

# Substance Abuse and Mental Health Among Older Americans: The State of the Knowledge and Future Directions

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# **SUBSTANCE ABUSE AND MENTAL HEALTH AMONG OLDER AMERICANS: THE STATE OF THE KNOWLEDGE AND FUTURE DIRECTIONS**

## **EXECUTIVE SUMMARY**

A substantial and growing percentage of older adults misuse alcohol, prescription drugs, or other substances. The number of older adults in need of substance abuse treatment is estimated to more than double from 1.7 million in 2000 and 2001 to 4.4 million in 2020.

One in four older adults has a significant mental disorder. Among the most common mental health problems in older persons are depression, anxiety disorders, and dementia. Over the next 25 years, the number of older adults with major psychiatric illnesses will more than double from an estimated 7 to 15 million individuals.

Substance abuse and mental health problems among older adults are associated with poor health outcomes, higher health care utilization, increased complexity of the course and prognosis of many mental and physical illnesses, increased disability and impairment, compromised quality of life, increased caregiver stress, increased mortality, and higher risk of suicide.

Demographic projections indicate that the aging percent of the “baby boom” generation will increase the proportion of persons over age 65 from 13 percent currently to 20 percent by the year 2030. By the year 2030, the number of persons with psychiatric disorders, including substance abuse disorders, in this older group will equal or exceed the number with mental illness in younger age groups (ages 18 to 29, 30 to 44, or 45 to 65).

The majority of older adults with substance abuse or mental health problems do not receive the treatment they need. An emerging evidence base supports the efficacy of a variety of pharmacological and psychotherapeutic interventions for substance abuse problems and major psychiatric disorders in older persons. Current prevention services for this population are extremely limited from both a substance abuse and a mental health perspective.

Prevention and early intervention programs, including those focused on risk and protective factors associated with this age group, are some of the most promising and appropriate ways to maximize health outcomes and minimize health care costs among older adults. These programs represent the future of age-appropriate care for the growing number of older Americans.

Mental health and substance abuse problems are associated with increased health care utilization and significant health care expenditures. Studies have indicated that targeted prevention and early intervention with this population can offset substantial costs to consumers, their families, health care organizations, and the government.

While the last two decades have provided the foundation for effective treatment and prevention strategies aimed at these issues, the developing knowledge base has received minimal dissemination and implementation within routine health care settings. Preventive strategies for mental health problems among older adults are less developed than those targeting substance abuse problems.

## **RECOMMENDATIONS**

Given the complexity and size of the current and future aging population, resources should be mobilized to modify and develop prevention and early intervention strategies to meet the specific needs and preferences of this rapidly growing group.

Information regarding evidence-based prevention and early intervention programs for late-life substance abuse and mental illness needs to be organized and made readily accessible for program adoption and replicability.

Prevention programming needs to be developed and tested so that the fast-growing older adult population is provided with state-of-the-art programs to reduce risk and improve protective factors for substance abuse and mental illness.

Technical assistance is critically needed to support promising prevention programs and help them implement the high quality scientific evaluation necessary for elevation to evidence-based practices (EBP) status.

As treatment demands increase, the substance abuse and mental health treatment systems will need a shift in focus to address the special needs of an older population of substance abusers. States and policymakers need to prepare for projected needs.

Improved tools for measuring substance abuse and mental health problems among older adults should be developed.

## **SUBSTANCE ABUSE AND MENTAL HEALTH AMONG OLDER AMERICANS: THE STATE OF THE KNOWLEDGE AND FUTURE DIRECTIONS**

### **PREVALENCE AND IMPACT OF SUBSTANCE ABUSE AMONG OLDER ADULTS**

A substantial and growing percentage of older adults misuse alcohol, prescription drugs, or other substances. The 2002/2003 SAMHSA National Survey on Drug Use and Health estimated that 45.1 percent of adults aged 50 or older (36.0 million persons) drank alcohol in the past month;<sup>1</sup> 34.4 percent of adults aged 65 or older drank alcohol in the past month;<sup>2</sup> approximately 12.2 percent of adults 50 or older reported binge alcohol use and 3.2 percent reported heavy alcohol use,<sup>1</sup> approximately 7.2 percent of adults 65 or older reported binge alcohol use and 1.8 percent reported heavy alcohol use.<sup>2</sup> In addition, an estimated 1.8 percent of adults aged 50 or older (1.4 million persons) had used an illicit drug in the past month. Marijuana was the most commonly used illicit drug (1.1%), followed by prescription-type drugs used nonmedically (0.7%) and cocaine (0.2%). The number of older adults in need of substance abuse treatment is estimated to more than double from 1.7 million in 2000 and 2001 to 4.4 million in 2020.<sup>3</sup>

