

Mental Health: A Report of the Surgeon General

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CHAPTER 5

OLDER ADULTS AND MENTAL HEALTH

Contents

Chapter Overview	336
Normal Life-Cycle Tasks	337
Cognitive Capacity With Aging	337
Change, Human Potential, and Creativity	338
Coping With Loss and Bereavement	339
Overview of Mental Disorders in Older Adults	340
Assessment and Diagnosis	340
Overview of Prevention	341
Primary Prevention	342
Prevention of Depression and Suicide	342
Treatment-Related Prevention	342
Prevention of Excess Disability	343
Prevention of Premature Institutionalization	343
Overview of Treatment	343
Pharmacological Treatment	344
Increased Risk of Side Effects	344
Polypharmacy	345
Treatment Compliance	345
Psychosocial Interventions	345
Gap Between Efficacy and Effectiveness	346
Depression in Older Adults	346
Diagnosis of Major and “Minor” Depression	346
Late-Onset Depression	347
Prevalence and Incidence	347
Barriers to Diagnosis and Treatment	348
Course	349
Interactions With Somatic Illness	350

Contents, *continued*

Consequences of Depression	350
Cost	351
Etiology of Late-Onset Depression	351
Treatment of Depression in Older Adults	352
Pharmacological Treatment	352
Tricyclic Antidepressants	352
Selective Serotonin Reuptake Inhibitors and Other Newer Antidepressants	353
Multimodal Therapy	353
Course of Treatment	354
Electroconvulsive Therapy	354
Psychosocial Treatment of Depression	355
Alzheimer's Disease	356
Assessment and Diagnosis of Alzheimer's Disease	357
Mild Cognitive Impairment	357
Behavioral Symptoms	359
Course	359
Prevalence and Incidence	359
Cost	360
Etiology of Alzheimer's Disease	360
Biological Factors	360
Protective Factors	361
Histopathology	361
Role of Acetylcholine	361
Pharmacological Treatment of Alzheimer's Disease	362
Acetylcholinesterase Inhibitors	362
Treatment of Behavioral Symptoms	362
Psychosocial Treatment of Alzheimer's Disease Patients and Caregivers	363
Other Mental Disorders in Older Adults	364
Anxiety Disorders	364
Prevalence of Anxiety	364
Treatment of Anxiety	364

Contents, continued

Schizophrenia in Late Life	365
Prevalence and Cost	365
Late-Onset Schizophrenia	366
Course and Recovery	366
Etiology of Late-Onset Schizophrenia	366
Treatment of Schizophrenia in Late Life	367
Alcohol and Substance Use Disorders in Older Adults	368
Epidemiology	368
Alcohol Abuse and Dependence	368
Misuse of Prescription and Over-the-Counter Medications	368
Illicit Drug Abuse and Dependence	369
Course	369
Treatment of Substance Abuse and Dependence	370
Service Delivery	370
Overview of Services	370
Service Settings and the <i>New Landscape for Aging</i>	371
Primary Care	372
Adult Day Centers and Other Community Care Settings	373
Nursing Homes	374
Services for Persons With Severe and Persistent Mental Disorders	374
Financing Services for Older Adults	376
Increased Role of Managed Care	376
Carved-In Mental Health Services for Older Adults	376
Carved-Out Mental Health Services for Older Adults	377
Outcomes Under Managed Care	377
Other Services and Supports	378
Support and Self-Help Groups	378
Education and Health Promotion	379
Families and Caregivers	379
Communities and Social Services	380
Conclusions	381
References	381

OLDER ADULTS AND MENTAL HEALTH

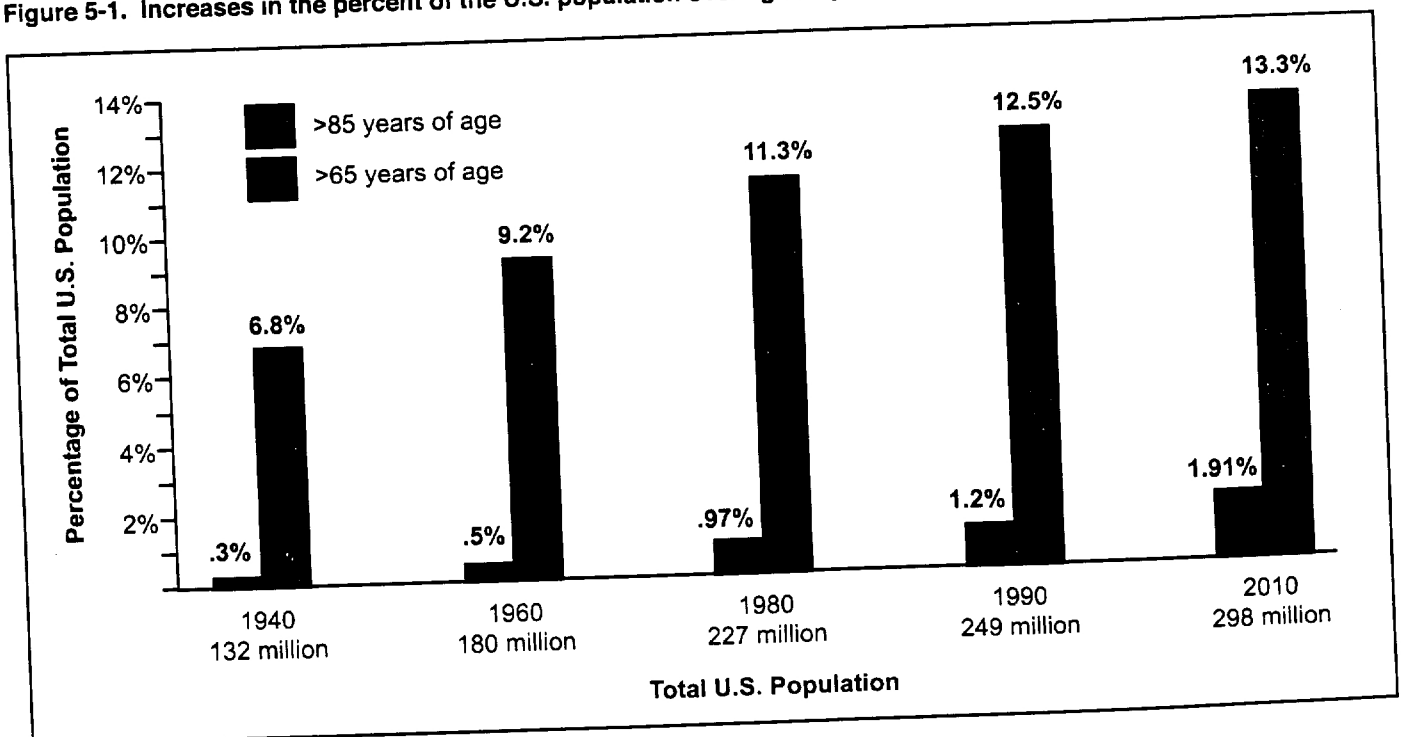
The past century has witnessed a remarkable lengthening of the average life span in the United States, from 47 years in 1900 to more than 75 years in the mid-1990s (National Center for Health Statistics [NCHS], 1993). Equally noteworthy has been the increase in the number of persons ages 85 and older (Figure 5-1). These trends will continue well into the next century and be magnified as the numbers of older Americans increase with the aging of the post-World War II baby boom generation.

