Mental Health

A Report of the Surgeon General
Executive Summary

DEPARTMENT OF HEALTH AND HUMAN SERVICES
U.S. Public Health Service

The Center for Mental Health Services
Substance Abuse and Mental Health Services Administration

National Institute of Mental Health
National Institutes of Health

Suggested Citation

U.S. Department of Health and Human Services. *Mental Health: A Report of the Surgeon General—Executive Summary*. Rockville, MD: U.S. Department of Health and Human Services, Substance Abuse and Mental Health Services Administration, Center for Mental Health Services, National Institutes of Health, National Institute of Mental Health, 1999.

For sale by the Superintendent of Documents,
P.O. Box 371954, Pittsburgh, PA 15250–7954

Message from Donna E. Shalala

Secretary of Health and Human Services

The United States leads the world in understanding the importance of overall health and well-being to the strength of a Nation and its people. What we are coming to realize is that mental health is absolutely essential to achieving prosperity. According to the landmark "Global Burden of Disease" study, commissioned by the World Health Organization and the World Bank, 4 of the 10 leading causes of disability for persons age 5 and older are mental disorders. Among developed nations, including the United States, major depression is the leading cause of disability. Also near the top of these rankings are manic-depressive illness, schizophrenia, and obsessive-compulsive disorder. Mental disorders also are tragic contributors to mortality, with suicide perennially representing one of the leading preventable causes of death in the United States and worldwide.

The U.S. Congress declared the 1990s the Decade of the Brain. In this decade we have learned much through research—in basic neuroscience, behavioral science, and genetics—about the complex workings of the brain. Research can help us gain a further understanding of the fundamental mechanisms underlying thought, emotion, and behavior—and an understanding of what goes wrong in the brain in mental illness. It can also lead to better treatments and improved services for our diverse population.

Now, with the publication of this first Surgeon General's Report on Mental Health, we are poised to take what we know and to advance the state of mental health in the Nation. We can with great confidence encourage individuals to seek treatment when they find themselves experiencing the signs and symptoms of mental distress. Research has given us effective treatments and service delivery strategies for many mental disorders. An array of safe and potent medications and psychosocial interventions, typically used in combination, allow us to effectively treat most mental disorders.

This seminal report provides us with an opportunity to dispel the myths and stigma surrounding mental illness. For too long the fear of mental illness has been profoundly destructive to people's lives. In fact mental illnesses are just as real as other illnesses, and they are like other illnesses in most ways. Yet fear and stigma persist, resulting in lost opportunities for individuals to seek treatment and improve or recover.

In this Administration, a persistent, courageous advocate of affordable, quality mental health services for all Americans is Mrs. Tipper Gore, wife of the Vice President. We salute her for her historic leadership and for her enthusiastic support of the initiative by the Surgeon General, Dr. David Satcher, to issue this groundbreaking Report on Mental Health.

The 1999 White House Conference on Mental Health called for a national antistigma campaign. The Surgeon General issued a Call to Action on Suicide Prevention in 1999 as well. This Surgeon General's Report on Mental Health takes the next step in advancing the important notion that mental health is fundamental health.

Foreword

Since the turn of this century, thanks in large measure to research-based public health innovations, the lifespan of the average American has nearly doubled. Today, our Nation's physical health—as a whole—has never been better. Moreover, illnesses of the body, once shrouded in fear—such as cancer, epilepsy, and HIV/AIDS to name just a few—increasingly are seen as treatable, survivable, even curable ailments. Yet, despite unprecedented knowledge gained in just the past three decades about the brain and human behavior, mental health is often an afterthought and illnesses of the mind remain shrouded in fear and misunderstanding.

This Report of the Surgeon General on Mental Health is the product of an invigorating collaboration between two Federal agencies. The Substance Abuse and Mental Health Services Administration (SAMHSA), which provides national leadership and funding to the states and many professional and citizen organizations that are striving to improve the availability, accessibility, and quality of mental health services, was assigned lead responsibility for coordinating the development of the report. The National Institutes of Health (NIH), which supports and conducts research on mental illness and mental health through its National Institute of Mental Health (NIMH), was pleased to be a partner in this effort. The agencies we respectively head were able to rely on the enthusiastic participation of hundreds of people who played a role in researching, writing, reviewing, and disseminating this report. We wish to express our appreciation and that of a mental health constituency, millions of Americans strong, to Surgeon General David Satcher, M.D., Ph.D., for inviting us to participate in this landmark report.

The year 1999 witnessed the first White House Conference on Mental Health and the first Secretarial Initiative on Mental Health prepared under the aegis of the Department of Health and Human Services. These activities set an optimistic tone for progress that will be realized in the years ahead. Looking ahead, we take special pride in the remarkable record of accomplishment, in the spheres of both science and services, to which our agencies have contributed over past decades. With the impetus that the Surgeon General's report provides, we intend to expand that record of accomplishment. This report recognizes the inextricably intertwined relationship between our mental health and our physical health and well-being. The report emphasizes that mental health and mental illnesses are important concerns at all ages. Accordingly, we will continue to attend to needs that occur across the lifespan, from the youngest child to the oldest among us.

The report lays down a challenge to the Nation—to our communities, our health and social service agencies, our policymakers, employers, and citizens—to take action. SAMHSA and NIH look forward to continuing our collaboration to generate needed knowledge about the brain and behavior and to translate that knowledge to the service systems, providers, and citizens.

Nelba Chavez, Ph.D.
Administrator
Substance Abuse and Mental Health
Services Administration

Steven E. Hyman, M.D.
Director
National Institute of Mental Health
for The National Institutes of Health

Bernard S. Arons, M.D.
Director
Center for Mental Health Services

Preface

from the Surgeon General
U.S. Public Health Service

The past century has witnessed extraordinary progress in our improvement of the public health through medical science and ambitious, often innovative, approaches to health care services. Previous Surgeons General reports have saluted our gains while continuing to set ever higher benchmarks for the public health. Through much of this era of great challenge and greater achievement, however, concerns regarding mental illness and mental health too often were relegated to the rear of our national consciousness. Tragic and devastating disorders such as schizophrenia, depression and bipolar disorder, Alzheimer's disease, the mental and behavioral disorders suffered by children, and a range of other mental disorders affect nearly one in five Americans in any year, yet continue too frequently to be spoken of in whispers and shame. Fortunately, leaders in the mental health field—fiercely dedicated advocates, scientists, government officials, and consumers—have been insistent that mental health flow in the mainstream of health. I agree and issue this report in that spirit.

