How can we stop young people from killing themselves? Now we at least know the risk factors for teen suicide.
Robbie grew up in a working-class Pittsburgh neighborhood. He won a scholarship to the Massachusetts Institute of Technology, but turned it down. He didn’t want to leave his girlfriend and his buddies at home. Then, his girlfriend broke up with him. Robbie (not his real name) became depressed and started smoking marijuana. He got back together with his girlfriend, then she broke up with him again.

Before he killed himself, Robbie left a suicide note. It was a poem written on a scrap of paper from a Giant Eagle bag, in the form of a Shakespearean sonnet—written in iambic pentameter, true to the form’s precise meter. The poem expressed his love for the girl and his feeling that life was not worth living. Robbie shot himself.
One evening in the mid-’80s, David Brent, professor of psychiatry, pediatrics, and epidemiology at the University of Pittsburgh, heard Robbie’s story from the boy’s parents. They brought out the piece of paper that Robbie had ripped from the grocery bag. *It’s a poem of some sort*, his parents said.

Nearly 20 years later, Brent’s voice fills with emotion as he remembers the boy he never met. Robbie’s final communication to the world made an unforgettable impression on him. “The kid had an amazing intellect. Those aren’t easy poems to write. “There was something he was trying to communicate beyond the words in the poem,” says Brent. “I mean the metaphor, that he did it on the back of a Giant Eagle bag, that was exactly his dilemma. He was between two worlds. And I have the feeling that for him to succeed, he [would] perhaps have had a sense of loss, that he would lose all his buddies and his neighborhood. But if he stayed, he had the loss of this potential.

“It’s almost as if he’d wished that somebody … would read it and experience a sense of regret, as I did,” says Brent.

“It was so unnecessary, what happened to that kid.”

Nearly 1,900 Americans between the ages of 10 and 19 killed themselves in 2001. Teen suicides tend to evoke, as Robbie’s story did in Brent, a feeling of needless tragedy. Teenagers end lives full of potential because of difficulties that, to an adult outsider, seem as though they might have been overcome. The waste leaves us wondering, *How can we prevent these deaths?*

In 1980, when Brent was in his final year of a psychiatry residency at Western Psychiatric Institute and Clinic, he was on a consultation/liaison service. Pediatricians would call him and say, *We have a kid who made a suicide attempt last night. Will you evaluate him and recommend whether he should go home or be admitted to the hospital?* Three or four times a week, he was asked to evaluate suicidal children, yet he had no reasoned way to determine who was at the greatest risk.

As a resident, Brent planned to practice in a rural area after finishing his training. “But as my residency was winding to an end,” he says, “I was beginning to confront the fact that I didn’t know very much. I mean, there wasn’t very much known in child psychiatry. So I didn’t have anything to offer, or not much.” To try to find answers, he was drawn toward research.

Two of Brent’s early studies were “psychological autopsies.” He and his colleagues spoke with the families and friends of some 90 suicide victims, in an effort to better characterize teens who commit suicide. (His conversation with Robbie’s parents was part of this research.) Initially, Brent had limited funding and did most of the interviews himself; after a full day at work, he would drive out to a family’s home, getting there around 6 or 7 p.m., many times not getting home until 2 the next morning. Often, it was hard to get to sleep after witnessing so much pain, recalls Brent.

From studies like this, data accumulated, and myths began to fall by the wayside. Up until the ’80s, the prevailing belief was that adolescents who committed suicide were psychologically normal but reacted to an acute stressor, such as a disappointment or alienation from parents. “People were concerned that it could happen to their kid, to any kid, and you didn’t know where to look and how to prevent it,” says Brent. “Now we know that almost all teens who kill themselves have a psychiatric illness, most commonly a mood disorder.”

On average, children suffer from a mental
illness, usually depression, for seven years before killing themselves.

Until the '80s, it was believed that teens who attempted suicide and those who completed it were in distinct groups—kids attempting suicide were simply making a gesture and didn’t really intend to kill themselves. Brent helped to establish that the single largest risk factor for completed suicide was attempted suicide and urged clinicians and communities to take suicide attempts seriously. “It sounds like common sense now,” says Brent, “but at the time it wasn’t.”

In the early '90s, research by Brent and others unearthed another trait linked to suicide: impulsive aggression, also known as reactive aggression—the tendency to react with hostility or aggression to provocation or frustration.