Millions of older Americans—indeed, the majority—cope constructively with the physical limitations, cognitive changes, and various losses, such as bereavement, that frequently are associated with late life. Research has contributed immensely to our understanding of developmental processes that continue to unfold as we age. Drawing on new

scientific information and acting on clinical common sense, mental health and general health care providers are increasingly able to suggest mental health strategies and skills that older adults can hone to make this stage of the life span satisfying and rewarding.

The capacity for sound mental health among older adults notwithstanding, a substantial proportion of the population 55 and older—almost 20 percent of this age group—experience specific mental disorders that are not part of “normal” aging (see Table 5-1). Research that has helped differentiate mental disorders from “normal” aging has been one of the more important achievements of recent decades in the field of geriatric health. Unrecognized or untreated, however, depression, Alzheimer’s disease, alcohol and drug misuse and abuse, anxiety, late-life schizophrenia, and other conditions can be severely impairing, even fatal;

Figure 5-1. Increases in the percent of the U.S. population over age 65 years and over age 85 years (Malmgren, 1994).



Mental Health: A Report of the Surgeon General

Table 5-1. Best Estimate 1-Year Prevalence Rates Based on Epidemiologic Catchment Area, Age 55+

	Prevalence (%)
Any Anxiety Disorder	11.4
Simple Phobia	7.3
Social Phobia	1.0
Agoraphobia	4.1
Panic Disorder	0.5
Obsessive-Compulsive Disorder	1.5
Any Mood Disorder	4.4
Major Depressive Episode	3.8
Unipolar Major Depression	3.7
Dysthymia	1.6
Bipolar I	0.2
Bipolar II	0.1
Schizophrenia	0.6
Somatization	0.3
Antisocial Personality Disorder	0.0
Anorexia Nervosa	0.0
Severe Cognitive Impairment	6.6
Any Disorder	19.8

Source: D. Regier & W. Narrow, personal communication, 1999.

in the United States, the rate of suicide, which is frequently a consequence of depression, is highest among older adults relative to all other age groups (Hoyert et al., 1999). The clinical challenges such conditions present may be exacerbated, moreover, by the manner in which they both affect and are affected by general medical conditions or by changes in cognitive capacities. Another complicating factor is that many older people, disabled by or at risk for mental disorders, find it difficult to afford and obtain needed medical and related health care services. Late-life mental disorders also can pose difficulties for the

burgeoning numbers of family members who assist in caretaking tasks for their loved ones (Light & Lebowitz, 1991).

Chapter Overview

Fortunately, the past 15 to 20 years have been marked by rapid growth in the number of clinical, research, and training centers dedicated to the mental illness- and mental health-related needs of older people. As evident in this chapter, much has been learned. The chapter reviews, first, normal developmental milestones of aging, highlighting the adaptive capacities that enable many older people to change, cope with loss, and pursue productive and fulfilling activities. The chapter then considers mental disorders in older people—their diagnosis and treatment, and the various risk factors that may complicate the course or outcome of treatment. Risk factors include co-occurring, or comorbid, general medical conditions, the high numbers of medications many older individuals take, and psychosocial stressors such as bereavement or isolation. These are cause for concern, but, as the chapter notes, they also point the way to possible new preventive interventions. The goal of such prevention strategies may be to limit disability or to postpone or even eliminate the need to institutionalize an ill person (Lebowitz & Pearson, in press). The chapter reviews gains that have been realized in making appropriate mental health services available to older people and the challenges associated with the delivery of services to this population. The advantages of a decisive shift away from mental hospitals and nursing homes to treatment in community-based settings today are in jeopardy of being undermined by fragmentation and insufficient availability of such services (Gatz & Smyer, 1992; Cohen & Cairl, 1996). The chapter examines obstacles and opportunities in the service delivery sphere, in part through the lens of public and private sector financing policies and managed care.

Finally, the chapter reviews the supports for older persons that extend beyond traditional, formal treatment settings. Through support networks, self-help groups, and other means, consumers, families, and communities are assuming an increasingly important

role in treating and preventing mental health problems and disorders among older persons.

Normal Life-Cycle Tasks

With improved diet, physical fitness, public health, and health care, more adults are reaching age 65 in better physical and mental health than in the past. Trends show that the prevalence of *chronic* disability among older people is declining: from 1982 to 1994, the prevalence of chronic disability diminished significantly, from 24.9 to 21.3 percent of the older population (Manton et al., 1997). While some disability is the result of more general losses of physiological functions with aging (i.e., normal aging), *extreme* disability in older persons, including that which stems from mental disorders, is not an inevitable part of aging (Cohen, 1988; Rowe & Kahn, 1997).

Normal aging is a gradual process that ushers in some physical decline, such as decreased sensory abilities (e.g., vision and hearing) and decreased pulmonary and immune function (Miller, 1996; Carman, 1997). With aging come certain changes in mental functioning, but very few of these changes match commonly held negative stereotypes about aging (Cohen, 1988; Rowe & Kahn, 1997). In normal aging, important aspects of mental health include stable intellectual functioning, capacity for change, and productive engagement with life.

Cognitive Capacity With Aging

Cognition subsumes intelligence, language, learning, and memory. With advancing years, cognitive capacity with aging undergoes some loss, yet important functions are spared. Moreover, there is much variability between individuals, variability that is dependent upon lifestyle and psychosocial factors (Gottlieb, 1995). Most important, accumulating evidence from human and animal research finds that lifestyle modifies genetic risk in influencing the outcomes of aging (Finch & Tanzi, 1997). This line of research is beginning to dispel the pejorative stereotypes of older people as rigidly shaped by heredity and incapable of broadening their pursuits and acquiring new skills.

A large body of research, including both cross-sectional studies and longitudinal studies, has investigated changes in cognitive function with aging. Studies have found that working memory declines with aging, as does long-term memory (Siegler et al., 1996), with decrements more apparent in recall than in recognition capacities. Slowing or some loss of other cognitive functions takes place, most notably in information processing, selective attention, and problem-solving ability, yet findings are variable (Siegler et al., 1996). These cognitive changes translate into a slower pace of learning and greater need for repetition of new information. Vocabulary increases slightly until the mid-70s, after which it declines (Carman, 1997). In older people whose IQ declines, somatic illness is implicated in some cases (Cohen, 1988). Fluid intelligence, a form of intelligence defined as the ability to solve novel problems, declines over time, yet research finds that fluid intelligence can be enhanced through training in cognitive skills and problem-solving strategies (Baltes et al., 1989).

Memory complaints are exceedingly common in older people, with 50 to 80 percent reporting subjective memory complaints (cited in Levy-Cushman & Abeles, in press). However, subjective memory complaints do not correspond with actual performance. In fact, some who complain about memory display performance superior to those who do not complain (Collins & Abeles, 1996). Memory complaints in older people, according to several studies, are thought to be more a product of depression than of decline in memory performance (cited in Levy-Cushman & Abeles, in press). (The importance of proper diagnosis and treatment of depression is emphasized in subsequent sections of this chapter.) Studies attempting to treat memory complaints associated with normal aging—using either pharmacological or psychosocial means—have been, with few exceptions, unsuccessful (Crook, 1993). In one of these exceptions, a recent study demonstrated a significant reduction in memory complaints with training workshops for healthy older people. The workshops stressed not only memory promotion strategies, but also ways of dealing with

Mental Health: A Report of the Surgeon General

expectations and perceptions about memory loss (Levy-Cushman & Abeles, in press).