Community surveys have estimated the prevalence of problem drinking among older adults to range from 1 percent to 15 percent.<sup>4-6</sup> In 2002, over 616,000 adults age 55 and older reported alcohol dependence in the past year (DSM-IV definition): 1.8 percent of those age 55-59, 1.5 percent of those age 60-64, and 0.5 percent of those age 65 or older.<sup>7</sup> Estimates of alcohol problems are much higher among healthcare-seeking populations because problem drinkers are more likely to seek medical care.<sup>8-10</sup> Studies in primary care settings found 10-15 percent of older patients met criteria for at-risk or problem drinking.<sup>11, 12</sup> Two recent studies among veterans in nursing homes reported that 29-49 percent of residents had a lifetime diagnosis of alcohol abuse or dependence, with 10-18 percent reporting active dependence symptoms in the past year.<sup>13, 14</sup> Despite the common occurrence of alcohol problems, health care personnel often fail to recognize problem drinking among older patients.<sup>8</sup>

Older adults also use a high number of prescription and over-the-counter medications, which increases their risk for inappropriate use of medications. In contrast to younger substance abusers who most often abuse illicit drugs, substance abuse problems among elderly individuals more typically occur from misuse of over-the-counter and prescription drugs. Overuse, underuse, or irregular use of either prescription or over-the-counter drugs are all forms of drug misuse. In its extreme form, misuse may become drug

abuse.<sup>15, 16</sup> Studies report that older persons regularly consume on average between two and six prescription medications and between one and three over-the-counter medications.<sup>17</sup> Combined difficulties with alcohol and medication misuse may affect up to 19 percent of older Americans.<sup>18-21</sup> Factors such as previous or coexisting drug, alcohol, or mental health problems, old age, and being of the female gender also increase vulnerability for misusing prescribed medications.<sup>22-26</sup>

Multiple biological, psychological, and social changes that accompany the aging process make the elderly uniquely vulnerable to substance abuse problems. These special vulnerabilities include loneliness, diminished mobility, impaired sensory capabilities, chronic pain, poor physical health, and poor economic and social supports.<sup>18, 27</sup> Many of the acute and chronic medical and psychiatric conditions that lead to high rates of health care use by older people are influenced by the consumption of alcohol. These conditions include harmful medication interactions, injury, depression, memory problems, liver disease, cardiovascular disease, cognitive changes, and sleep problems.<sup>28, 29</sup> The interactions between alcohol and medications are of notable importance to older populations; interactions between psychoactive medications, such as benzodiazepines, barbiturates, and antidepressants are of particular concern. Alcohol use can interfere with the metabolism of many medications and is a leading risk factor for the development of adverse drug reactions.<sup>30-32</sup> Finally, the presence of co-occurring psychiatric conditions (dual diagnosis) including comorbid depression, anxiety disorders, and cognitive impairment likely represent both a risk factor for and a complication of alcohol and medication abuse in older adults.<sup>33</sup>

Substance abuse complicates the course and significantly increases disability and morbidity associated with aging and illness.<sup>34-36</sup> Limited information concerning the most efficacious approaches to preventing, treating, and managing substance abuse among the elderly contributes to the failure of the current health care system to adequately address substance abuse and its complications among elders. Most diagnostic and treatment strategies are neither age-specific nor sensitive to what is most clinically effective in accommodating the unique biological and social condition of the elderly. The relative absence of clinical guidelines in treating substance abuse problems among the elderly is largely attributable to a lack of empirical studies targeting these problems and this population, including the diverse ethnic and racial groups that comprise the elderly population. In addition, health care providers tend to overlook substance abuse and misuse among older patients while older adults and their families are more likely to hide their substance abuse and less likely to seek help.<sup>15, 35</sup> The assortment of risk factors associated with alcohol

and medication misuse in older adults, coupled with the rapid growth in this population, highlights the need for targeted prevention and treatment interventions.

