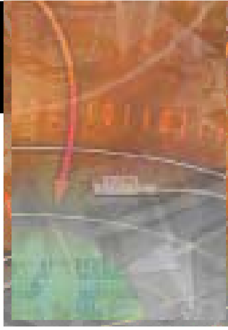

policy points

Reducing Suicide

Certain groups are at higher risk for suicide, including older white males, dentists, and doctors. If primary physicians know what to look for, they may be able to help individual patients in the days or weeks before suicide.

BY JEFF ATKINSON

Nearly 20 percent of people who complete suicide make contact with their primary care provider in the week before their death, and nearly 40 percent make contact within one month before death.

These visits could provide an opportunity for the physician to intervene in the suicide, given an understanding of what key signs to recognize. Patients, on their own initiative, typically do not confide their suicide plans to primary care providers. Nonetheless, signs of danger are often present. Ninety to 95 percent of people who complete suicide have a diagnosable mental disorder, particularly depression or bipolar disorder. Studies have shown that patients usually will tell their physicians about suicidal thoughts if they are asked, and that asking a patient about suicidal thoughts does not increase the risk of suicide.

The Institute of Medicine, part of the National Academy of Sciences established by Congress, has called for more research and dissemination of protocols for screening patients for risk of suicide. The recommendation is one of many in a recent report from the Institute entitled "Reducing Suicide: A National Imperative." The report (496 pages) is available in book form and on line at *www.nap.edu/books/0309083214/html*

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Suicides exceed homicides

In 2000, there were 29,350 deaths by suicide in the United States. This reflects a death rate of 10.6 per year per 100,000 population, outnumbering homicides by more than one half, and accounting for 178,000 more deaths than AIDS over the last twenty years. Suicide is the 11th leading cause of death for all ages in the United States and the third leading cause of death for individuals between 10 and 24 years of age. Suicide rates may be under-reported in some jurisdictions because of reluctance to classify a death as suicide and because of the ambiguity in the cause

Continued from previous page

of death for some individuals, including in auto accidents.

The death rates for suicide vary markedly, depending on age, ethnic background, and geographic region. For example, data from the National Center for Health Statistics for 2000 shows the suicide rate for older white males is high: 40.4 per 100,000 for ages 75 - 84, and 58.8 per 100,000 for 85 years and older. (See "Death Rates for Suicide.") The rate for white females age 65 and over is much lower: 4.3 per 100,000. Black females and Hispanic females have the lowest suicide rate of all ethnic groups (1.8 per 100,000 for all ages). Factors contributing to the low suicide rate for black females are believed to include spirituality and more connections to community institutions, including churches.

Native American and Alaskan native males have the highest suicide rate of all ethnic groups (19.6 per 100,000). The rates are particularly high for individuals under age 45. After age 45, the suicide rates are similar to or lower than the suicide rates for males in the general population. Female Native Americans and Alaska natives also have higher suicide rates than females in the general population until age 45. Social disruption, family disruption, and alcohol abuse are linked to the increased suicide rates.

New Jersey has the lowest suicide rate in the U.S. (6.3 per 100,000) while Alaska and Nevada have the highest rates (in excess of 21 per 100,000). Western states and rural states tend to have higher suicide rates than eastern states and more densely populated states. More limited access to mental health services and more availability of firearms correlates with higher suicide rates. For discussion of risk factors and protective factors associated with suicide, see "Risk Factors Associated with Suicide," and "Factors that Decrease Risk of Suicide."

Attempts versus completion

In Western countries, men complete suicide more often than women by a factor of 3 to 5, although women generally make more suicide attempts. Several explanations for this are given: Men are more likely than women to have the co-morbid conditions of alcohol and drug abuse; men tend to use more lethal means (firearms rather than overdose of drugs); and women are more likely to seek help.

In China, however, the suicide rate is somewhat higher for women than men: 14.8 versus 13.4 per 100,000, according to the World Health Organization. The reason for the higher suicide rate for women in China is not certain, but it appears to be linked, in part, to the easy access of women in rural areas to very toxic pesticides which might be consumed in an impulsive moment. The Institute of Medicine report comments, "[C]ases that might end up as suicide attempts in the United States are fatal in China." For suicide rates of men and women in different countries, see "Suicide Rates (per 100,000), by Country, Year, and Gender."

Doctors and dentists at risk

Individuals in certain professions are at heightened risk for suicide. Dentists have a 5.4 increased risk of suicide, and physicians have a 2.3 increased risk. Reasons for the heightened risk may include increased stigma within the professions regarding mental illness which results in delays in seeking treatment. Some studies suggest that police officers also have a heightened risk for suicide. This may be due in part to the easy access of police officers to guns.