“Reactive aggression is,” explains Brent, “say, you’re sitting minding your own business and somebody insults you. You punch them or you act out. It has an emotional quality to it that has to do with the inability to modulate your response. Your response is out of proportion, perhaps, to the situation.”

Through nearly 25 years of painstaking research by Brent and others, a cluster of traits—including depression, past suicide attempts, and reactive aggression—has emerged that helps professionals identify teens most at risk for suicide. (In 1998, Brent was one of the primary authors of the American Academy of Child and Adolescent Psychiatry’s practice parameters on depression, which lays out risk factors for suicide.)

The Pittsburgh professor now holds an endowed chair in suicide studies, which is the only such appointment in the United States. But has the information made a difference?

The rate of teen suicide increased three-fold from 1960 to 1980, peaked in 1987, remained stable for years, then 10 years ago began to decline. The change is too new, perhaps, to signify a consistent trend, but seems to be a hopeful sign. Researchers can only speculate about why rates have declined. Is it better identification of teens at risk, increasing use of selective serotonin reuptake inhibitors (there’s now a contentious debate within the FDA; some believe certain formulations can actually increase the risk of teen suicide), or have environmental factors changed (like lessened access to alcohol or guns)? “Who knows what it is, but it’s good,” says Brent.

But it is not enough for Brent. “If we knew what type of interventions could actually reduce suicidal risk, that would be good, because right now we’re sort of flying by the seat of our pants,” he says. While many children at risk for suicide are treated for underlying depression, treating depression alone may not be enough to prevent suicide. Brent has seen teens appear to come out of depression, then try to kill themselves.

“If there is another vulnerability [besides depression], say, related to ... impulsive aggression, and you’re not treating it, you’re not making a difference,” says Brent.

The National Institute of Mental Health (NIMH) has funded Brent to conduct a pilot study of depressed adolescents who have made a suicide attempt. He and his collaborators at five sites plan to enroll 120 teens. A third of the adolescents will receive a specially designed psychotherapy; a third will receive antidepressant medication; and a third will receive both the psychotherapy and the medication.

The psychotherapy sessions will entail looking at all of the events and emotions that led up to the suicide attempt and trying to understand what feelings or situations are most likely to trigger an attempt. The therapy then focuses on ways of coping with those triggers. (The parents of teens in the psychotherapy groups will also take part in an education program and counseling to help them provide a safe, supportive environment for their children.)

This study is one of only a handful designed to test therapies whose primary focus is preventing suicide. The risk of a repeated suicide attempt in a depressed child is about 30 to 40 percent.

Although the NIMH funding for the study was in hand two years ago, the researchers only recently began enrolling their first participants. The delay stemmed in part from the Institutional Review Boards at the five sites. Charged with protecting the human subjects of research, the IRBs hesitated before granting approval, which is required for the study to proceed. The review boards are cautious because the study population is at high risk for suicide. (They possess the two greatest risk factors for suicide in teens, depression and a past suicide attempt.)

“I don’t want anybody to die in our studies,” says Brent.

“You have to recognize that if you deal with a higher risk group, then bad things happen. Brent has seen teens appear to come out of depression, then try to kill themselves.

“Depression is a potentially fatal illness; people will die [from it].”

He believes that if someone enrolled in the trial commits suicide, the trial may be stopped: “The general emotional attitude is much different than if somebody dies of end-stage cancer in a clinical trial. I’m not sure that the views should be quite that disparate.”

Brent points out another concern raised when studying suicidal populations: Are people who don’t particularly care whether they live or die capable of giving informed consent to participate in research?

“It’s not that they don’t understand the risks, but the risks may not matter to them,” says Brent. He suggests researchers get consent from the study subject as well as a proxy—“somebody close to them, if you can find someone.” In Brent’s teen study, because the participants are minors, their parents or guardians give informed consent.

Brent speaks of the need to address such issues appropriately, but at the same time he is anxious to move the research forward: “There is a point where it’s unethical not to study these people, because otherwise you’ll never improve their treatment.”

People who kill themselves are four times more likely than people who don’t to have a close relative who has attempted or completed suicide. Revealing how genetics and neurobiology contribute to suicide might help reduce suicide rates over the long haul, says Brent. He’s now engaged in a study of an extended family of 500 in Israel who all have the same ancestor. The family’s rate of suicide attempts is three times higher than the rate in two other extended families who live in the same village. (The other families will serve as controls in the study.) Working with statistical geneticists like Bernie Devlin, a Pitt PhD associate professor of psychiatry and human genetics, he’s hoping to find genes linked to a propensity to attempt suicide.