## **PREVALENCE AND IMPACT OF MENTAL HEALTH PROBLEMS AMONG OLDER ADULTS**

One in four older adults has a significant mental disorder (26%), including 16 percent with a primary psychiatric illness, 3 percent with dementia complicated by significant psychiatric symptoms, and 7 percent with uncomplicated dementia.<sup>37</sup> Among the most common mental health problems in older persons are depression, anxiety disorders, and dementia.<sup>38</sup> Psychotic disorders are also prevalent, although they are likely to be underreported. Moreover, older adults have the highest suicide rate of any age group, with greater risk associated with men,<sup>39</sup> and with the presence of alcohol use and depressive symptoms.<sup>40</sup> <sup>41</sup> Over the next 25 years, the number of older adults with major psychiatric illnesses is expected to more than double from an estimated 7 to 15 million individuals.<sup>37</sup>

Without adequate and effective treatment, mental disorders in older persons are associated with significant disability and impairment, including impaired independent and community-based functioning, compromised quality of life, cognitive impairment, increased caregiver stress, disability, increased mortality, and poor health outcomes.<sup>42</sup> Older adults with mental health problems also have higher utilization and costs of health care services,<sup>43, 44</sup> although providing effective mental health services can potentially result in cost offsets.<sup>45</sup>

Mental disorders are frequently underdiagnosed, owing to 1) misattribution of psychiatric symptoms to cognitive disorders, medical disorders, or normal aging; 2) a lack of age-appropriate diagnostic criteria for certain psychiatric problems; and 3) underreporting of symptoms by older persons due to the increased prevalence of cognitive disorders and the stigma associated with psychiatric illness.<sup>37</sup> In addition, health care settings and providers are poorly prepared to address the mental health needs of this older population. Current specialty outpatient mental health services are lacking with respect to integrated medical and psychiatric treatment or accommodations for the unique and complex needs of older adults with mental disorders.<sup>46</sup> Few older adults (less than 3%) report seeing a mental health professional for treatment, a rate that is lower than that of any other adult age group.<sup>47</sup> Instead, most older adults seek mental health care from primary care providers who have limited time to address a multitude of health

care issues.<sup>42, 48, 49</sup> Finally, older adults are less likely than younger persons to self-identify mental health problems and are less likely to seek specialty mental health services.<sup>50</sup> This problem of underidentification is further compounded by family members and professional providers who share the misperception that mental disorders are a “normal” part of aging.<sup>51</sup> The assumption that significant depression is to be expected with declining medical health or social losses results in the assumption that treatment is neither indicated nor likely to be helpful. The failure of the consumer, family members, and providers to seek mental health services for depression has been described as one of the major challenges in addressing the high rate of suicide in older adults.<sup>39</sup>

### **CO-OCCURRING SUBSTANCE ABUSE AND MENTAL ILLNESS AMONG OLDER ADULTS**

A history of substance abuse is associated with increased risk of mental illness and, conversely, a history of mental illness is associated with a greater likelihood of a substance use disorder. Epidemiological studies indicate that 29 percent of individuals with a mental illness have a substance use disorder at some time in their lifetime, and 37 percent of individuals with a substance abuse diagnosis have a lifetime prevalence of psychiatric illness.<sup>52</sup> Based on the limited available research data, the prevalence of co-occurring disorders is lower in older compared to younger age groups.<sup>53</sup> For example, nearly one-third (30%) of psychiatric outpatients under age 55 receiving care at Veterans Affairs (VA) facilities have a co-occurring substance use disorder. In contrast, the prevalence of co-occurring disorders was 13.5 percent among psychiatric outpatients age 55 to 64 years, 7.3 percent among those age 65 to 74 years, and 4.4 percent among those age 75 years and older. An analysis restricted to VA psychiatric outpatients aged 65 and older reveals that approximately 7 percent are characterized as having a “dual diagnosis” of a co-occurring psychiatric and substance use disorder. Notably, abuse of substances other than alcohol is significantly lower among older adults (26%) compared to younger adults (65%).<sup>53</sup>