This report makes evident that the neuroscience of mental health—a term that encompasses studies extending from molecular events to psychological, behavioral, and societal phenomena—has emerged as one of the most exciting arenas of scientific activity and human inquiry. We recognize that the brain is the integrator of thought, emotion, behavior, and health. Indeed, one of the foremost contributions of contemporary mental health research is the extent to which it has mended the destructive split between "mental" and "physical" health.

We know more today about how to treat mental illness effectively and appropriately than we know with certainty about how to prevent mental illness and promote mental health. Common sense and respect for our fellow humans tells us that a focus on the positive aspects of mental health demands our immediate attention.

Even more than other areas of health and medicine, the mental health field is plagued by disparities in the availability of and access to its services. These disparities are viewed readily through the lenses of racial and cultural diversity, age, and gender. A key disparity often hinges on a person's financial status; formidable financial barriers block off needed mental health care from too many people regardless of whether one has health insurance with inadequate mental health benefits, or is one of the 44 million Americans who lack any insurance. We have allowed stigma and a now unwarranted sense of hopelessness about the opportunities for recovery from mental illness to erect these barriers. It is time to take them down.

Promoting mental health for all Americans will require scientific know-how but, even more importantly, a societal resolve that we will make the needed investment. The investment does not call for massive budgets; rather, it calls for the willingness of each of us to educate ourselves and others about mental health and mental illness, and thus to confront the attitudes, fear, and misunderstanding that remain as barriers before us. It is my intent that this report will usher in a healthy era of mind and body for the Nation.

David Satcher, M.D., Ph.D.
Surgeon General

EXECUTIVE SUMMARY

A REPORT OF THE SURGEON GENERAL ON MENTAL HEALTH

Mental health*—the successful performance of mental function, resulting in productive activities, fulfilling relationships with other people, and the ability to adapt to change and to cope with adversity; from early childhood until late life, mental health is the springboard of thinking and communication skills, learning, emotional growth, resilience, and self-esteem.*

Mental illness*—the term that refers collectively to all mental disorders. Mental disorders are health conditions that are characterized by alterations in thinking, mood, or behavior (or some combination thereof) associated with distress and/or impaired functioning.*

This is the first Surgeon General's report ever issued on the topic of mental health and mental illness. The science-based report conveys several messages. One is that **mental health is fundamental to health**. The qualities of mental health are essential to leading a healthy life. Americans assign high priority to preventing disease and promoting personal well-being and public health; so too must we assign priority to the task of promoting mental health and preventing mental disorders. Nonetheless, mental disorders occur and, thus, treatment and mental health services are critical to the Nation's health. These emphases, combined with research to increase the knowledge needed to treat and prevent mental and behavioral disorders, constitute a broad public health approach to an urgent health concern.

A second message of the report is that **mental disorders are real health conditions** that have an immense impact on individuals and families throughout this Nation and the world. Appreciation of the clinically and economically devastating nature of mental disorders is part of a quiet scientific revolution that not only has documented the extent of the problem, but in recent years has generated many real solutions. The decision to publish the report at this time was based, in part, on the tremendous growth of the science base that is enriching our understanding of the awe-inspiring complexity of the brain and behavior. This understanding increasingly supports mental health practices.

The body of this report is a summary of an extensive review of the scientific literature and of consultations with mental health care providers and consumers. Contributors guided by the Office of the Surgeon General examined more than 3,000 research articles and other materials, including first-person accounts from individuals who have experienced mental disorders. Today, a strong consensus among Americans in all walks of life holds that our society no longer can afford to view mental health as separate and unequal to general health. This consensus resonates with the Surgeon General's conviction that mental health should be part of the mainstream of health.

The review of research supports two main findings:

- **The efficacy of mental health treatments is well documented,** and
- **A range of treatments exists for most mental disorders.**

On the strength of these findings, the single, explicit recommendation of the report is to ***seek help if you have a mental health problem or think you have symptoms of a mental disorder.***

Once a person has made the decision to seek help for a mental health problem, he or she can choose from a broad variety of helping sources, treatment approaches, and service settings. There is no "one size fits all" treatment for mental disorders. Personal preference may influence, for example, the choice of psychotherapeutic, or "talk," therapy over the use of medications; in another case, an individual may feel most comfortable raising questions about symptoms of mental distress with a family doctor, with a trusted member of the clergy, or, if a child's health is the subject of concern, with a teacher or a school counselor. There are many individuals who are familiar with questions about mental health care and who, as a first point of contact, can provide invaluable assistance in obtaining appropriate and effective care.

Despite the efficacy of treatment options and the many possible ways of obtaining a treatment of choice, nearly half of all Americans who have a severe mental illness do not seek treatment. Most often, reluctance to seek care is an unfortunate outcome of very real barriers. Foremost among these is the stigma that many in our society attach to mental illness and to people who have a mental illness.

Stigma erodes confidence that mental disorders are valid, treatable health conditions. It leads people to avoid socializing, employing or working with, or renting to or living near persons who have a mental disorder, especially a severe disorder like schizophrenia. Stigma deters the public from wanting to pay for care and, thus, reduces consumers' access to resources and opportunities for treatment and social services. A consequent inability or failure to obtain treatment reinforces destructive patterns of low self-esteem, isolation, and hopelessness. Stigma tragically deprives people of their dignity and interferes with their full participation in society. It must be overcome.

Increasingly effective treatments for mental disorders promise to be the most effective antidote to stigma. Effective interventions help people to understand that mental disorders are not character flaws but are legitimate illnesses that respond to specific treatments, just as other health conditions respond to medical interventions. Fresh approaches to disseminating research information are needed urgently. While they are being developed, this report provides information that organizations, experts, and many other individuals can use to educate all Americans about mental health and mental illness.

Overarching Themes of the Surgeon General's Report

Key themes, summarized here, run throughout the report. The importance of information, policies, and actions that will reduce and eventually eliminate the cruel and unfair stigma attached to mental illness is one. The importance of a solid research base for every mental health and mental illness intervention is another. As our Nation has seen in the past, establishing mental health policy on the basis of good intentions alone can make bad situations worse; evaluating the practicality and effectiveness of new approaches is efficient and, more critically, is accountable to those for whom an intervention is intended. Additional themes of the report include the following.

Public Health Perspective

In the United States, mental health programs, like general health programs, are rooted in a *population-based public health model*. Broader in focus than medical models that concentrate on diagnosis and treatment, public health attends, in addition, to the health of a population in its entirety. A public health approach encompasses a focus on epidemiologic surveillance, health promotion, disease prevention, and access to services. Although much more is known through research about mental illness than about mental health, the report attaches high importance to public health practices that seek to identify risk factors for mental health problems; to mount preventive interventions that may block the emergence of severe illnesses; and to actively promote good mental health.