One large, ongoing longitudinal study found high cognitive performance to be dependent on four factors, ranked here in decreasing order of importance: education, strenuous activity in the home, peak pulmonary flow rate, and "self-efficacy," which is a personality measure defined by the ability to organize and execute actions required to deal with situations likely to happen in the future (Albert et al., 1995). Education, as assessed by years of schooling, is the strongest predictor of high cognitive functioning. This finding suggests that education not only has salutary effects on brain function earlier in life, but also foreshadows sustained productive behavior in later life, such as reading and performing crossword puzzles (Rowe & Kahn, 1997).

The coexistence of mental and somatic disorders (i.e., comorbidity) is common (Kramer et al., 1992). Some disorders with primarily somatic symptoms can cause cognitive, emotional, and behavioral symptoms as well, some of which rise to the level of mental disorders. At that point, the mental disorder may result from an effect of the underlying disorder on the central nervous system (e.g., dementia due to a medical condition such as hypothyroidism) or an effect of treatment (e.g., delirium due to a prescribed medication). Likewise, mental problems or disorders can lead to or exacerbate other physical conditions by decreasing the ability of older adults to care for themselves, by impairing their capacity to rally social support, or by impairing physiological functions. For example, stress increases the risk of coronary heart disease and can suppress cellular immunity (McEwen, 1998). Depression can lead to increased mortality from heart disease and possibly cancer (Frasure-Smith et al., 1993, 1995; Penninx et al., 1998).

A new model postulates that successful aging is contingent upon three elements: avoiding disease and disability, sustaining high cognitive and physical function, and engaging with life (Rowe & Kahn, 1997). The latter encompasses the maintenance of interpersonal relationships and productive activities, as defined by paid or unpaid activities that generate goods

or services of economic value. The three major elements are considered to act in concert, for none is deemed sufficient by itself for successful aging. This new model broadens the reach of health promotion in aging to entail more than just disease prevention.

Change, Human Potential, and Creativity

Descriptive research reveals evidence of the capacity for constructive change in later life (Cohen, 1988). The capacity to change can occur even in the face of mental illness, adversity, and chronic mental health problems. Older persons display flexibility in behavior and attitudes and the ability to grow intellectually and emotionally. Time plays a key role. Externally imposed demands upon one's time may diminish, and the amount of time left at this stage in life can be significant. In the United States in the late 20th century, late-life expectancy approaches another 20 years at the age of 65. In other words, average longevity from age 65 today approaches what had been the average longevity from birth some 2,000 years ago. This leaves plenty of time to embark upon new social, psychological, educational, and recreational pathways, as long as the individual retains good health and material resources.

In his classic developmental model, Erik Erikson characterized the final stage of human development as a tension between "ego integrity and despair" (Erikson, 1950). Erikson saw the period beginning at age 65 years as highly variable. Ideally, individuals at this stage witness the flowering of seeds planted earlier in the prior seven stages of development. When they achieve a sense of integrity in life, they garner pride from their children, students and protégés, and past accomplishments. With contentment comes a greater tolerance and acceptance of the decline that naturally accompanies the aging process. Failure to achieve a satisfying degree of ego integrity can be accompanied by despair.

Cohen (in press) has proposed that with increased longevity and health, particularly for people with adequate resources, aging is characterized by two human potential phases. These phases, which emphasize the positive aspects of the final stages of the

life cycle, are termed *Retirement/Liberation* and *Summing Up/Swan Song*.

Retirement often is viewed as the most important life event prior to death. Retirement frequently is associated with negative myths and stereotypes (Sheldon et al., 1975; Bass, 1995). Cohen points out, however, that most people fare well in retirement. They have the opportunity to explore new interests, activities, and relationships due to retirement's liberating qualities. In the Retirement/Liberation phase, new feelings of freedom, courage, and confidence are experienced. Those at risk for faring poorly are individuals who typically do not want to retire, who are compelled to retire because of poor health, or who experience a significant decline in their standard of living (Cohen, 1988). In short, the liberating experience of having more time and an increased sense of freedom can be the springboard for creativity in later life. Creative achievement by older people can change the course of an individual, family, community, or culture.

In the late-life Summing Up/Swan Song phase, there is a tendency to appraise one's life work, ideas, and discoveries and to share them with family or society. The desire to sum up late in life is driven by varied feelings, such as the desire to complete one's life work, the desire to give back after receiving much in life, or the fear of time evaporating. Important opportunities for creative sharing and expression ensue. There is a natural tendency with aging to reminisce and elaborate stories that has propelled the development of reminiscence therapy for health promotion and disease prevention. The swan song, the final part of this phase, connotes the last act or final creative work of a person before retirement or death.

There is much misunderstanding about thoughts of death in later life. Depression, serious loss, and terminal illness trigger the sense of mortality, regardless of age. Contrary to popular stereotypes, studies on aging reveal that most older people generally do not have a fear or dread of death in the absence of being depressed, encountering serious loss, or having been recently diagnosed with a terminal illness (Kastenbaum, 1985). Periodic thoughts of death—not in the form of dread or angst—do occur. But these are

usually associated with the death of a friend or family member. When actual dread of death does occur, it should not be dismissed as accompanying aging, but rather as a signal of underlying distress (e.g., depression). This is particularly important in light of the high risk of suicide among depressed older adults, which is discussed later in this chapter.

Coping With Loss and Bereavement

Many older adults experience loss with aging—loss of social status and self-esteem, loss of physical capacities, and death of friends and loved ones. But in the face of loss, many older people have the capacity to develop new adaptive strategies, even creative expression (Cohen, 1988, 1990). Those experiencing loss may be able to move in a positive direction, either on their own, with the benefit of informal support from family and friends, or with formal support from mental health professionals.

The life and work of William Carlos Williams are illustrative. Williams was a great poet as well as a respected physician. In his 60s, he suffered a stroke that prevented him from practicing medicine. The stroke did not affect his intellectual abilities, but he became so severely depressed that he needed psychiatric hospitalization. Nonetheless, Williams, with the help of treatment for a year, surmounted the depression and for the next 10 years wrote luminous poetry, including the Pulitzer Prize-winning *Pictures From Bruegel*, which was published when he was 79. In his later life, Williams wrote about “old age that adds as it takes away.” What Williams and his poetry epitomize is that age can be the catalyst for tapping into creative potential (Cohen, 1998a).

Loss of a spouse is common in late life. About 800,000 older Americans are widowed each year. Bereavement is a natural response to death of a loved one. Its features, almost universally recognized, include crying and sorrow, anxiety and agitation, insomnia, and loss of appetite (Institute of Medicine [IOM], 1984). This constellation of symptoms, while overlapping somewhat with major depression, does not by itself constitute a mental disorder. Only when symptoms persist for 2 months and longer after the loss does the

Mental Health: A Report of the Surgeon General

DSM-IV permit a diagnosis of either adjustment disorder or major depressive disorder. Even though bereavement of less than 2 months' duration is not considered a mental disorder, it still warrants clinical attention (DSM-IV). The justification for clinical attention is that bereavement, as a highly stressful event, increases the probability of, and may cause or exacerbate, mental *and* somatic disorders.

Bereavement is an important and well-established risk factor for depression. At least 10 to 20 percent of widows and widowers develop clinically significant depression during the first year of bereavement. Without treatment, such depressions tend to persist, become chronic, and lead to further disability and impairments in general health, including alterations in endocrine and immune function (Zisook & Shuchter, 1993; Zisook et al., 1994). Several preventive interventions, including participation in self-help groups, have been shown to prevent depression among widows and widowers, although one study suggested that self-help groups can exacerbate depressive symptoms in certain individuals (Levy et al., 1993). These are described later in this chapter.