High rates of co-occurring mental health and substance use disorders are found in specialty geriatric psychiatry outpatient clinics and in psychiatric inpatient settings. For example, one fifth (20%) of older adults (age 60+) receiving treatment in a specialty geriatric psychiatry outpatient clinic were found to have a substance use disorder, including 11 percent with benzodiazepine dependence and 9 percent with alcohol dependence. The most common psychiatric disorders seen in this geriatric psychiatry clinic included depression and dementia.<sup>54</sup> Even higher rates of comorbid psychiatric and substance use disorders were found in psychiatric inpatient settings. In a study of the prevalence of dual disorders in

older psychiatric inpatients (age 60+), over one-third (37.6%) had co-occurring psychiatric and substance use disorders, consisting of 71 percent with alcohol abuse and 29 percent abusing alcohol and other substances. The most common psychiatric diagnosis in this inpatient study was depression, accounting for over two-thirds (71%) of the psychiatric co-occurring disorders.<sup>55</sup> Another recent report specifically examining the relationship of geriatric depression to co-occurring substance use disorders found that approximately one-fifth of older adults with depression have a co-occurring alcohol use disorder.<sup>56</sup> Similar rates of co-occurring disorders have been reported in other studies of older adults in psychiatric outpatient clinics (15%) and psychiatric inpatient settings (21%).<sup>57-59</sup>

Co-occurring psychiatric illness is also common in older adults who are identified with a substance use disorder. Approximately 29 percent of older veterans receiving treatment for alcohol use disorders have a co-occurring psychiatric disorder,<sup>60</sup> most commonly consisting of an affective disorder.<sup>61</sup> Nearly half of community dwelling older adults with a history of alcohol abuse have co-occurring depressive symptoms.<sup>62</sup> Among an at-risk population of older adults receiving in-home services, 9.6 percent had an alcohol abuse problem and two-thirds of those individuals (6% of the overall sample) had a comorbid psychiatric illness such as depression or dementia.<sup>63</sup> Among older adults with a recognized substance abuse disorder who were attending an alcohol dependence rehabilitation treatment program, 23 percent had dementia and 12 percent had affective disorders.<sup>64</sup> Finally, psychiatric comorbidity is also common among older persons (age 65+) hospitalized for prescription drug dependence, with indications that 32 percent have a mood disorder and 12 percent have an anxiety disorder.<sup>22</sup>

Co-occurring addictive and psychiatric disorders are associated with poor health outcomes, higher health care utilization, increased complexity of the course and prognosis of mental illness, heightened mortality, and higher rates of active suicidal ideation and social dysfunction relative to individuals having either disorder alone.<sup>65-68</sup> Few studies have examined service utilization among older adults with co-occurring disorders. However, these studies have identified that outpatient mental health services are used more frequently among individuals with dual diagnoses, compared to either substance abuse or psychiatric illness alone.<sup>53, 60</sup> In contrast, inpatient mental health services are more frequently used by individuals with psychiatric illness alone, compared to those with co-occurring disorders.<sup>53</sup> Active suicidal ideation and suicide attempts are also frequently reported by older adults with alcohol misuse or abuse and mental illness.<sup>40, 55, 67</sup>

## **THE IMPACT OF PROJECTED DEMOGRAPHIC CHANGES**

Demographic projections indicate that the aging of the “baby boom” generation will increase the proportion of persons over age 65 from 13 percent currently to 20 percent by the year 2030.<sup>69</sup> In addition, the fastest growing segment of the population is composed of individuals age 85 and older.<sup>69</sup> The projected growth of the older population has significant public health implications with respect to the provision of appropriate substance abuse and mental health services. By the year 2030, the number of persons with psychiatric disorders, including substance abuse disorders, in this older group will equal or exceed the number with mental illness in younger age groups (age 18-29, 30 to 44, or age 45-65).<sup>37, 69</sup>