Mental Disorders Are Disabling

The World Health Organization, in collaboration with the World Bank and Harvard University, mounted an ambitious research effort in the mid-1990s to determine

the "burden of disability" associated with the whole range of diseases and health conditions suffered by peoples throughout the world. Possibly the most striking finding of the landmark Global Burden of Disease study is that the impact of mental illness on overall health and productivity in the United States and throughout the world is profoundly underrecognized. Today, in established market economies such as the United States, mental illness is the second leading cause of disability and premature mortality. Mental disorders collectively account for more than 15 percent of the overall burden of disease from *all* causes and slightly more than the burden associated with all forms of cancer (Table 1). These data underscore the importance and urgency of treating and preventing mental disorders and of promoting mental health in our society.

Table 1. Disease burden by selected illness categories in established market economies, 1990

	Percent of Total DALYs*
All cardiovascular conditions	18.6
All mental illness**	15.4
All malignant disease (cancer)	15.0
All respiratory conditions	4.8
All alcohol use	4.7
All infectious and parasitic disease	2.8
All drug use	1.5

*Disability-adjusted life year (DALY) is a measure that expresses years of life lost to premature death and years lived with a disability of specified severity and duration (Murray & Lopez, 1996).

**Disease burden associated with "mental illness" includes suicide.

Mental Health and Mental Illness: Points on a Continuum

As will be evident in the pages that follow, "mental health" and "mental illness" may be thought of as points on a continuum. *Mental health* refers to the successful performance of mental function, resulting in productive activities, fulfilling relationships with other people, and the ability to adapt to change and to cope with adversity. Mental health is indispensable to personal well-being, family and interpersonal relationships, and contribution to community or society. It is easy to overlook the value of mental health until problems surface. Yet from early childhood until death, mental health is the springboard of thinking and communication skills, learning, emotional growth, resilience, and self-esteem. These are the ingredients of each individual's successful contribution to community and society. Americans are inundated with messages about *success*—in school, in a profession, in parenting, in relationships—without appreciating that successful performance rests on a foundation of mental health.

Many ingredients of mental health may be identifiable, but mental health is not easy to define. In the words of a distinguished leader in the field of mental health prevention, ". . . built into any definition of wellness . . . are overt and covert expressions of values. Because values differ across cultures as well as among subgroups (and indeed individuals) within a culture, the ideal of a uniformly acceptable definition of the construct is illusory. . ." (Cowen, 1994). In other words, what it means to be mentally healthy is subject to many different interpretations that are rooted in value judgments that may vary across cultures. The challenge of defining mental health has stalled the development of programs to foster mental health (Secker, 1998), although some strides have been made—for example, wellness programs for older people.

Mental illness refers collectively to all diagnosable mental disorders. Mental disorders are health conditions that are characterized by alterations in thinking, mood, or behavior (or some combination thereof) associated with distress and/or impaired functioning. Alzheimer's disease exemplifies a mental disorder largely marked by alterations in thinking (especially forgetting). Depression exemplifies a mental disorder largely marked by alterations in mood. Attention-deficit/hyperactivity disorder exemplifies a mental disorder largely marked by alterations in behavior (overactivity) and/or thinking (inability to concentrate). Alterations in thinking, mood, or behavior spawn a host of problems— patient distress, impaired functioning, or

heightened risk of death, pain, disability, or loss of freedom (DSM-IV, 1994).

This report uses the term "mental health problems" for signs and symptoms of insufficient intensity or duration to meet the criteria for any mental disorder. Almost everyone has experienced mental health problems in which the distress one feels matches some of the signs and symptoms of mental disorders. Mental health problems may warrant active efforts in health promotion, prevention, and treatment. Bereavement symptoms in older adults offer a case in point. Bereavement symptoms of less than 2 months' duration do not qualify as a mental disorder, according to professional manuals for diagnosis (DSM-IV, 1994). Nevertheless, bereavement symptoms can be debilitating if they are left unattended. They place older people at risk for depression, which, in turn, is linked to death from suicide, heart attack, or other causes (Zisook & Shuchter, 1991, 1993; Frasure-Smith et al., 1993, 1995; Conwell, 1996). Much can be done—through formal treatment or through support group participation—to ameliorate the symptoms and to avert the consequences of bereavement. In this case, early intervention is needed to address a mental health problem before it becomes a disorder.

Mind and Body Are Inseparable

As it examines mental health and illness in the United States, the report confronts a profound obstacle to public understanding, one that stems from an artificial, centuries-old separation of mind and body.

Even today, everyday language encourages a misperception that mental health or mental illness is unrelated to physical health or physical illness. In fact, the two are inseparable. In keeping with modern scientific thinking, this report uses mind to refer to all mental functions related to thinking, mood, and purposive behavior. The mind is generally seen as deriving from activities within the brain. Research reviewed for this report makes it clear that mental functions are carried out by a particular organ, the brain. Indeed, new and emerging technologies are making it increasingly possible for researchers to demonstrate the extent to which mental disorders and their treatment—both with medication and with psychotherapy—are reflected in physical changes in the brain.

Scope of the Report and General Conclusions

Chapter 1: Introduction and Themes

Chapter 1 of the report elaborates on the overarching themes highlighted above and describes the criteria applied to the scientific evidence that is cited throughout the report. The chapter also lists the key conclusions drawn from each succeeding chapter. These conclusions are provided, as well, in the following pages of this Executive Summary.

Chapter 2: The Fundamentals of Mental Health and Mental Illness

The past 25 years have been marked by several discrete, defining trends in the mental health field. These have included:

- The extraordinary pace and productivity of scientific research on the brain and behavior;
- The introduction of a range of effective treatments for most mental disorders;
- A dramatic transformation of our society's approaches to the organization and financing of mental health care; and
- The emergence of powerful consumer and family movements.

Scientific Research. The brain has emerged as the central focus for studies of mental health and mental illness. New scientific disciplines, technologies, and insights have begun to weave a seamless picture of the way in which the brain mediates the influence of biological, psychological, and social factors on human thought, behavior, and emotion in health and in illness. Molecular and cellular biology and molecular genetics, which are complemented by sophisticated cognitive and behavioral science, are preeminent research disciplines in the contemporary neuroscience of mental health. These disciplines are affording unprecedented opportunities for "bottom-up" studies of the brain. This

term refers to research that is examining the workings of the brain at the most fundamental levels. Studies focus, for example, on the complex neurochemical activity that occurs within individual nerve cells, or neurons, to process information; on the properties and roles of proteins that are expressed, or produced, by a person's genes; and on the interaction of genes with diverse environmental influences. All of these activities now are understood, with increasing clarity, to underlie learning, memory, the experience of emotion, and, when these processes go awry, the occurrence of mental illness or a mental health problem.