After some 25 years of research and clinical experience, Brent no longer feels ignorant when confronted with a teen who has attempted suicide. “I do feel pretty confident that I’ll be able to do something for somebody, even though it feels like a real crisis for [the patient].”

“I’m very grateful for that.”

STUDY FEATURES

The rates of depression and suicide, and the number of suicides, have declined.

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“You have to recognize that if you deal with a higher risk group, then bad things happen.
A ngela Brown (a pseudonym) was in her early 70s. Her husband died, then she had major surgery. Following the surgery, she developed a complication of anesthesia that caused scarring in her lungs. Brown had sung in her church choir for years; because of the scarring, she could no longer sing. Under the stress and pain of bereavement, major illness, and disability, she became clinically depressed. Sometimes she wished she could “just go to sleep and never wake up.”

Six to 10 percent of Americans who are older than 60 suffer from major depression. In many, the disease is never diagnosed. Only half of depressed Caucasian elderly patients seen in primary care settings receive an appropriate diagnosis (according to national studies on the frequency of the disease compared to Medicare diagnosis data). In depressed elderly African Americans seen by primary care doctors, only 25 percent are diagnosed.

Even when the disease is recognized, an elderly patient treated in a primary care setting often does not receive appropriate treatment. “Typically, they may get a low dose of an antidepressant medication, which often isn’t adjusted to a fully effective dose,” says Charles Reynolds (Res ’80), professor of psychiatry, neurology, and neuroscience at the University of Pittsburgh. “Typically, their medication is discontinued too soon, and they often don’t receive counseling.”

The underdiagnosis and undertreatment of depression in the elderly may contribute to the high rates of suicide among the elderly in the United States. Depression is one of the risk factors most strongly associated with suicide in old age. In those 60 and older, suicide is six times more common than it is in the general population—and suicide is even more prevalent in people older than 75.

“The elderly mean business. And very often when the elderly attempt suicide, the attempt is lethal,” says Reynolds.

He and his colleagues have laid out a new strategy for improving depression treatment in the elderly—and, he hopes, reducing suicide rates. Reynolds’ study was published in the March 3, 2004, issue of the Journal of the American Medical Association. The research involved 20 primary care practices that treat large numbers of the elderly. A “depression care manager”—a nurse, social worker, or psychologist—was placed in each practice. The manager screened elderly patients willing to participate in the study; depressed patients were randomized into one of two groups.

One group received usual care from the primary care provider; in the other group, the physician worked with the depression care manager, and patients were treated with medication and, when appropriate, interpersonal psychotherapy (IPT). The therapy deals with issues like bereavement and role transitions, such as retirement. “IPT also helps older people deal with the interpersonal conflicts that can arise out of increasing dependency. If I’m old and medically ill, and I’m more dependent on my spouse for daily care than I used to be, that’s a situation that could be rife with conflict,” says Reynolds.

The study found that 50 percent of the patients who received the services of the depression care manager recovered from depression, versus only 30 percent of patients who received usual care. Symptoms of depression, including suicidal ideation—thoughts such as Angela Brown’s (thinking that one would be better off dead) or formulation of a plan for carrying out a suicide—were reduced more rapidly in the experimental group. (Suicidal ideation is strongly associated with suicide in old age.)

The cost of the intervention—including antidepressants—was $400 to $500 per patient.

“The treatment works. The science is there,” says Reynolds. “Now we need social justice.” He points out that Medicare pays 50 percent of the customary cost of treating mental illnesses, while it pays 80 percent of the customary cost of treating other illnesses.

“Medicare discriminates against the mentally ill elderly,” says Reynolds.

The program’s stance affects not only the mental health of older Americans, but also their overall health, says Reynolds.

“Depression makes it more difficult for older people to comply with medical treatments.” It amplifies the disability of other illnesses, says Reynolds, noting: “The mind/brain is indissolubly linked to the body.” (To learn more about the power depression can have over other medical conditions, see p. 29 story.)

For Brown, who participated in Reynolds’ study, treatment with antidepressant medication and IPT reduced her symptoms of depression. And though her lung capacity isn’t what it used to be, she has started to sing once again in her church choir.