The extent of alcohol and medication misuse is likely to significantly increase as the baby boom cohort ages, due to both the growth in the older population and cohort-associated lifestyle differences.<sup>69, 70</sup> The projected increase in the number of older adults with substance abuse problems is associated with a 50 percent increase in the number of older adults and a 70 percent increase in the rate of treatment need among older adults.<sup>3</sup> Recent studies of consumption patterns suggest that the baby boom generation, as it continues to age, could maintain a higher level of alcohol consumption than in previous older adult cohorts.<sup>71</sup> Rates of heavy alcohol use have been shown to be higher among baby boomers than in earlier cohorts.<sup>32</sup> In addition, drug use is heightened in the baby boomer cohort.<sup>15</sup> Gfroerer and colleagues<sup>72</sup> have also argued that the increasing rate of problem substance use in this population is driven by an increase in problems related to the use of illicit drugs or nonmedical use of prescription drugs. Further, these projections may be underestimates, as criteria used to define problem substance use may not be most appropriate for older populations. Increased substance abuse, coupled with the projected increase in the older adult population, will place increasing pressure on the treatment programs and health care resources.<sup>42</sup>

Increases in the need and the demand for mental health services are expected as well. The demand for mental health services is likely to increase as the baby boom cohort has tended to utilize mental health services more frequently than the current older adult cohort and has tended to be less stigmatized by seeking mental health care. For instance, although the current older adult population has been shown to perceive less stigma around depression, compared to younger adults,<sup>73</sup> stigma in older adults is associated with reluctance to be treated for their mental health issues. In addition, older adults who report negative attitudes about mental health services are less likely to talk with their primary care physician about psychiatric symptoms.<sup>50</sup>

The population of older adults is expected to become more ethnically and racially diverse in the coming decades. Minority elderly are among the fastest growing segment of the population and present new challenges and opportunities for designing effective services. For example, as a proportion of total older adults, the percentage of individuals who are Hispanic over age 65 is expected to nearly double from 5.6 percent in 2000 to 10.5 percent in the year 2030.<sup>69</sup> However, this increasing ethnic diversity in the U.S. population has implications for access and barriers to mental health and substance abuse services, cultural competency of providers and client-therapist dynamics, and the need for research-based knowledge regarding cultural differences pertaining to the perception of mental illness and the response to treatment.

### **CURRENTLY AVAILABLE SERVICES AND SERVICES NEEDED**

The most recent reports available indicate that the trends among older adults in substance abuse treatment are moving in predicted directions. The Substance Abuse and Mental Health Services Administration's (SAMHSA) Drug and Alcohol Services Information System Report indicates that between 1995 and 2002, the number of substance abuse treatment admissions among persons aged 55 or older increased by 32 percent, from 50,200 to 66,500 admissions.<sup>74</sup> This increase outpaced the total treatment population increase of 12 percent during the same period. Adults aged 55 to 59 made up the largest part of the older adult treatment population, increasing from 51 percent of older adults in treatment in 1995 to 59 percent in 2002. Further, while alcohol was the most frequently reported primary substance of use among older adults, the proportion of older admissions reporting alcohol as their primary substance declined over the same time period, from 86.5 percent in 1995 to 77.5 percent in 2002. By contrast, primary drug admissions among older adults more than doubled over the same time period, increasing from 6,200 men and 1,600 women in 1995 to 12,800 men and 3,500 women in 2002—a 106 percent increase for men and a 119 percent increase for women.

The majority of older adults with substance abuse or mental health problems do not receive the treatment they need. For example, only 11.9 percent of the estimated 1.7 million older adults with substance abuse treatment needs in 2000/2001 received substance abuse treatment within the past year.<sup>3</sup> Similarly, only approximately one-third of older persons who live in the community and who need mental health services actually receive them.<sup>75</sup> Less than one-fifth of older residents in nursing homes who need mental health services receive them.<sup>76-78</sup> Unfortunately, the gap in services for older adults is even more pronounced in the area of prevention. In general, the focus of substance abuse and mental health preventive programs

has tended to reflect the common age bias that prevention applies to the young, but not the old. Despite a clear need for substance abuse and mental illness prevention in older persons, preventive services for older adults are infrequently provided as a component of public health programs.

Current prevention services are extremely limited from both a substance abuse and a mental health perspective. It is important that prevention programming be developed and tested so that the fast-growing older adult population is provided with state-of-the-art programs to reduce risk and improve protective factors for substance abuse and mental illness. While some prevention/early intervention programs for aging individuals have attained evidence-based practices status (e.g., the Gatekeeper program, described further on), there are few rigorously-tested prevention programs ready for widespread implementation. Technical assistance is critically needed to support promising prevention programs and help them implement the high quality scientific evaluation necessary for elevation to EBP status.