Equally important to the mental health field is "top-down" research; here, as the term suggests, the aim is to understand the broader behavioral context of the brain's cellular and molecular activity and to learn how individual neurons work together in well-delineated neural circuits to perform mental functions.

Effective Treatments. As information accumulates about the basic workings of the brain, it is the task of translational research to transfer new knowledge into clinically relevant questions and targets of research opportunity—to discover, for example, what specific properties of a neural circuit might make it receptive to safer, more effective medications. To elaborate on this example, theories derived from knowledge about basic brain mechanisms are being wedded more closely to brain imaging tools such as functional Magnetic Resonance Imaging (MRI) that can observe actual brain activity. Such a collaboration would permit investigators to monitor the specific protein molecules intended as the "targets" of a new medication to treat a mental illness or, indeed, to determine how to optimize the effect on the brain of the learning achieved through psychotherapy.

In its entirety, the new "integrative neuroscience" of mental health offers a way to circumvent the antiquated split between the mind and the body that historically has hampered mental health research. It also makes it possible to examine scientifically many of the important psychological and behavioral theories regarding normal development and mental illness that have been developed in years past. The unswerving goal of mental health research is to develop and refine clinical treatments as well as preventive interventions that are based on an understanding of specific mechanisms that can contribute to or lead to illness but also can protect and enhance mental health.

Mental health clinical research encompasses studies that involve human participants, conducted, for example, to test the efficacy of a new treatment. A noteworthy feature of contemporary clinical research is the new emphasis being placed on studying the effectiveness of interventions in actual practice settings. Information obtained from such studies increasingly provides the foundation for services research concerned with the cost, cost-effectiveness, and "deliverability" of interventions and the design—including economic considerations—of service delivery systems.

Organization and Financing of Mental Health Care. Another of the defining trends has been the transformation of the mental illness treatment and mental health services landscapes, including increased reliance on primary health care and other human service providers. Today, the U.S. mental health system is multifaceted and complex, comprising the public and private sectors, general health and specialty mental health providers, and social services, housing, criminal justice, and educational agencies. These agencies do not always function in a coordinated manner. The configuration of the system reflects necessary responses to a broad array of factors including reform movements, financial incentives based on who pays for what kind of services, and advances in care and treatment technology. Although the hybrid system that exists today serves diverse functions well for many people, individuals with the most complex needs and the fewest financial resources often find the system fragmented and difficult to use. A challenge for the Nation in the near-term future is to speed the transfer of new evidence-based treatments and prevention interventions into diverse service delivery settings and systems, while ensuring greater coordination among these settings and systems.

Consumer and Family Movements. The emergence of vital consumer and family movements promises to shape the direction and complexion of mental health

programs for many years to come. Although divergent in their historical origins and philosophy, organizations representing consumers and family members have promoted important, often overlapping, goals and have invigorated the fields of research as well as treatment and service delivery design. Among the principal goals shared by much of the consumer movement are to overcome stigma and prevent discrimination in policies affecting persons with mental illness; to encourage self-help and a focus on recovery from mental illness; and to draw attention to the special needs associated with a particular disorder or disability as well as with age or gender or by the racial and cultural identity of those who have mental illness.

Chapter 2 of the report was written to provide background information that would help persons from outside the mental health field better understand topics addressed in subsequent chapters of the report. Although the chapter is meant to serve as a mental health primer, its depth of discussion supports a range of conclusions:

- The multifaceted complexity of the brain is fully consistent with the fact that it supports all behavior and mental life. Proceeding from an acknowledgment that all psychological experiences are recorded ultimately in the brain and that all psychological phenomena reflect biological processes, the modern neuroscience of mental health offers an enriched understanding of the inseparability of human experience, brain, and mind.
- Mental functions, which are disturbed in mental disorders, are mediated by the brain. In the process of transforming human experience into physical events, the brain undergoes changes in its cellular structure and function.
- Few lesions or physiologic abnormalities define the mental disorders, and for the most part their causes remain unknown. Mental disorders, instead, are defined by signs, symptoms, and functional impairments.
- Diagnoses of mental disorders made using specific criteria are as reliable as those for general medical disorders.
- About one in five Americans experiences a mental disorder in the course of a year. Approximately 15 percent of all adults who have a mental disorder in one year also experience a co-occurring substance (alcohol or other drug) use disorder, which complicates treatment.
- A range of treatments of well-documented efficacy exists for most mental disorders. Two broad types of intervention include psychosocial treatments—for example, psychotherapy or counseling—and psychopharmacologic treatments; these often are most effective when combined.
- In the mental health field, progress in developing preventive interventions has been slow because, for most major mental disorders, there is insufficient understanding about etiology (or causes of illness) and/or there is an inability to alter the *known* etiology of a particular disorder. Still, some successful strategies have emerged in the absence of a full understanding of etiology.
- About 10 percent of the U.S. adult population use mental health services in the health sector in any year, with another 5 percent seeking such services from social service agencies, schools, or religious or self-help groups. Yet critical gaps exist between those who need service and those who receive service.
- Gaps also exist between optimally effective treatment and what many individuals receive in actual practice settings.
- Mental illness and less severe mental health problems must be understood in a social and cultural context, and mental health services must be designed and delivered in a manner that is sensitive to the perspectives and needs of racial and ethnic minorities.
- The consumer movement has increased the involvement of individuals with mental disorders and their families in mutual support services, consumer-run services, and advocacy. They are powerful agents for changes in service programs and policy.
- The notion of recovery reflects renewed optimism about the outcomes of mental illness, including that achieved through an individual's own self-care

efforts, and the opportunities open to persons with mental illness to participate to the full extent of their interests in the community of their choice.

Mental Health and Mental Illness Across the Lifespan

The Surgeon General's report takes a lifespan approach to its consideration of mental health and mental illness. Three chapters that address, respectively, the periods of childhood and adolescence, adulthood, and later adult life beginning somewhere between ages 55 and 65, capture the contributions of research to the breadth, depth, and vibrancy that characterize all facets of the contemporary mental health field.