Bereavement-associated depression often coexists with another type of emotional distress, which has been termed traumatic grief (Prigerson et al., in press). The symptoms of traumatic grief, although not formalized as a mental disorder in DSM-IV, appear to be a mixture of symptoms of both pathological grief and post-traumatic stress disorder (Frank et al., 1997a). Such symptoms are extremely disabling, associated with functional and health impairment and with persistent suicidal thoughts, and may well respond to pharmacotherapy (Zygmunt et al., 1998). Increased illness and mortality from suicide are the most serious consequences of late-life depression.

The dynamics around loss in later life need greater clarification. One pivotal question is why some, in confronting loss with aging, succumb to depression and suicide—which, as noted earlier, has its highest frequency after age 65—while others respond with new adaptive strategies. Research on health promotion also needs to identify ways to prevent adverse reactions and to promote positive responses to loss in later life.

Meanwhile, despite cultural attitudes that older persons can handle bereavement by themselves or with support from family and friends, it is imperative that those who are unable to cope be encouraged to access mental health services. Bereavement is not a mental disorder but, if unattended to, has serious mental health and other health consequences.

Overview of Mental Disorders in Older Adults

Older adults are encumbered by many of the same mental disorders as are other adults; however, the prevalence, nature, and course of each disorder may be very different. This section provides a general overview of assessment, diagnosis, and treatment of mental disorders in older people. Its purpose is to describe issues common to many mental disorders. Subsequent sections of this chapter provide more detailed reviews of late-life depression and Alzheimer's disease. Also, to shed light on the range and frequency of disorders that impair the mental well-being of older Americans, the chapter reviews the impact on older adults of anxiety, schizophrenia, and alcohol and substance abuse.

Assessment and Diagnosis

Assessment and diagnosis of late-life mental disorders are especially challenging by virtue of several distinctive characteristics of older adults. First, the clinical presentation of older adults with mental disorders may be different from that of other adults, making detection of treatable illness more difficult. For example, many older individuals present with somatic complaints and experience symptoms of depression and anxiety that do not meet the full criteria for depressive or anxiety disorders. The consequences of these subsyndromal conditions may be just as deleterious as the syndromes themselves. Failure to detect individuals who truly have treatable mental disorders represents a serious public health problem (National Institutes of Health [NIH] Consensus Development Panel on Depression in Late Life, 1992).

Detection of mental disorders in older adults is complicated further by high comorbidity with other

medical disorders. The symptoms of somatic disorders may mimic or mask psychopathology, making diagnosis more taxing. In addition, older individuals are more likely to report somatic symptoms than psychological ones, leading to further under-identification of mental disorders (Blazer, 1996b).

Primary care providers carry much of the burden for diagnosis of mental disorders in older adults, and, unfortunately, the rates at which they recognize and properly identify disorders often are low. With respect to depression, for example, a significant number of depressed older adults are neither diagnosed nor treated in primary care (NIH Consensus Development Panel on Depression in Late Life, 1992; Unutzer et al., 1997b). In one study of primary care physicians, only 55 percent of internists felt confident in diagnosing depression, and even fewer (35 percent of the total) felt confident in prescribing antidepressants to older persons (Callahan et al., 1992). Physicians were *least* likely to report that they felt "very confident" in evaluating depression in other late-life conditions (Gallo et al., in press). Researchers estimate that an *unmet* need for mental health services may be experienced by up to 63 percent of adults aged 65 years and older with a mental disorder, based on prevalence estimates from the Epidemiologic Catchment Area (ECA) study (Rabins, 1996).

The large unmet need for treatment of mental disorders reflects *patient* barriers (e.g., preference for primary care, tendency to emphasize somatic problems, reluctance to disclose psychological symptoms), *provider* barriers (e.g., lack of awareness of the manifestations of mental disorders, complexity of treatment, and reluctance to inform patients of a diagnosis), and mental health delivery *system* barriers (e.g., time pressures, reimbursement policies).

Stereotypes about normal aging also can make diagnosis and assessment of mental disorders in late life challenging. For example, many people believe that "senility" is normal and therefore may delay seeking care for relatives with dementing illnesses. Similarly, patients and their families may believe that depression and hopelessness are natural conditions of older age, especially with prolonged bereavement.

Cognitive decline, both normal and pathological, can be a barrier to effective identification and assessment of mental illness in late life. Obtaining an accurate history, which may need to be taken from family members, is important for diagnosis of most disorders and especially for distinguishing between somatic and mental disorders. Normal decline in short-term memory and especially the severe impairments in memory seen in dementing illnesses hamper attempts to obtain good patient histories. Similarly, cognitive deficits are prominent features of many disorders of late life that make diagnosis of psychiatric disorders more difficult.

Overview of Prevention

Prevention in mental health has been seen until recently as an area limited to childhood and adolescence. Now there is mounting awareness of the value of prevention in the older population. While the body of published literature is not as extensive as that for diagnosis or treatment, investigators are beginning to shape new approaches to prevention. Yet because prevention research is driven, in part, by refined understanding of disease etiology—and etiology research itself continues to be rife with uncertainty—prevention advances are expected to lag behind those in etiology.

There are many ways in which prevention models can be applied to older individuals, provided a broad view of prevention is used (Lebowitz & Pearson, in press). Such a broad view entails interventions for reducing the risk of developing, exacerbating, or experiencing the consequences of a mental disorder. Consequently, this section covers primary prevention (including the prevention of depression and suicide), treatment-related prevention, prevention of excess disability, and prevention of premature institutionalization. However, many of the research advances noted in this section have yet to be translated into practice. Given the frequency of memory complaints and depression, the time may soon arrive for older adults to be encouraged to have "mood and memory checkups" in the same manner that they are now encouraged to have physical checkups (N. Abeles, personal communication, 1998).

Mental Health: A Report of the Surgeon General

Primary Prevention

Primary prevention, the prevention of disease before it occurs, can be applied to late-onset disorders. Progress in our understanding of etiology, risk factors, pathogenesis, and the course of mental disorders—discussed later in this chapter for depression, Alzheimer's disease, and other conditions—stimulates and channels the development of prevention interventions.

The largest body of primary prevention research focuses on late-life depression, where some progress has been documented. With other disorders, primary prevention research is in its infancy. Prevention in Alzheimer's disease might target individuals at increased genetic risk with prophylactic nutritional (e.g., vitamin E), cholinergic, or amyloid-targeting interventions. Prevention research on late-onset schizophrenia might explore potential protective factors, such as estrogen.

Prevention of Depression and Suicide

Depression is strikingly prevalent among older people. As noted below, 8 to 20 percent of older adults in the community and up to 37 percent in primary care settings experience symptoms of depression.

One approach to preventing depression is through grief counseling for widows and widowers. For example, participation in self-help groups appears to ameliorate depression, improve social adjustment, and reduce the use of alcohol and other drugs of abuse in widows (Constantino, 1988; Lieberman & Videka-Sherman, 1986). The efficacy of self-help groups approximates that of brief psychodynamic psychotherapy in older bereaved individuals without significant prior psychopathology (Marmar et al., 1988). The battery of psychosocial and pharmacological treatments to prevent *recurrences* of depression (i.e., secondary prevention) is discussed later in this chapter under the section on depression.