The Surgeon General's Report on Mental Health,<sup>42</sup> the Administration of Aging Report on Older Adults,<sup>79</sup> and the Center for Substance Abuse Treatment (CSAT) Treatment Improvement Protocol for Older Adults (TIP #26)<sup>35</sup> underscore the dramatic developments in knowledge over the past decade regarding effective treatments for substance abuse and mental illness among older adults. An emerging evidence base supports the efficacy of a variety of pharmacological and psychotherapeutic interventions for substance abuse problems and major psychiatric disorders in older persons. Evidence-based and promising treatment practices include, among others, brief alcohol interventions;<sup>5, 12, 80-82</sup> home and community-based mental health outreach;<sup>83</sup> integration of substance abuse, mental health, and primary care services;<sup>84-86</sup> geriatric mental health consultation and treatment teams in nursing homes;<sup>87</sup> support interventions for family and caregivers of persons with dementia;<sup>88-90</sup> and a variety of pharmacological and nonpharmacological interventions.<sup>5, 80, 90-100</sup>

The substance abuse treatment system will need a shift in focus to address the special needs of an older population of substance abusers, as treatment demands increase. The TIP Consensus Panel<sup>35</sup> recommended incorporating the following features into substance abuse treatment for older adults:<sup>27</sup>

1. Age-specific group treatment that is supportive and nonconfrontational and aims to build or rebuild the patient's self-esteem
2. A focus on coping with depression, loneliness, and loss (e.g., death of a spouse, retirement)
3. A focus on rebuilding the client's social support network

4. A pace and content of treatment appropriate for the older person
5. Staff members who are interested and experienced in working with older adults
6. Linkages with medical services, services for the aging, and institutional settings for referral into and out of treatment, as well as case management.

Further, the Consensus Panel also recommended creating a culture of respect for older clients, taking a broad and holistic approach to treatment, keeping the treatment program flexible, and adapting treatment as needed in response to clients' gender.

Barriers to providing culturally equitable and appropriate services will need to be addressed in the coming years. These include inadequate financing; fragmented or unavailable services (lack of bilingual and bicultural staff); negative attitudes by consumers to conventional mental health services and treatment; and issues of mistrust, fear, racism and discrimination.<sup>101</sup> Cultural beliefs have been strongly associated with dramatic differences among elderly ethnic groups with respect to utilization of mental health treatments and services. Ethnic and racial groups may differ with respect to prevalence and presentation of psychiatric symptoms and may also prefer different types of treatments and providers. Furthermore, language and cultural factors can have a substantial impact on the accessibility and acceptability of mental health treatment.<sup>101</sup> Developing mental health services that respond to the preferences and needs of older persons includes the creation of a culturally competent work force of health care providers.

## **RATIONALE FOR PREVENTION AND EARLY INTERVENTION**

Without effective prevention and treatment, a range of disabilities and impairment can result from substance abuse and mental disorders. Hampered independence and community-based functioning, a compromised quality of life, poor health outcomes, cognitive impairment, increased mortality, and increased caregiver stress are potential negative outcomes resulting from substance abuse and mental disorders.<sup>42</sup> Alcohol and medication misuse in older persons has negative effects on health and is associated with increased morbidity, disability, and mortality from disease-specific disorders such as alcohol-induced cirrhosis, as well as increasing risks for diseases such as hypertension and trauma risks from motor vehicle accidents or falls.<sup>28, 102</sup> Furthermore, psychiatric disorders such as depression are associated with worse health outcomes, more compromised health status, and risk of suicide.<sup>103-106</sup> Older adults with mental illness are also at risk for receiving inadequate and inappropriate care services.<sup>107</sup> For

example, older persons with depression are more likely than younger adults to receive inappropriate pharmacological treatments and are less likely to receive psychotherapy.<sup>108</sup> Mental health and substance abuse problems are also associated with significant health care expenditures. Combined, they accounted for 7.6 percent of all U.S. health care expenditures in 2001, including 85 billion for mental health care and 18 billion for substance abuse services.<sup>109</sup> Public resources fund the majority of these care costs. Medicare expenditures for substance abuse and mental health problems amounted to over \$7 billion, while Medicaid expenditures amounted to nearly \$27 billion in 2001.<sup>109</sup>