The disorders featured in depth in Chapters 3, 4, and 5 were selected on the basis of the frequency with which they occur in our society, and the clinical, societal, and economic burden associated with each. To the extent that data permit, the report takes note of how gender and culture, in addition to age, influence the diagnosis, course, and treatment of mental illness. The chapters also note the changing role of consumers and families, with attention to informal support services (i.e., unpaid services), with which many consumers are comfortable and upon which they depend for information. Persons with mental illness and, often, their families welcome a proliferating array of support services—such as self-help programs, family self-help, crisis services, and advocacy—that help them cope with the isolation, family disruption, and possible loss of employment and housing that may accompany mental disorders. Support services can help to dissipate stigma and to guide patients into formal care as well.

Mental health and mental illness are dynamic, ever-changing phenomena. At any given moment, a person's mental status reflects the sum total of that individual's genetic inheritance and life experiences. The brain interacts with and responds—both in its function and in its very structure—to multiple influences continuously, across every stage of life. At different stages, variability in expression of mental health and mental illness can be very subtle or very pronounced. As an example, the symptoms of separation anxiety are normal in early childhood but are signs of distress in later childhood and beyond. It is all too common for people to appreciate the impact of developmental processes in children, yet not to extend that conceptual understanding to older people. In fact, people continue to develop and change throughout life. Different stages of life are associated with vulnerability to distinct forms of mental and behavioral disorders but also with distinctive capacities for mental health.

Even more than is true for adults, children must be seen in the context of their social environments—that is, family and peer group, as well as that of their larger physical and cultural surroundings. Childhood mental health is expressed in this context, as children proceed along the arc of development. A great deal of contemporary research focuses on developmental processes, with the aim of understanding and predicting the forces that will keep children and adolescents mentally healthy and maintain them on course to become mentally healthy adults. Research also focuses on identifying what factors place some at risk for mental illness and, yet again, what protects some children but not others despite exposure to the *same* risk factors. In addition to studies of normal development and of risk factors, much research focuses on mental disorders in childhood and adolescence and what can be done to prevent or treat these conditions and on the design and operation of service settings best suited to the needs of children.

For about one in five Americans, adulthood—a time for achieving productive vocations and for sustaining close relationships at home and in the community—is interrupted by mental illness. Understanding why and how mental disorders occur in adulthood, often with no apparent portents of illness in earlier years, draws heavily on the full panoply of research conducted under the aegis of the mental health field. In years past, the onset, or occurrence, of mental illness in the adult years was attributed principally to observable phenomena—for example, the burden of stresses associated with career or family, or the inheritance of a disease viewed to run in a particular family. Such explanations now may appear naive at best. Contemporary studies of the brain and behavior

are racing to fill in the picture by elucidating specific neurobiological and genetic mechanisms that are the platform upon which a person's life experiences can either strengthen mental health or lead to mental illness. It now is recognized that factors that influence brain development prenatally may set the stage for a vulnerability to illness that may lie dormant throughout childhood and adolescence. Similarly, no single gene has been found to be responsible for any specific mental disorder; rather, variations in multiple genes contribute to a disruption in healthy brain function that, under certain environmental conditions, results in a mental illness. Moreover, it is now recognized that socioeconomic factors affect individuals' vulnerability to mental illness and mental health problems. Certain demographic and economic groups are more likely than others to experience mental health problems and some mental disorders. Vulnerability alone may not be sufficient to cause a mental disorder; rather, the causes of most mental disorders lie in some combination of genetic and environmental factors, which may be biological or psychosocial.

The fact that many, if not most, people have experienced mental health problems that mimic or even match some of the symptoms of a diagnosable mental disorder tends, ironically, to prompt many people to underestimate the painful, disabling nature of severe mental illness. In fact, schizophrenia, mood disorders such as major depression and bipolar illness, and anxiety often are devastating conditions. Yet relatively few mental illnesses have an unremitting course marked by the most acute manifestations of illness; rather, for reasons that are not yet understood, the symptoms associated with mental illness tend to wax and wane. These patterns pose special challenges to the implementation of treatment plans and the design of service systems that are optimally responsive to an individual's needs during every phase of illness. As this report concludes, enormous strides are being made in diagnosis, treatment, and service delivery, placing the productive and creative possibilities of adulthood within the reach of persons who are encumbered by mental disorders.

Late adulthood is when changes in health status may become more noticeable and the ability to compensate for decrements may become limited. As the brain ages, a person's capacity for certain mental tasks tends to diminish, even as changes in other mental activities prove to be positive and rewarding. Well into late life, the ability to solve novel problems can be enhanced through training in cognitive skills and problem-solving strategies.

The promise of research on mental health promotion notwithstanding, a substantial minority of older people are disabled, often severely, by mental disorders including Alzheimer's disease, major depression, substance abuse, anxiety, and other conditions. In the United States today, the highest rate of suicide—an all-too-common consequence of unrecognized or inappropriately treated depression—is found in older males. This fact underscores the urgency of ensuring that health care provider training properly emphasizes skills required to differentiate accurately the causes of cognitive, emotional, and behavioral symptoms that may, in some instances, rise to the level of mental disorders, and in other instances be expressions of unmet general medical needs.

As the life expectancy of Americans continues to extend, the sheer number—although not necessarily the proportion—of persons experiencing mental disorders of late life will expand, confronting our society with unprecedented challenges in organizing, financing, and delivering effective mental health services for this population. An essential part of the needed societal response will include recognizing and devising innovative ways of supporting the increasingly more prominent role that families are assuming in caring for older, mentally impaired and mentally ill family members.

Chapter 3: Children and Mental Health

- Childhood is characterized by periods of transition and reorganization, making it critical to assess the mental health of children and adolescents in the context of familial, social, and cultural expectations about age-appropriate thoughts, emotions, and behavior.

- The range of what is considered "normal" is wide; still, children and adolescents can and do develop mental disorders that are more severe than the "ups and downs" in the usual course of development.
- Approximately one in five children and adolescents experiences the signs and symptoms of a DSM-IV disorder during the course of a year, but only about 5 percent of all children experience what professionals term "extreme functional impairment."
- Mental disorders and mental health problems appear in families of all social classes and of all backgrounds. No one is immune. Yet there are children who are at greatest risk by virtue of a broad array of factors. These include physical problems; intellectual disabilities (retardation); low birth weight; family history of mental and addictive disorders; multigenerational poverty; and caregiver separation or abuse and neglect.
- Preventive interventions have been shown to be effective in reducing the impact of risk factors for mental disorders and improving social and emotional development by providing, for example, educational programs for young children, parent-education programs, and nurse home visits.
- A range of efficacious psychosocial and pharmacologic treatments exists for many mental disorders in children, including attention-deficit/hyperactivity disorder, depression, and the disruptive disorders.
- Research is under way to demonstrate the effectiveness of most treatments for children in actual practice settings (as opposed to evidence of "efficacy" in controlled research settings), and significant barriers exist to receipt of treatment.
- Primary care and the schools are major settings for the potential recognition of mental disorders in children and adolescents, yet trained staff are limited, as are options for referral to specialty care.
- The multiple problems associated with "serious emotional disturbance" in children and adolescents are best addressed with a "systems" approach in which multiple service sectors work in an organized, collaborative way. Research on the effectiveness of systems of care shows positive results for system outcomes and functional outcomes for children; however, the relationship between changes at the system level and clinical outcomes is still unclear.
- Families have become essential partners in the delivery of mental health services for children and adolescents.
- Cultural differences exacerbate the general problems of access to appropriate mental health services. Culturally appropriate services have been designed but are not widely available.