Depression is a foremost risk factor for suicide in older adults (Conwell, 1996; Conwell et al., 1996). Older people have the highest rates of suicide in the U.S. population: suicide rates increase with age, with older white men having a rate of suicide up to six times

that of the general population (Kachur et al., 1995; Hoyert et al., 1999). Despite the prevalence of depression and the risk it confers for suicide, depression is neither well recognized nor treated in primary care settings, where most older adults seek and receive health care (Unutzer et al., 1997a). Studies described in the depression section of this chapter have found that undiagnosed and untreated depression in the primary care setting plays a significant role in suicide (Caine et al., 1996). This awareness has prompted the development of suicide prevention strategies expressly for primary care. One of the first published suicide prevention studies, an uncontrolled experiment conducted in Sweden, suggested that a depression training program for general practitioners reduces suicide (Rihmer et al., 1995). Suicide interventions, especially in the primary care setting, have become a priority of the U.S. Public Health Service, with lead responsibility assumed by the Office of the Surgeon General and the National Institute of Mental Health.

Depression and suicide prevention strategies also are important for nursing home residents. About half of patients newly relocated to nursing homes are at heightened risk for depression (Parmelee et al., 1989).

Treatment-Related Prevention

Prevention of relapse or recurrence of the underlying mental disorder is important for improving the mental health of older patients with mental disorders. For example, treatments that are applied with adequate intensities for depression (Schneider, 1996) and for depression in Alzheimer's disease (Small et al., 1997) may prevent relapse or recurrence. Substantial residual disability in chronically mentally ill individuals (Lebowitz et al., 1997) suggests that treatment must be approached from a longer term perspective (Reynolds et al., 1996).

Prevention of medication side effects and adverse reactions also is an important goal of treatment-related prevention efforts in older adults. Comorbidity and the associated polypharmacy for multiple conditions are characteristic of older patients. New information on the genetic basis of drug metabolism and on the action of drug-metabolizing enzymes can lead to a better

understanding of complex drug interactions (Nemeroff et al., 1996). For example, many of the selective serotonin reuptake inhibitors compete for the same metabolic pathway used by beta-blockers, type 1C antiarrhythmics, and benzodiazepines (Nemeroff et al., 1996). This knowledge can assist the clinician in choosing medications that can prevent the likelihood of side effects. In addition, many older patients require antipsychotic treatment for management of behavioral symptoms in Alzheimer's disease, schizophrenia, and depression. Although doses tend to be quite low, age and length of treatment represent major risk factors for movement disorders (Saltz et al., 1991; Jeste et al., 1995a). Recent research on older people suggests that the newer antipsychotics present a much lower risk of movement disorders, highlighting their importance for prevention (Jeste et al., in press). Finally, body sway and postural stability are affected by many drugs, although there is wide variability within classes of drugs (Laghrissi-Thode et al., 1995). Minimizing the risk of falling, therefore, is another target for prevention research. Falls represent a leading cause of injury deaths among older persons (IOM, 1999).

Prevention of Excess Disability

Prevention efforts in older mentally ill populations also target avoidance of excessive disability. The concept of excess disability refers to the observation that many older patients, particularly those with Alzheimer's disease and other severe and persistent mental disorders, are more functionally impaired than would be expected according to the stage or severity of their disorder. Medical, psychosocial, and environmental factors all contribute to excess disability. For example, depression contributes to excess disability by hastening functional impairment in patients with Alzheimer's disease (Ritchie et al., 1998). The fast pace of modern life, with its emphasis on independence, also contributes to excess disability by making it more difficult for older adults with impairments to function autonomously. Attention to depression, anxiety, and other mental disorders may reduce the functional limitations associated with concomitant mental and somatic impairments. Many studies have demonstrated

that attention to these factors and aggressive intervention, where appropriate, maximize function (Lebowitz & Pearson, in press).

Prevention of Premature Institutionalization

Another important goal of prevention efforts in older adults is prevention of premature institutionalization. While institutional care is needed for many older patients who suffer from severe and persistent mental disorders, delay of institutional placement until absolutely necessary generally is what patients and family caregivers prefer. It also has significant public health impact in terms of reducing costs. A randomized study of counseling and support versus usual care for family caregivers of patients with Alzheimer's disease found the intervention to have delayed patients' nursing home admission by over 300 days (Mittelman et al., 1996). The intervention also resulted in a significant reduction in depressive symptoms in the caregivers. The intervention consisted of three elements: individual and family counseling sessions, support group participation, and availability of counselors to assist with patient crises.

The growing importance of avoiding premature institutionalization is illustrated by its use as one measure of the effectiveness of pharmacotherapy in older individuals. For example, clinical trials of drugs for Alzheimer's disease have begun using delay of institutionalization as a primary outcome (Sano et al., 1997) or as a longer-term outcome in a followup study after the double-blind portion of the clinical trial ended (Knopman et al., 1996).

Overview of Treatment

Treatment of mental disorders in older adults encompasses pharmacological interventions, electroconvulsive therapy, and psychosocial interventions. While the pharmacological and psychosocial interventions used to treat mental health problems and specific disorders may be identical for older and younger adults, characteristics unique to older adults may be important considerations in treatment selection.

Mental Health: A Report of the Surgeon General

Pharmacological Treatment

The special considerations in selecting appropriate medications for older people include physiological changes due to aging; increased vulnerability to side effects, such as tardive dyskinesia; the impact of polypharmacy; interactions with other comorbid disorders; and barriers to compliance. All are discussed below.

The aging process leads to numerous changes in physiology, resulting in altered blood levels of certain medications, prolonged pharmacological effects, and greater risk for many side effects (Kendell et al., 1981). Changes may occur in the absorption, distribution, metabolism, and excretion of psychotropic medications (Pollock & Mulsant, 1995).

As people age, there is a gradual decrease in gastrointestinal motility, gastric blood flow, and gastric acid production (Greenblatt et al., 1982). This slows the *rate* of absorption, but the overall *extent* of gastric absorption is probably comparable to that in other adults. The aging process is also associated with a decrease in total body water, a decrease in muscle mass, and an increase in adipose tissue (Borkan et al., 1983). Drugs that are highly lipophilic, such as neuroleptics, are therefore more likely to be accumulated in fatty tissues in older patients than they are in younger patients.

The liver undergoes changes in blood flow and volume with age. Phase I metabolism (oxidation, reduction, hydrolysis) may diminish or remain unchanged, while phase II metabolism (conjugation with an endogenous substrate) does not change with aging. Renal blood flow, glomerular surface area, tubular function, and reabsorption mechanisms all have been shown to diminish with age. Diminished renal excretion may lead to a prolonged half-life and the necessity for a lower dose or longer dosing intervals.

Pharmacodynamics, which refers to the drug's effect on its target organ, also can be altered in older individuals. An example of aging-associated pharmacodynamic change is diminished central cholinergic function contributing to increased sensitivity to the anticholinergic effects of many neuroleptics and antidepressants in older adults (Molchan et al., 1992).

Because of the pharmacokinetic and pharmacodynamic concerns presented above, it is often recommended that clinicians "start low and go slow" when prescribing new psychoactive medications for older adults. In other words, efficacy is greatest and side effects are minimized when initial doses are small and the rate of increase is slow. Nevertheless, the medication should generally be titrated to the regular adult dose in order to obtain the full benefit. The potential pitfall is that, because of slower titration and the concomitant need for more frequent medical visits, there is less likelihood of older adults receiving an adequate dose and course of medication.

