40-44 year age group, plateaued through mid-life, and rose to a peak of 22.9/100,000 in 80-84 year olds. The increased suicide risk with aging is accounted for in large part by the strikingly high rates for white males in later life. In 1998, the group at highest risk was white males aged 85 and older, whose rate of 62.7/100,000 was almost six times the nation’s age-adjusted average (National Center for Health Statistics, 2001).

In contrast, rates for women peak in mid-life and remain stable, or decline slightly, thereafter. This pattern is unlike patterns in most other countries of the world where, according to statistics reported by the World Health Organization, later life is the highest risk for both men and women (Pearson and Conwell, 1995). Suicide rates for the general population have remained relatively stable throughout the second half
of the 20th century. However, rates among older people declined by up to 50% between 1930 and 1980 (McIntosh et al; 1994). Optimistic explanations offered for this decline include increased economic security for older people resulting from the implementation of Social Security and Medicare legislation (Busse, 1994) and the more widespread and effective use of anti-depressant medications (Conwell, 1994). Others ascribe such variation to generational or cohort effects, a propensity to suicide that is characteristic of a group born within a specific time frame (Blazer et al., 1986; Manton et al., 1987). For example, people who entered old age before 1930 had higher rates of suicide at all points in the life course than did birth cohorts that entered late life from 1930 to 1980. If cohort effects do influence suicide rates, then the trend for lower suicide risk among older people would be expected to reverse. At all ages, the large postwar “baby boom” cohort has had substantially higher suicide rates than preceding generations (McIntosh, 1992). As more of these people enter later life, their suicide rates are likely to rise above those of the current elderly cohort. Perhaps presaging this trend, a recent report by the Centers for Disease Control and Prevention (CDC) found that the suicide rate for the population aged 65 and over rose 9% between 1980 and 1992 (MMWR, 1996). Rates among men and women aged 80-84 showed rises of 35% and 36% respectively. Some authors have argued that the size of the baby boom generation may work to the benefit of that cohort in later life through greater political influence and accumulated resources (McIntosh, 1992). Nonetheless, older people are the fastest growing segment of the population. Haas and Hendin (1983) projected that the number of suicides committed in later life would double by the year 2030 as a function of this demographic shift alone. There is, therefore, an urgent need for efficient and effective measures to prevent suicide in older people.

Havens (1965) characterized suicide as “the final common pathway of diverse circumstances, of an independent network rather than an isolated cause, a knot of circumstances tightening around a single time and place.” General understanding of suicide among older people is often oversimplified, ascribed to a single factor such as severe physical illness or depression. The reality is far more complex. There is no single cause for any suicide, and no two can be understood to result from exactly the same constellation of factors. As no single factor is universally causal, no single intervention will prevent all suicide deaths. The multi-determination of suicide present great challenges but also has important implications for prevention (O’Carroll, 1993).

IV. Preventive Interventions

Two general approaches to suicide prevention in late life have been identified: public health or population based strategies, and high-risk models (Lewis et al., 1997). The public health model advocates universal prevention through interventions that have a potential impact on large segments of a society. Examples include gun control legislation (Kellerman et al., 1992), detoxification of a domestic gas (Charlton et al., 1992), or restrictions on access to drugs with a low therapeutic index (Gunnell & Frankel, 1994). The high-risk model targets more highly selected populations. Among the elderly, two approaches to selective interventions in high-risk samples have been proposed: interventions in primary care settings designed to improve recognition and treatment of depressed and suicidal older patients, and community outreach to isolated elders at risk.

Interventions in Primary Care

The majority of older people at greatest risk for suicide already have access to health care services in which preventative intervention should be feasible. At least six studies conducted in Great Britain and the United States have demonstrated that from 43% to 76% of older people who committed suicide saw a primary care provider (PCP) within 30 days of death (Barraclough, 1971; Clark, 1991; Carney et al., 1994; Cattell & Jolley, 1995; Conwell, 1994; Miller, 1976). From 19% to 49% saw a physician within one week of their suicide. This observation is critical for prevention as it suggests a
means for providing access for elders in, or immediately preceding, the development of the suicidal state.

Depression is the most common psychopathology associated with suicide in late life, and the most prevalent mental disorder seen among older patients in primary care settings. Yet many studies in the medical and psychiatric literature have demonstrated that PCPs have difficulty recognizing treatable depression in their patients. Screening tools for depression have been validated for use in elderly primary care patients. Such measures should be used routinely in primary care offices. In addition, greater emphasis should be placed in undergraduate, graduate, and continuing medical education on recognition and effective treatment of depressive disorders and suicidal states in older people. Since older people rarely utilize mental health services, active collaborations between psychiatry and primary care in medical settings may yield optimal outcomes.

Suicidal people are frequently excluded from treatment research because of liability concerns (Linehan, 1997). Without their participation, we lack the evidence with which to judge the interventions’ efficacy and effectiveness at reducing suicidal outcomes. The ethical and medicolegal implications are profound. Nonetheless, it is important that regulatory mechanisms be devised that shield investigators from unjustified liability claims, enabling the inclusion of individuals at high risk, while at the same time guaranteeing the ethical conduct of the research and the rights of the subjects themselves.

Community Outreach
Although initiatives in primary care settings promise to provide access for prevention to the majority of older people at risk for suicide, a substantial minority would slip through the cracks: those without resources to pay for care, those who are homebound and physically unable to access care, and those who, out of fear and misunderstanding, choose not to seek help. For these elders, who may indeed be the most vulnerable segment of the population, outreach is required.

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Benefits of Prevention
Prevention of late-life suicide can be expected to have benefits of reduced morbidity and mortality among the surviving spouse and other loved ones. There is a great deal of evidence to suggest that prevention of suicide in older people by improved recognition and treatment of its most potent risk factor, depression, will result in a host of other “ancillary” benefits. In addition to being at greater risk of suicide, older people with depression have higher mortality from all causes. Their functioning is significantly more impaired, their quality of life is diminished, and utilization of health care resources is greatly increased.
A range of studies have confirmed an association between depression and increased morbidity due to stroke, acute myocardial infarction, chronic obstructive pulmonary, hip fracture, Parkinson's disease, and arthritis (see review by Katz, 1996). Moreover, depression has been shown to significantly predict mortality at six month and 18 month follow-up of patients with acute myocardial infarction (Frasure-Smith et al., 1993, 1995), and to be associated with increased all-cause mortality in both the general population (Bruce et al., 1994) as well as among older people in nursing homes (Rovner et al., 1991).

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Precious Wife of Tom
Loving Mother of
Alane, Robert, Mark, Bruce & Diane