Chapter 4: Adults and Mental Health

- As individuals move into adulthood, developmental goals focus on productivity and intimacy including pursuit of education, work, leisure, creativity, and personal relationships. Good mental health enables individuals to cope with adversity while pursuing these goals.
- Untreated, mental disorders can lead to lost productivity, unsuccessful relationships, and significant distress and dysfunction. Mental illness in adults can have a significant and continuing effect on children in their care.
- Stressful life events or the manifestation of mental illness can disrupt the balance adults seek in life and result in distress and dysfunction. Severe or life-threatening trauma experienced either in childhood or adulthood can further provoke emotional and behavioral reactions that jeopardize mental health.
- Research has improved our understanding of mental disorders in the adult stage of the life cycle. Anxiety, depression, and schizophrenia, particularly, present special problems in this age group. Anxiety and depression contribute to the high rates of suicide in this population. Schizophrenia is the most persistently disabling condition, especially for young adults, in spite of recovery of function by some individuals in mid to late life.
- Research has contributed to our ability to recognize, diagnose, and treat each of these conditions effectively in terms of symptom control and behavior management. Medication and other ther-

apies can be independent, combined, or sequenced depending on the individual's diagnosis and per- sonal preference.
- A new recovery perspective is supported by evidence on rehabilitation and treatment as well as by the personal experiences of consumers.
- Certain common events of midlife (e.g., divorce or other stressful life events) create mental health problems (not necessarily disorders) that may be addressed through a range of interventions.
- Care and treatment in the real world of practice do not conform to what research determines is best. For many reasons, at times care is inadequate, but there are models for improving treatment.
- Substance abuse is a major co-occurring problem for adults with mental disorders. Evidence supports combined treatment, although there are substantial gaps between what research recommends and what typically is available in communities.
- Sensitivity to culture, race, gender, disability, poverty, and the need for consumer involvement are important considerations for care and treatment.
- Barriers of access exist in the organization and financing of services for adults. There are specific problems with Medicare, Medicaid, income supports, housing, and managed care.

Chapter 5: Older Adults and Mental Health

- Important life tasks remain for individuals as they age. Older individuals continue to learn and contribute to the society, in spite of physiologic changes due to aging and increasing health problems.
- Continued intellectual, social, and physical activity throughout the life cycle are important for the maintenance of mental health in late life.
- Stressful life events, such as declining health and/or the loss of mates, family members, or friends often increase with age. However, persistent bereavement or serious depression is not "normal" and should be treated.
- Normal aging is not characterized by mental or cognitive disorders. Mental or substance use disorders that present alone or co-occur should be recognized and treated as illnesses.
- Disability due to mental illness in individuals over 65 years old will become a major public health problem in the near future because of demographic changes. In particular, dementia, depression, and schizophrenia, among other conditions, will all present special problems in this age group:
  - — Dementia produces significant dependency and is a leading contributor to the need for costly long-term care in the last years of life;
  - — Depression contributes to the high rates of suicide among males in this population; and
  - — Schizophrenia continues to be disabling in spite of recovery of function by some individuals in mid to late life.
- There are effective interventions for most mental disorders experienced by older persons (for example, depression and anxiety), and many mental health problems, such as bereavement.
- Older individuals can benefit from the advances in psychotherapy, medication, and other treatment interventions for mental disorders enjoyed by younger adults, when these interventions are modified for age and health status.
- Treating older adults with mental disorders accrues other benefits to overall health by improving the interest and ability of individuals to care for themselves and follow their primary care provider's directions and advice, particularly about taking medications.
- Primary care practitioners are a critical link in identifying and addressing mental disorders in older adults. Opportunities are missed to improve mental health and general medical outcomes when mental illness is underrecognized and undertreated in primary care settings.
- Barriers to access exist in the organization and financing of services for aging citizens. There are specific problems with Medicare, Medicaid, nursing homes, and managed care.

Chapter 6: Organization and Financing of Mental Health Services

In the United States in the late 20th century, research-based capabilities to identify, treat, and, in some in-

stances, prevent mental disorders are outpacing the capacities of the existing service system to deliver mental health care to all who would benefit from it. Approximately 10 percent of children and adults receive mental health services from mental health specialists or general medical providers in a given year. Approximately one in six adults, and one in five children, obtain mental health services either from health care providers, the clergy, social service agencies, or schools in a given year.

Chapter 6 discusses the organization and financing of mental health services. The chapter provides an overview of the current system of mental health services, describing where people get care and how they use services. The chapter then presents information on the costs of care and trends in spending. Only within recent decades, in the face of concerns about discriminatory policies in mental health financing, have the dynamics of insurance financing become a significant issue in the mental health field. In particular, policies that have emphasized cost containment have ushered in managed care. Intensive research currently is addressing both positive and adverse effects of managed care on access and quality, generating information that will guard against untoward consequences of aggressive cost-containment policies. Inequities in insurance coverage for mental health and general medical care—the product of decades of stigma and discrimination—have prompted efforts to correct them through legislation designed to produce financing changes and create parity. Parity calls for equality between mental health and other health coverage.