The Institute of Medicine suggests more study of the causes, risks, protective factors, and successful interventions regarding suicide. The institute believes this can be best accomplished through the establishment of multiple research centers, similar to those that have been established with a combination of public and private funds for the study of cancer, Alzheimer's disease, and different types of injury. The centers could be freestanding or affiliated with a university and would promote the training of more new multidisciplinary researchers in suicidology. Because of the low incidence of suicide, centers should have at least 100,000 participants to obtain statistically valid results.

More precise data

The institute also calls for the establishment of a more rigorous data-gathering system, similar to the federal government's Fatality Analysis Reporting System (FARS), which gathers more than 100 coded pieces of information about each fatal auto crash in the country. The FARS information is analyzed and has led to reforms to promote safety, including raising the minimum age for purchasing alcoholic beverages from 18 to 21. The number of auto deaths per year (40,000) is similar in magnitude to the number of suicides (29,000).

Currently, Oregon has a statewide system for collecting data about adolescent suicide attempts, requiring reports to the state health department of a variety of information, including de-

Continued from previous page

Suicide Rates by Country, Year, and Gender (Per 100,000 population per year, using the most recent data available)

Country	Year	Males	Females
ARGENTINA	*96*	*9.9*	*3.0*
AUSTRALIA	*99*	*21.2*	*5.1*
AUSTRIA	*00*	*29.3*	*10.4*
BELARUS	*99*	*61.1*	*10.0*
BELGIUM	*95*	*31.3*	*11.7*
BRAZIL	*95*	*6.6*	*1.8*
CANADA	*97*	*19.6*	*5.1*
CHILE	*94*	*10.2*	*1.4*
CHINA *(Selected rural & urban areas)*	*98*	*13.4*	*14.8*
DENMARK	*98*	*20.9*	*8.1*
FINLAND	*99*	*37.9*	*9.6*
FRANCE	*98*	*27.1*	*9.2*
GERMANY	*99*	*20.2*	*7.3*
GREECE	*98*	*6.1*	*1.7*
HUNGARY	*00*	*51.5*	*15.4*
ICELAND	*97*	*19.1*	*5.2*
INDIA	*98*	*12.2*	*9.1*
IRELAND	*98*	*23.1*	*3.9*
ISRAEL	*97*	*10.5*	*2.6*
ITALY	*98*	*12.3*	*3.6*
JAPAN	*99*	*36.5*	*14.1*
LATVIA	*00*	*56.6*	*11.9*
LITHUANIA	*00*	*75.6*	*16.1*
LUXEMBOURG	*00*	*22.2*	*6.7*
MEXICO	*95*	*5.4*	*1.0*
NETHERLANDS	*99*	*13.0*	*6.3*
NEW ZEALAND	*98*	*23.7*	*6.9*
NORWAY	*98*	*18.2*	*6.7*
PUERTO RICO	*92*	*16.0*	*1.9*
REP. OF KOREA	*00*	*18.8*	*8.3*
RUSSIAN FED.	*98*	*62.6*	*11.6*
SPAIN	*98*	*13.0*	*3.8*
SURINAME	*92*	*16.6*	*7.2*
SWEDEN	*98*	*20.1*	*7.8*
SWITZERLAND	*96*	*29.2*	*11.6*
THAILAND	*94*	*5.6*	*2.4*
UKRAINE	*00*	*52.1*	*10.0*
UNITED KINGDOM	*99*	*11.8*	*3.3*
UNITED STATES	*00*	*18.1*	*4.0*

Sources: World Health Organization (WHO) and National Center for Health Statistics (NCHS).

Risk Factors Associated with Suicide

Depressive disorders, including bipolar disorders — Four percent of persons with depressive disorders will die from suicide. Feelings of hopelessness increase the risk of suicide, and hopelessness has been found to be a more reliable predictor of suicide than depression by itself. For men, mood disorders increase the risk of suicide by a factor of 13.5. Twenty-five to 50 percent of persons with bipolar disorder will attempt suicide at least once.

Impulsivity and aggression — This is a particularly strong risk factor in suicides by youth.

Alcohol and drug abuse — Approximately 20 - 25 percent of persons who complete suicide are intoxicated with alcohol at the time of death, and 64 percent of persons who attempt suicide are inebriated.

Other psychiatric diagnoses — A panic disorder increases the risk of suicide by a factor of 20 compared to persons without psychiatric disorders. Schizophrenia increases the risk of suicide by 30 to 40 times the risk for the general population. Between 40 and 90 percent of persons with borderline personalities have attempted suicide, and approximately 10 percent will complete suicide.