Increased Risk of Side Effects

Older people encounter an increased risk of side effects, most likely the result of taking multiple drugs or having higher blood levels of a given drug. The increased risk of side effects is especially true for neuroleptic agents, which are widely prescribed as treatment for psychotic symptoms, agitation, and behavioral symptoms. Neuroleptic side effects include sedation, anticholinergic toxicity (which can result in urinary retention, constipation, dry mouth, glaucoma, and confusion), extrapyramidal symptoms (e.g., parkinsonism, akathisia, and dystonia), and tardive dyskinesia. Chapter 4 contains more detailed information about the side effects of neuroleptics.

Tardive dyskinesia is a frequent and persistent side effect that occurs months to years after initiation of neuroleptics. In older adults, tardive dyskinesia typically entails abnormal movements of the tongue, lips, and face. In a recent study of older outpatients treated with conventional neuroleptics the incidence of tardive dyskinesia after 12 months of neuroleptic treatment was 29 percent of the patients. At 24 and 36 months, the mean cumulative incidence was 50.1 percent and 63.1 percent, respectively (Jeste et al., 1995a). This study demonstrates the high risk of tardive dyskinesia in older patients even with low doses of conventional neuroleptics. Studies of younger adult patients reveal an annual cumulative incidence of tardive dyskinesia at 4 to 5 percent (Kane et al., 1993).

Unlike conventional neuroleptics, the newer atypical ones, such as clozapine, risperidone, olanzapine, and quetiapine, apparently confer several advantages with respect to both efficacy and safety. These drugs are associated with a lower incidence of extrapyramidal symptoms than conventional neuroleptics are. For clozapine, the low risk of tardive dyskinesia is well established (Kane et al., 1993). The incidence of tardive dyskinesia with other atypical antipsychotics is also likely to be lower than that with conventional neuroleptics because extrapyramidal symptoms have been found to be a risk factor for tardive dyskinesia in older adults (Saltz et al., 1991; Jeste et al., 1995a). The determination of exact risk of tardive dyskinesia with these newer drugs needs long-term studies.

Polypharmacy

In addition to the effects of aging on pharmacokinetics and pharmacodynamics and the increased risk of side effects, older individuals with mental disorders also are more likely than other adults to be medicated with multiple compounds, both prescription and nonprescription (i.e., polypharmacy). Older adults (over the age of 65) fill an average of 13 prescriptions a year (for original or refill prescriptions), which is approximately three times the number filled by younger individuals (Chrischilles et al., 1992). Polypharmacy greatly complicates effective treatment of mental disorders in older adults. Specifically, drug-drug interactions are of concern, both in terms of increasing side effects and decreasing efficacy of one or both compounds.

Treatment Compliance

Compliance with the treatment regimen also is a special concern in older adults, especially in those with moderate or severe cognitive deficits. Physical problems, such as impaired vision, make it likely that instructions may be misread or that one medicine may be mistaken for another. Cognitive impairment may also make it difficult for patients to remember whether or not they have taken their medication. Although in general, older patients are more compliant about taking

psychoactive medications than other types of drugs (Cooper et al., 1982), when noncompliance does occur, it may be less easily detected, more serious, less easily resolved, mistaken for symptoms of a new disease, or even falsely labeled as "old-age" symptomatology. Accordingly, greater emphasis must be placed on strict compliance by patients in this age group (Lamy et al., 1992). Medication noncompliance takes different forms in older adults, that is, overuse and abuse, forgetting, and alteration of schedules and doses. The most common type of deliberate noncompliance among older adults may be the underuse of the prescribed drug, mainly because of side effects and cost considerations. Factors that contribute to medication noncompliance in older patients include inadequate information given to them regarding the necessity for drug treatment, unclear prescribing directions, suboptimal doctor-patient relationship, the large number of times per day drugs must be taken, and the large number of drugs that are taken at the same time (Lamy et al., 1992). Better compliance may be achieved by giving simple instructions and by asking specific questions to make sure that the patient understands directions.

Psychosocial Interventions

Several types of psychosocial interventions have proven effective in older patients with mental disorders, but the research is more limited than that on pharmacological interventions (see Klausner & Alexopoulos, in press). Both types are frequently used in combination. Most of the research has been restricted to psychosocial treatments for depression, although, as discussed below, there is mounting interest in dementia. For other mental disorders, psychosocial interventions found successful for younger adults are often tailored to older people in the practice setting without the benefit of efficacy research.

Despite the relative paucity of research, psychosocial interventions may be preferred for some older patients, especially those who are unable to tolerate, or prefer not to take, medication or who are confronting stressful situations or low degrees of social support (Lebowitz et al., 1997). The benefits of psychosocial interventions are likely to assume greater prominence

Mental Health: A Report of the Surgeon General

as a result of population demographics: as the number of older people grows, progressively more older people in need of mental health treatment—especially the very old—are expected to be suffering from greater levels of comorbidity or dealing with the stresses associated with disability. Psychosocial interventions not only can help relieve the symptoms of a variety of mental disorders and related problems but also can play more diverse roles: they can help strengthen coping mechanisms, encourage (and monitor) patients' compliance with medications, and promote healthy behavior (Klausner & Alexopoulos, in press).

New approaches to service delivery are being designed to realize the benefits of established psychosocial interventions. Many older people are not comfortable with traditional mental health settings, partially as a result of stigma (Waters, 1995). In fact, many older people *prefer* to receive treatment for mental disorders by their primary care physicians, and most older people *do* receive such care in the primary care setting (Brody et al., 1997; Unutzer et al., 1997a). Since older people show willingness to accept psychosocial interventions in the primary care setting, new models are striving to integrate into the primary care setting the delivery of specialty mental health services. The section of this chapter on service delivery discusses new models in greater detail.

Gap Between Efficacy and Effectiveness

A problem common to both pharmacological and psychosocial interventions is the disparity between treatment efficacy, as demonstrated in randomized controlled clinical trials, and effectiveness in real-world settings. While this problem is certainly not unique to older people (see Chapter 2 for a broader discussion of the problem), this problem is especially significant for older people with mental disorders. Older people are often undertreated for their mental disorders in primary care settings (Unutzer et al., 1997a). When they do receive appropriate treatment, older people are more likely than other people to have comorbid disorders and social problems that reduce treatment effectiveness (Unutzer et al., 1997a). An additional overlay of

barriers, including financing and systems of care, is discussed later in this chapter.

Depression in Older Adults

Depression in older adults not only causes distress and suffering but also leads to impairments in physical, mental, and social functioning. Despite being associated with excess morbidity and mortality, depression often goes undiagnosed and untreated. The startling reality is that a substantial proportion of older patients receive no treatment or inadequate treatment for their depression in primary care settings, according to expert consensus (NIH Consensus Development Panel on Depression in Late Life, 1992; Lebowitz et al., 1997). Part of the problem is that depression in older people is hard to disentangle from the many other disorders that affect older people, and its symptom profile is somewhat different from that in other adults. Depressive symptoms are far more common than full-fledged major depression. However, several depressive symptoms together represent a condition—explained below as “minor depression”—that can be as disabling as major depression (Unutzer et al., 1997a). Minor depression, despite the implications of the term, is *major* in its prevalence and impact. Eight to 20 percent of older adults in the community and up to 37 percent in primary care settings suffer from depressive symptoms. Treatment is successful, with response rates between 60 and 80 percent, but the response generally takes longer than that for other adults. In addition to reviewing information on prevalence and treatment, this section also discusses depression's course, barriers to diagnosis, interactions with physical disease, consequences, cost, and etiology.