Screening and interventions focused on lifestyle factors, including the use of alcohol, are some of the most promising and appropriate ways to maximize health outcomes and minimize health care costs among older adults.<sup>35, 81</sup> For example, using screening and brief interventions (5 to 15 minute sessions of advice about alcohol risks and reducing alcohol use) in primary care settings can help prevent at-risk drinkers from developing alcohol problems.<sup>5, 110</sup> In addition, community-based outreach to isolated older adults and early intervention of cognitive and mental health problems can help protect against suicide or serious functional impairment in later years.<sup>111, 112</sup> Finally, mental health and general well-being have been shown to be associated with healthy lifestyle choices such as physical activity, caloric intake, and adequate sleep.<sup>113, 114</sup>

Research has identified a number of factors that place older adults at risk for developing substance abuse and mental health problems. Prevention programs that address these risk factors and strengthen protective factors can help older adults weather the unique circumstances that contribute to the development and/or deterioration of substance abuse and mental health problems. For example, psychosocial risk factors that increase risk for geriatric depression include poor social supports, social isolation, death of a spouse or loved one, and a lack of relatives or friends in whom to confide.<sup>115-117</sup> Protective factors could include psychosocial supports, involvement in meaningful activities such as volunteer or part-time work, or involvement in faith-based activities.<sup>116, 117</sup> Other risk factors for late-life depression include poor physical health, pain, and chronic illness.<sup>115, 118-122</sup> Protective factors include health promotion, education and support for healthy lifestyle changes, physical health care screening, and preventive health care.

Potential preventive interventions targeted specifically at older adults with substance abuse problems include communication and educational approaches, interventions to prevent drug interactions, interventions to prevent drinking and driving, preretirement counseling, family interventions, and

interagency collaboration.<sup>27, 123-125</sup> In addition, a recent collaborative publication from the National Council on the Aging and SAMHSA, entitled “Promoting Older Adult Health,” describes several promising programs and partnerships that have been developed to address medication, alcohol, and mental health problems in older persons. For instance, the Gatekeeper program is a community-wide system of proactive case-finding that provides early identification of persons at risk for negative substance abuse or mental health consequences.<sup>126-128</sup> Analyses of the characteristics of clients referred to the program indicated that they were more frequently socially isolated, economically disadvantaged, more likely to live alone, less likely to have physical health problems, less likely to have a physician, and had greater service needs at the time of referral. After 1 year, Gatekeeper-referred clients did not need or use more services than those referred by other sources. Evaluations of the Gatekeeper model report that it was relatively inexpensive to implement and benefited communities through increased collaboration among service providers. Similarly, LIFESPAN of Greater Rochester’s Geriatric Addictions Program (G.A.P.) has become a model for addressing the unique challenges faced by older adults coping with substance abuse issues, as well as the physical and psychological problems associated with aging. At G.A.P., the primary focus is combining assessment, intervention and treatment services for clients in their homes.<sup>129</sup> Together, a wide range of prevention and intervention programs have been tailored to the unique needs of older adults with substance misuse and mental health problems. These programs represent the future of age-appropriate care for the growing number of older Americans.

## **COST AND REIMBURSEMENT ISSUES**

Increased disability associated with substance abuse and mental health problems among older adults is associated with increased utilization and costs of health care services. The costs of alcohol abuse and dependence are estimated to be over \$100 billion a year, due in part to increased mortality, significant social costs, and health consequences.<sup>130-133</sup> Individuals who have alcohol disorders are among the highest cost users of medical care in the United States. Persons with alcohol dependence, who represent between 3 and 14 percent of the U.S. population, consume more than 15 percent of the national health care budget.<sup>134</sup> Although a number of cost studies have examined drinking in younger adults, few studies have separated the costs of alcohol disorders for older adults or even included older adults in cost analyses.<sup>135</sup> Untreated substance abuse is associated with significantly heightened general medical expenditures: untreated alcohol or drug dependent persons use health care and incur costs at a rate about twice that of their age and gender cohorts.<sup>135,136</sup> However, in a study of Federal employees, one-half of whom were

over age 60, alcohol treatment contributed to sustained reductions in total health care utilization and costs.<sup>137</sup> Finally, older adults with alcohol use disorders also have greater use of hospitalization services and have a higher mortality rate than older adults without alcohol use problems.<sup>11</sup>