- Epidemiologic surveys indicate that one in five Americans has a mental disorder in any one year.
- Fifteen percent of the adult population use some form of mental health service during the year. Eight percent have a mental disorder; 7 percent have a mental health problem.
- Twenty-one percent of children ages 9 to 17 receive mental health services in a year.
- The U.S. mental health service system is complex and connects many sectors (public–private, specialty–general health, 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 from many funding streams, adding to the complexity, given sometimes competing incentives between funding sources.
- In 1996, the direct treatment of mental disorders, substance abuse, and Alzheimer's disease cost the Nation $99 billion; direct costs for mental disorders alone totaled $69 billion. In 1990, indirect costs for mental disorders alone totaled $79 billion.
- Historically, financial barriers to mental health services have been attributable to a variety of economic forces and concerns (e.g., market failure, adverse selection, moral hazard, and public provision). This has accounted for differential resource allocation rules for financing mental health services.
  - — "Parity" legislation has been a partial solution to this set of problems.
  - — Implementing parity has resulted in negligible cost increases where the care has been managed.
- In recent years, managed care has begun to introduce dramatic changes into the organization and financing of health and mental health services.
- Trends indicate that in some segments of the private sector per capita mental health expenditures have declined much faster than they have for other conditions.
- There is little direct evidence of problems with quality in well-implemented managed care programs. The risk for more impaired populations and children remains a serious concern.
- An array of quality monitoring and quality improvement mechanisms has been developed, although incentives for their full implementation have yet to emerge. In addition, competition on the basis of quality is only beginning in the managed care industry.
- There is increasing concern about consumer satisfaction and consumers' rights. A Consumers Bill of Rights has been developed and implemented in Federal Employee Health Benefit Plans, with

broader legislation currently pending in the Congress.

Chapter 7: Confidentiality of Mental Health Information: Ethical, Legal, and Policy Issues

In an era in which the confidentiality of all health care information, its accessibility, and its uses are of concern to all Americans, privacy issues are keenly felt in the mental health field. An assurance of confidentiality is understandably critical in individual decisions to seek mental health treatment. Although an extensive legal framework governs confidentiality of consumer-provider interactions, potential problems exist and loom ever larger.

- People's willingness to seek help is contingent on their confidence that personal revelations of mental distress will not be disclosed without their consent.
- The U.S. Supreme Court recently has upheld the right to the privacy of these records and the therapist-client relationship.
- Although confidentiality issues are common to health care in general, there are special concerns for mental health care and mental health care records because of the extremely personal nature of the material shared in treatment.
- State and Federal laws protect the confidentiality of health care information but are often incomplete because of numerous exceptions which often vary from state to state. Several states have implemented or proposed models for protecting privacy that may serve as a guide to others.
- States, consumers, and family advocates take differing positions on disclosure of mental health information without consent to family caregivers. In states that allow such disclosure, information provided is usually limited to diagnosis, prognosis, and information regarding treatment, specifically medication.
- When conducting mental health research, it is in the interest of both the researcher and the individual participant to address informed consent and to obtain certificates of confidentiality before proceeding. Federal regulations require informed consent for research being conducted with Federal funds.
- New approaches to managing care and information technology threaten to further erode the confidentiality and trust deemed so essential between the direct provider of mental health services and the individual receiving those services. It is important to monitor advances so that confidentiality of records is enhanced, instead of impinged upon, by technology.
- Until the stigma associated with mental illnesses is addressed, confidentiality of mental health information will continue to be a critical point of concern for payers, providers, and consumers.

Chapter 8: A Vision for the Future—Actions for Mental Health in the New Millennium

The extensive literature that the Surgeon General's report reviews and summarizes leads to the conclusion that ***a range of treatments of documented efficacy exists for most mental disorders***. Moreover, a person may choose a particular approach to suit his or her needs and preferences. Based on this finding, the report's principal recommendation to the American people is to ***seek help if you have a mental health problem or think you have symptoms of a mental disorder***. As noted earlier, stigma interferes with the willingness of many people—even those who have a serious mental illness—to seek help. And, as documented in this report, those who do seek help will all too frequently learn that there are substantial gaps in the availability of state-of-the-art mental health services and barriers to their accessibility. Accordingly, the final chapter of the report goes on to explore opportunities to overcome barriers to implementing the recommendation and to have seeking help lead to effective treatment.

The final chapter identifies the following courses of action.

- ***Continue to Build the Science Base***: Today, integrative neuroscience and molecular genetics present some of the most exciting basic research opportunities in medical science. A plethora of new pharmacologic agents and psychotherapies for mental disorders afford new treatment oppor-

tunities but also challenge the scientific community to develop new approaches to clinical and health services interventions research. Because the vitality and feasibility of clinical research hinges on the willing participation of clinical research volunteers, it is important for society to ensure that concerns about protections for vulnerable research subjects are addressed. Responding to the calls of managed mental and behavioral health care systems for evidence-based interventions will have a much needed and discernible impact on practice. Special effort is required to address pronounced gaps in the mental health knowledge base. Key among these are the urgent need for evidence which supports strategies for mental health promotion and illness prevention. Additionally, research that explores approaches for reducing risk factors and strength- ening protective factors for the prevention of men- tal illness should be encouraged. As noted through- out the report, high-quality research and the ef- fective services it promotes are a potent weapon against stigma.

- ***Overcome Stigma***: Powerful and pervasive, stigma prevents people from acknowledging their own mental health problems, much less disclosing them to others. For our Nation to reduce the burden of mental illness, to improve access to care, and to achieve urgently needed knowledge about the brain, mind, and behavior, stigma must no longer be tolerated. Research on brain and behavior that continues to generate ever more effective treatments for mental illnesses is a potent antidote to stigma. The issuance of this Surgeon General's Report on Mental Health seeks to help reduce stigma by dispelling myths about mental illness, by providing accurate knowledge to ensure more informed consumers, and by encouraging help seeking by individuals experiencing mental health problems.
- ***Improve Public Awareness of Effective Treatment***: Americans are often unaware of the choices they have for effective mental health treatments. In fact, there exists a constellation of several treatments of documented efficacy for most mental disorders. Treatments fall mainly under several broad categories—counseling, psychotherapy, medication therapy, rehabilitation—yet within each category are many more choices. All human services professionals, not just health professionals, have an obligation to be better informed about mental health treatment resources in their communities and should encourage individuals to seek help from any source in which they have confidence.
- ***Ensure the Supply of Mental Health Services and Providers***: The fundamental components of effective service delivery, which include integrated community-based services, continuity of providers and treatments, family support services (including psychoeducation), and culturally sensitive services, are broadly agreed upon, yet certain of these and other mental health services are in consistently short supply, both regionally and, in some instances, nationally. Because the service system as a whole, as opposed to treatment services considered in isolation, dictates the outcome of recovery-oriented mental health care, it is imperative to expand the supply of effective, evidence-based services throughout the Nation. Key personnel shortages include mental health professionals serving children/adolescents and older people with serious mental disorders and specialists with expertise in cognitive-behavioral therapy and interpersonal therapy, two forms of psychotherapy that research has shown to be effective for several severe mental disorders. For adults and children with less severe conditions, primary health care, the schools, and other human services must be prepared to assess and, at times, to treat individuals who come seeking help.
- ***Ensure Delivery of State-of-the-Art Treatments***: A wide variety of effective, community-based services, carefully refined through years of research, exist for even the most severe mental illnesses yet are not being translated into community settings. Numerous explanations for the gap between what is known from research and what is

practiced beg for innovative strategies to bridge it.