Diagnosis of Major and “Minor” Depression

The term “major depression” refers to conditions with a major depressive episode, such as major depressive disorder, bipolar disorder, and related conditions. Major depressive disorder, the most common type of major depression in adults, is characterized by one or more episodes that include the following symptoms: depressed mood, loss of interest or pleasure in activities, significant weight loss or gain, sleep

disturbance, psychomotor agitation or retardation, fatigue, feelings of worthlessness, loss of concentration, and recurrent thoughts of death or suicide. (For further discussion of the diagnosis of major depressive disorder, see Chapter 4.) Major depressive disorder cannot be diagnosed if symptoms last for less than 2 months after bereavement, among other exclusionary factors (DSM-IV).

Most older patients with symptoms of depression do not meet the full criteria for major depression. The new diagnostic entity of minor depression has been proposed to characterize some of these patients. "Minor depression," a subsyndromal form of depression, is not yet recognized as an official disorder, and DSM-IV proposes further research on it.

Minor depression is more frequent than major depression, with 8 to 20 percent of older community residents displaying symptoms (Alexopoulos, 1997; Gallo & Lebowitz, 1999). The diagnosis of minor depression is not yet standardized; the research criteria proposed in DSM-IV are the same as those for major depression, but a diagnosis would require fewer symptoms and less impairment. Minor depression, in fact, is not thought to be a single syndrome, but rather a heterogeneous group of syndromes that may signify either an early or residual form of major depression, a chronic, though mild, form of depression that does not present with a full array of symptoms at any one time, called dysthymia, or a response to an identifiable stressor (Judd et al., 1994; Pincus & Wakefield-Davis, 1997). Since depression is more difficult to assess and detect in older adults, research is needed on what clinical features might help identify older adults at increased risk for sustained depressive symptoms and suicide.

Both major and minor depression are associated with significant disability in physical, social, and role functioning (Wells et al., 1989). The degree of disability may not be as great with minor depression, but because of its higher prevalence, minor depression is associated with 51 percent more days lost from work than is major depression (Broadhead et al., 1990). Major and minor depression are associated with high

health care utilization and poor quality of life (see Unutzer et al., 1997a, for a review).

Late-Onset Depression

Major or minor depression diagnosed with first onset later than age 60 has been termed *late-onset depression*. Late-onset depression is not a diagnosis; rather, it refers to a subset of patients with major or minor depression whose later age at first onset imparts slightly different clinical characteristics, suggesting the possibility of distinct etiology. Late-onset depression shares many clinical characteristics with early-onset depression, yet some distinguishing features exist. Patients with late-onset depression display greater apathy (Krishnan et al., 1995) and less lifetime personality dysfunction (Abrams et al., 1994). Cognitive deficits may be more prominent, with more impaired executive and memory functioning (Salloway et al., 1996) and greater medial temporal lobe abnormalities on magnetic resonance imaging, similar to those seen in dementia (Greenwald et al., 1997). Other studies, however, have shown no differences in cognition between patients with late- and early-onset depression (Holroyd & Duryee, 1997). The risk of recurrence of depression is relatively high among patients with onset of depression after the age of 60 (Reynolds, 1998).

Risk factors for late-onset depression, based on results of prospective studies, include widowhood (Bruce et al., 1990; Zisook & Shuchter, 1991; Harlow et al., 1991; Mendes de Leon et al., 1994), physical illness (Cadoret & Widmer, 1988; Harlow et al., 1991; Bachman et al., 1992), educational attainment less than high school (Wallace & O'Hara, 1992; Gallo et al., 1993), impaired functional status (Bruce & Hoff, 1994), and heavy alcohol consumption (Saunders et al., 1991).

Prevalence and Incidence

Estimates of the prevalence of major depression vary widely, depending on the definition and the procedure used for counting persons with depression (Gallo & Lebowitz, 1999). Researchers applying DSM criteria for major depression have found 1-year U.S. prevalence rates of about 5 percent or less in older people (Gurland

Mental Health: A Report of the Surgeon General

et al., 1996). The prevalence of major depression declines with age, while depressive symptoms increase (symptoms that now might warrant classification as minor depression). Romanoski and colleagues, on the basis of psychiatric interviews of adults in the Baltimore Epidemiologic Catchment Area, showed that major depression declined with advancing age (Romanoski et al., 1992). Prevalence estimates derived from *symptom* scales are consistent with the clinical impression that prevalence of depressive symptoms increases with advancing age. Depressive symptoms and syndromes have been identified in 8 to 20 percent of older community residents (Alexopoulos, 1997; Gallo & Lebowitz, 1999) and 17 to 35 percent of older primary care patients (Gurland et al., 1996).

Several incidence studies based on DSM criteria reflect a similar pattern of decline in rates of major depression with advancing age (Eaton et al., 1989; Eaton et al., 1997). The 13-year followup of the participants of the Baltimore Epidemiologic Catchment Area (ECA) sample revealed, however, that the distribution of the incidence of DSM-based major depression across the life span was bimodal, with a primary peak in the fourth decade and a secondary peak in the sixth decade (Eaton et al., 1997). In contrast to studies based on DSM criteria, several incidence studies report increased rates of depressive symptoms with age. A Swedish study reported that rates of depressive symptoms were highest in the older age groups and that rates of depression had increased in the interval from 1947–1957 to 1957–1972 (Hagnell et al., 1982). Incidence studies reveal an increased risk of depression among women as they age, consistent with findings based on prevalence surveys (Hagnell et al., 1982; Eaton et al., 1989; Gallo et al., 1993).

Thus, both prevalence and incidence studies that rely on DSM-based diagnosis of major depression suggest a decline with age, whereas symptom-based assessment studies show increased rates of depression among older adults, especially women. Evidence that older adults are less likely than younger persons to report feelings of dysphoria (i.e., sadness, unhappiness, or irritability) suggests that the standard criteria for depression may be more difficult to apply to older

adults (Gallo et al., 1994) or that older adults are disinclined to report such feelings.

Other mood disorders, such as dysthymia, bipolar disorder, and hypomania,¹ also are present in older individuals. Little difference has been found in the prevalence of affective disorders between African Americans and whites over the age of 65 (Weissman et al., 1991). The prevalence of bipolar disorder among people aged 65 and over is reportedly less than 1 percent (Robins & Regier, 1991). Approximately 5 to 10 percent of older patients presenting with mood disorders are manic or hypomanic (Yassa et al., 1988). However, these mood disorders will not be the focus of this section of the report, as they are much less common in older adults than depression.

Barriers to Diagnosis and Treatment

The underdiagnosis and undertreatment of depression in primary care represent a serious public health problem (NIH Consensus Development Panel on Depression in Late Life, 1992). One study found that only about 11 percent of depressed patients in primary care received adequate antidepressant treatment (in terms of dose and duration of pharmacotherapy), while 34 percent received inadequate treatment and 55 percent received no treatment (Katon et al., 1992).

There are many barriers to the diagnosis of depression in late life. Some of these barriers reflect the nature of the disorder: depression occurs in a complex medical and psychosocial context. In the elderly, the signs and symptoms of major depression are frequently attributed to “normal aging,” atherosclerosis, Alzheimer’s disease, or any of a host of other age-associated afflictions. Psychosocial antecedents such as loss, combined with decrements in physical health and sensory impairment, can also divert attention from clinical depression.