Family history — Suicide by a first degree family member increases the risk of suicide by a factor of four. Genetic factors, including those associated with mental illness, are believed to account for 30 to 50 percent of the variance

Physical and sexual abuse as a child — Different studies have said that experiencing physical and sexual abuse as a child increases the risk of suicide by factors of 1.3 to 25. Longer duration of abuse and penetration during sexual abuse increase the risk. Factors regarding the victim which decrease the risk of suicide from physical and sexual abuse include: high intelligence, scholastic achievement, paternal care, and connection to other competent adults.

Unemployed or out of school — Unemployment increases suicide risk by a factor of 2. Adolescents who have dropped out of school and are unemployed have a 44-fold increased risk.

Availability of guns in the home — The presence of a handgun in the home increases the risk of suicide by a factor of about 5; long guns increase the risk by about 3. Keeping guns loaded adds to the risk; keeping a gun locked decreases the risk by about one-half.

Social disruptions — Massive social changes, including few opportunities for employment, have been associated with increased risk of suicide. In certain republics of the former Soviet Union, for example, suicide rates increased markedly following breakup of the Soviet Union. The rate in Latvia nearly doubled between 1970 and 1995, and the rate in the Ukraine increased by 57 percent between 1988 and 1997.

Loss of spouse — This factor is especially prominent for elderly persons and it is more pronounced for men than women. ■

Factors that Decrease Risk

- Being married
- Being a parent (particularly for mothers)
- Close social relationships
- Participation in religious activities

Source: Institute of Medicine (and studies cited by the Institute).

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mographics, method of attempt, psychological history, drug or alcohol use, previous attempts, reasons for attempt, and seriousness of attempt.

Among key issues to research are the details of the pathways and mechanisms to suicide and the nature and duration of treatments that are most effective, including pharmacology, lengths of hospital stay, and frequency of psychotherapy.

Need for clinical trials

The institute calls for more use of persons with suicidal behaviors in clinical trials. Currently such individuals usually are excluded from clinical trials, which hinders development of treatments that may be beneficial to such patients. Including persons with suicidal behaviors would require extra precautions by the researchers. The institute report said: "[S]uicide is, unfortunately, a medically expectable outcome of many mental illnesses. Death in a cancer clinical trial may be predictable, or even inevitable, but trials do not exclude terminally ill patients."

The institute cited several programs which have had success in reducing suicides:

GUN CONTROL LAWS-
The institute noted that after Washington, DC adopted firearms legislation, the suicide rate from firearms dropped by 23 percent and the overall suicide rate dropped by 9 percent. Surrounding areas without firearm legislation did not experience such drops. The legislation included requirements for registration, fitness, and knowledge of purchasers, and keeping guns unloaded and disassembled.

DEATH RATES FOR SUICIDE BY AGE AND ETHNIC BACKGROUND

(Per 100,000 per year, using data from 2000)

Black females, all ages	*1.8*
Hispanic females, all ages	*1.8*
White females, all ages	*4.0*
American Indian or Alaskan Native females, all ages	*4.6*
Black males, all ages	*10.2*
All persons (average)	*10.6*
Hispanic males, all ages	*10.8*
White males, all ages	*19.4*
American Indian or Alaskan native male, all ages	*19.6*
White males, ages 75 - 84	*40.4*

Source: National Center for Health Statistics (NCHS)

BLISTER PACKS- Use of blister packs with only one pill per bubble and restriction of the drug content has substantially reduced morbidity and mortality from acetaminophen overdose according to a comparison of data from France (blister pack required) to England (blister pack not required).

CRISIS TELEPHONES ON BRIDGES-
When a crisis telephone was installed on a bridge from which many people had committed suicide, the telephone was used in 30 instances, and only one telephone user completed suicide, although nine people jumped without using the telephone, and five of those nine died.

SCHOOL-BASED PROGRAMS-
Several schools have suicide prevention programs (or general mental health programs) that seem to have reduced suicide rates. The most successful programs, the institute said, are long-term and include stress-protection and competence-promotion. The institute cautions that some "short-term school-based suicide awareness interventions . . . may be ineffective and even potentially harmful."

Breast cancer comparison

The institute notes that $400 million was spent on breast cancer research in 1998. In approximately the same time period, $40 million was spent on suicide research, even though the number of persons who die of breast cancer and suicide are in the same general range (40,000 and 30,000 per year, respectively). The institute said that spending on research of suicide is "disproportionately low given the magnitude of the problem of suicide" and that a "substantial investment of funds is needed to make meaningful progress."

If the institute's recommendations are followed, physicians will have more information with which to provide evaluations and treatment of patients who may come to the office with somatic complaints, but who also may have mental health issues and suicidal ideation that need to be explored. ■

Jeff Atkinson teaches courses in health-care reform and health-care contracts at DePaul University College of Law in Chicago, where he graduated summa cum laude. He also is the past chair of the Illinois State Bar Association Standing Committee on Mental Health Law and he writes on legal, medical, and ethical issues.