- ***Tailor Treatment to Age, Gender, Race, and Culture***: Mental illness, no less than mental health, is influenced by age, gender, race, and culture as well as additional facets of diversity that can be found within all of these population groups—for example, physical disability or a person's sexual orientation. To be effective, the diagnosis and treatment of mental illness must be tailored to all characteristics that shape a person's image and identity. The consequences of not understanding these influences can be profoundly deleterious. "Culturally competent" services incorporate understanding of racial and ethnic groups, their histories, traditions, beliefs, and value systems. With appropriate training and a fundamental respect for clients, any mental health professional can provide culturally competent services that reflect sensitivity to individual differences and, at the same time, assign validity to an individual's group identity. Nonetheless, the preference of many members of ethnic and racial minority groups to be treated by mental health professionals of similar background underscores the need to redress the current insufficient supply of mental health professionals who are members of racial and ethnic minority groups.
- ***Facilitate Entry Into Treatment***: Public and private agencies have an obligation to facilitate entry into mental health care and treatment through the multiple "portals of entry" that exist: primary health care, schools, and the child welfare system. To enhance adherence to treatment, agencies should offer services that are responsive to the needs and preferences of service users and their families. At the same time, some agencies receive inappropriate referrals. For example, an alarming number of children and adults with mental illness are in the criminal justice system inappropriately. Importantly, assuring the small number of individuals with severe mental disorders who pose a threat of danger to themselves or others ready access to adequate and appropriate services promises to reduce significantly the *need* for coercion in the form of involuntary commitment to a hospital and/or certain outpatient treatment requirements that have been legislated in most states and territories. Coercion should not be a substitute for effective care that is sought voluntarily; consensus on this point testifies to the need for research designed to enhance adherence to treatment.
- ***Reduce Financial Barriers to Treatment***: Concerns about the cost of care—concerns made worse by the disparity in insurance coverage for mental disorders in contrast to other illnesses—are among the foremost reasons why people do not seek needed mental health care. While both access to and use of mental health services increase when benefits for those services are enhanced, preliminary data show that the effectiveness—and, thus, the value—of mental health care also has increased in recent years, while expenditures for services, under managed care, have fallen. Equality between mental health coverage and other health coverage—a concept known as parity—is an affordable and effective objective.

Scope of Coverage of the Report

This report is comprehensive but not exhaustive in its coverage of mental health and mental illness. It considers mental health facets of some conditions which are not always associated with the mental disorders and does not consider all conditions which can be found in classifications of mental disorders such as DSM-IV. The report includes, for example, a discussion of autism in Chapter 3 and provides an extensive section on Alzheimer's disease in Chapter 5. Although DSM-IV lists specific mental disorder criteria for both of these conditions, they often are viewed as being outside the scope of the mental health field. In both cases, mental health professionals are involved in the diagnosis and treatment of these conditions, often characterized by cognitive and behavioral impairments. Developmental disabilities and mental retardation are not discussed except in passing in this report. These conditions were considered to be beyond its scope with a care system all their own and very special needs. The same is generally true for the addictive disorders, such as alcohol and other drug use disorders. The latter,

however, co-occur with such frequency with the other mental disorders, which are the focus of this report, that the co-occurrence is discussed throughout. The report addresses the epidemiology of addictive disorders and their co-occurrence with other mental disorders as well as the treatment of co-occurring conditions. Brief sections on substance abuse in adolescence and late life also are included in the report.

Preparation of the Report

In September 1997, the Office of the Surgeon General, with the approval of the Secretary of the Department of Health and Human Services, authorized the Substance Abuse and Mental Health Services Administration (SAMHSA) to serve as lead operating division for preparing the Surgeon General's Report on Mental Health. SAMHSA's Center for Mental Health Services worked in partnership with the National Institute of Mental Health, National Institutes of Health, to develop this report under the guidance of Surgeon General David Satcher, M.D., Ph.D. The Federal partners established a Planning Board comprising individuals who represent a broad range of expertise in mental health: university-based researchers and educators, practicing mental health professionals, self-identified consumers of mental health services, and many knowledgeable advocates in diverse areas of the mental health field. Also included on the Planning Board were individuals representing Federal Operating Divisions, Offices, Centers, and Institutes and private nonprofit foundations with interests in the area of mental health.

Editors

Howard H. Goldman, M.D., Ph.D., Senior Scientific Editor, Professor of Psychiatry, University of Maryland School of Medicine, Baltimore, Maryland.

CAPT Patricia Rye, J.D., M.S.W., Managing Editor, Office of the Director, Center for Mental Health Services, Substance Abuse and Mental Health Services Administration, Rockville, Maryland.

Paul Sirovatka, M.S., Coordinating Editor, Science Writer, Office of Science Policy and Program Planning, National Institute of Mental Health, National Institutes of Health, Bethesda, Maryland.

Senior Science Writer

Miriam Davis, Ph.D., Medical Writer and Consultant, Silver Spring, Maryland.

References

American Psychiatric Association. (1994). *Diagnostic and statistical manual of mental disorders* (4th ed.). Washington, DC: Author.

Conwell, Y. (1996). *Diagnosis and treatment of depression in late life.* Washington, DC: American Psychiatric Press.

Cowen, E. L. (1994). The enhancement of psychological wellness: Challenges and opportunities. *American Journal of Community Psychology, 22*(2), *149–179*.

DSM-IV. See American Psychiatric Association (1994).

Frasure-Smith, N., Lesperance, F., & Talajic, M. (1993). Depression following myocardial infarction. Impact on 6-month survival. *Journal of the American Medical Association, 270*, 1819–1825.

Frasure-Smith, N., Lesperance, F., & Talajic, M. (1995). Depression and 18-month prognosis after myocardial infarction. *Circulation, 91*, 999–1005.

Murray, C.L., & Lopez, A.D. (Eds.). (1996). *The global burden of disease. A comprehensive assessment of mortality and disability from diseases, injuries, and risk factors in 1990 and projected to 2020.* Cambridge, MA: Harvard University.

Secker, J. (1998). Current conceptualizations of mental health and mental health priorities. *Health Education Research, 13*(1), 57–66.

Zisook, S., & Shuchter, S. R. (1991). Depression through the first year after the death of a spouse. *American Journal of Psychiatry, 148*, 1346–1352.

Zisook, S., & Shuchter, S. R. (1993). Major depression associated with widowhood. *American Journal of Geriatric Psychiatry, 1*, 316–326.