Another reason for the underdiagnosis is that older patients are less likely to report symptoms of dysphoria and worthlessness, which are often considered hallmarks of the diagnosis of depression. The

¹ Hypomania is marked by abnormally elevated mood, but the symptoms are not severe enough for mania (see Chapter 4).

consequences of underdiagnosis of this subset of patients can be severe. On the basis of a followup of older adults in the Baltimore Epidemiologic Catchment Area sample, persons with depressive symptoms (e.g., sleep and appetite disturbance) without sadness (e.g., hopelessness, worthlessness, thoughts of death, wanting to die, or suicide) were at increased risk for subsequent functional impairment, cognitive impairment, psychological distress, and death over the course of the 13-year interval (Gallo et al., 1997).

Other barriers to diagnosis are patient related. Depression can and frequently does amplify physical symptoms, distracting patients' and providers' attention from the underlying depression; and many older patients may deny psychological symptoms of depression or refuse to accept the diagnosis because of stigma. This appears to be particularly the case with older men, who also have the highest rates of suicide in later life (Hoyert et al., 1999).

Provider-related factors also appear to play a role in underdetection of depression and suicide risk. Providers may be reluctant to inform older patients of a diagnosis of depression, owing to uncertainty about diagnosis, reluctance to stigmatize, uncertainty about optimal treatment, concern about medication interactions or lack of access to psychiatric care, and continuing concern about the effectiveness and cost-effectiveness of treatment intervention (NIH Consensus Development Panel on Depression in Late Life, 1992; Unutzer et al., 1997a).

Societal stereotypes about aging also can hamper efforts to identify and diagnose depression in late life. Many people believe that depression in response to the loss of a loved one, increased physical limitations, or changing societal role is an inevitable part of aging. Even physicians appear to hold such stereotyped views. Three-quarters of physicians in one study thought that depression "was understandable" in older persons (Gallo et al., in press), consistent with other studies (Bartels et al., 1997). Suicidal thoughts are sometimes considered a normal facet of old age. These mistaken beliefs can lead to underreporting of symptoms by patients and lack of effort on the part of family members to seek care for patients.

Finally, the health care system itself is increasingly restricting the time spent in patient care, forcing mental health concerns to compete with comorbid general medical conditions. Primary care physicians often report feeling too pressured for time to investigate depression in older people (Glasser & Gravdal, 1997). Given the inseparability of mental and general health in later life particularly, this trend is worrisome.

Course

Across the life span, the course of depression is marked by recurrent episodes of depression followed by periods of remission. In late life, the course of depression tends to be more chronic than that in younger adults (Alexopoulos & Chester, 1992; Callahan et al., 1994; Cole & Bellavance, 1997). This means that recurrences extend for longer duration, while intervals of remission are shorter. It also means that cycles of recurrence and remission persist over a longer period of time. Patients' response to treatment is highly variable, and the determinants of treatment response and its temporal profile are the subjects of intense research (Reynolds & Kupfer, 1999). A slower, less consistent response, which suggests a higher probability of relapse, is related to older age, presence of acute and chronic stressors, lower levels of perceived social support, higher levels of pretreatment anxiety, and greater biologic dysregulation as reflected in higher levels of rapid eye movement sleep (Dew et al., 1997). The temporal profile of the initial treatment response also may provide important clues about which patients are likely to fare well on maintenance treatment and which ones are likely to have a brittle treatment response and stormy long-term course.

A recent update of the NIH Consensus Development Conference on the Diagnosis and Treatment of Late-Life Depression emphasized the need for more data to guide long-term treatment planning, especially in patients 70 years and older with major depression (Lebowitz et al., 1997). Little is currently known about differences, if any, in speed and rate of remission, relapse, recovery, and recurrence in patients aged 60 to 69 and those aged 70 and above. In a study at the University of Pittsburgh, two groups of patients (ages

Mental Health: A Report of the Surgeon General

60 to 69 and 70+) showed comparable times to remission and recovery, as well as similar absolute rates of remission during acute therapy, relapse during continuation therapy, and recovery. However, patients aged 70 and older experienced a significantly higher rate of recurrence during the first year of maintenance therapy (Reynolds, 1998). Thus, the course of depression and its interaction with treatment are influenced by age. This highlights the importance of research targeted at older age groups instead of reliance on extrapolations from younger patients.

Interactions With Somatic Illness

Late-life mental disorders are often detected in association with somatic illness (Reynolds & Kupfer, 1999). The prevalence of clinically significant depression in later life is estimated to be highest—approximately 25 percent—among those with chronic illness, especially with ischemic heart disease, stroke, cancer, chronic lung disease, arthritis, Alzheimer's disease, and Parkinson's disease (Borson et al., 1986; Blazer, 1989; Oxman et al., 1990; Callahan et al., 1994; Beekman et al., 1995; Borson, 1995).

The relationship between somatic illness and mental disorders is likely to be reciprocal, but the mechanisms are far from understood. Biological and psychological factors are thought to play a role (Unutzer et al., 1997a). The nature and course of late-life depression can be greatly affected by the coexistence of one or more other medical conditions.

Insomnia and sleep disturbance play a large role in the clinical presentation of older depressed patients. Sleep complaints over time in community-residing older people have been found to vary with the intensity of depressive symptoms (Rodin et al., 1988). Sleep disturbances in older men and women have also been recently linked to poor health, depression, angina, limitations in activities of daily living, and chronic use of benzodiazepines (Newman et al., 1997). Furthermore, persistent or residual sleep disturbance in older patients with prior depressive episodes predicts a less successful maintenance response to pharmacotherapy (Buysse et al., 1996). The prevalence of chronic, primary insomnia in older adults is

estimated at 5 to 10 percent (Ohayon et al., 1996). Relatively little is known about the etiology or pathophysiology of chronic primary insomnia and why it constitutes a risk factor for depression in older adults. An important issue for further research is whether effective treatment for chronic insomnia could prevent the subsequent development of clinical depression in midlife and later.

Consequences of Depression

The most serious consequence of depression in later life—especially untreated or inadequately treated depression—is increased mortality from either suicide or somatic illness. Older persons (65 years and above) have the highest suicide rates of any age group. The suicide rate for individuals age 85 and older is the highest, at about 21 suicides per 100,000, a rate almost twice the overall national rate of 10.6 per 100,000 (CDC, 1999). The high suicide rate among older people is largely accounted for by white men, whose suicide rate at age 85 and above is about 65 per 100,000 (CDC, 1999). Trends from 1980 to 1992 reveal that suicide rates are increasing among more recent cohorts of older persons (Kachur et al., 1995). Since national statistics are unlikely to include more veiled forms of suicide, such as nursing home residents who stop eating, estimates are probably conservative.

Suicide in older adults is most associated with late-onset depression: among patients 75 years of age and older, 60 to 75 percent of suicides have diagnosable depression (Conwell, 1996). Using a "psychological autopsy," Conwell and coworkers investigated all suicides within a geographical region and found that with increasing age, depression was more likely to be unaccompanied by other conditions such as substance abuse (Conwell et al., 1996). While thoughts of death may be developmentally expected in older adults, suicidal thoughts are not. From a stratified sample of primary care patients over age 60, Callahan and colleagues estimated the prevalence of specific suicidal thoughts at 0.7 to 1.2 percent (Callahan et al., 1996b). Unfortunately, no demographic or clinical variables distinguished depressed suicidal patients from depressed nonsuicidal patients (Callahan et al., 1996b).