There has been some exploration of the cost offsets associated with substance abuse treatment.<sup>135</sup> In a review of studies of alcohol treatment and potential health care cost savings, Holder found that once treatment begins, total health care utilization and costs begin to drop, reaching a level that is lower than pretreatment initiation costs after a 2-to 4-year period.<sup>135</sup> The oldest group in the study (age 55 and older) experienced the highest medical care costs and showed the least convergence to levels prior to the initiation of alcohol treatment. Reasons for this include increased general morbidity with age and the potentially more serious health problems and generally poorer prognosis due to a longer period of chronic alcohol abuse or dependence. For example, older adults often have more prolonged and severe alcohol withdrawal than younger adults,<sup>131</sup> and participation in group treatment is more difficult for them in the early stages of treatment. They are also more likely to need more intensive outpatient care after an inpatient stay than younger adults. These age differences in cost benefits of substance abuse treatment support the value of prevention and early intervention.

Most economic studies of alcohol treatment have focused on hospital inpatient and outpatient treatment for abuse and dependence.<sup>138, 139</sup> Although hospital treatment is no more effective than outpatient treatment, reimbursement systems have often supported the more costly, medically-based inpatient treatment options.<sup>138</sup> Some experts suggest that effectively treating alcoholism and reducing the social and medical consequences of alcohol disorders will yield the largest savings in a reformed American health care system.<sup>140</sup> One of the few recent studies of managed care<sup>141</sup> estimated that for every \$10,000 spent on brief intervention for alcohol or drug abuse, \$13,500 to \$25,000 is saved in medical spending for the managed care provider. In contrast to data on the cost-benefits of substance abuse treatment, there are few data on the cost savings of substance abuse prevention and early intervention. Research demonstrating the effectiveness of alcohol prevention and early interventions should seek to incorporate measures of cost-offsets achieved by preventing more costly complications of heavier alcohol intake. With ongoing changes in the delivery of alcohol treatment services from inpatient to outpatient settings, coupled with the shifting reimbursement structure from fee-for-service Medicare to managed Medicare, coverage of effective treatment is increasingly uncertain. The changes in treatment setting and fee structures underscore the importance of conducting multidimensional outcomes assessments in the context of

quality management. Compelling evidence from well-designed research studies is vital to ensuring that older adults who need intervention and treatment for alcohol problems receive the appropriate level of treatment and adequate followup.

Older adults with mental illness have increased service visits, increased burden to medical care providers, and heightened annual costs of care.<sup>43, 44, 142, 143</sup> For instance, older depressed primary care outpatients utilize a greater amount of general medical services than nondepressed older outpatients and have higher health care costs. Data indicate that older depressed outpatients have 38 percent more outpatient visits and 61 percent higher outpatient expenses than older adults without a depressive episode.<sup>144</sup> Older adults with serious mental illness are overrepresented in long-term care settings and account for a disproportionate amount of expenditures for older persons seen in mental health outpatient clinics.<sup>48, 145</sup>

Cost offsets have also been demonstrated for mental health interventions in older adults. These studies suggest that excess disability and expensive hospital or nursing home days can be reduced by targeted prevention and early intervention. For example, providing psychiatric consultation services to older adults with hip fractures reduced hospitalization by an average of 1.7 to 2.2 days, resulting in an overall yearly (1989) cost reduction of \$97,361 to \$166,926. Reduced hospitalization costs more than exceeded the cost of the psychiatrists' intervention (\$20,000).<sup>45</sup> Another example of a low-cost preventive intervention for high-risk older adults enhances the natural social supports and protective factors for the family caregivers of persons with dementia. By providing individualized and group education and problem solving sessions, coupled with a 24-hour phone support service, this caregiver support intervention delayed nursing home placement by an average of 329 days.<sup>88</sup> Based on average nursing home care costs for publicly run facilities of \$132 per day,<sup>146</sup> the intervention is likely to reduce nursing home costs by \$43,428 per patient.

The substantial growth in the number of older persons with substance abuse and mental illness represents a major and costly public health problem. Current financing and systems of care are oriented toward mental health and substance abuse services for older people that are provided in hospital-based settings, nursing home settings, or specialty mental health outpatient clinics. Despite these financing and regulatory structures, data suggest that even in these settings (particularly nursing homes and specialty mental health clinics) services to older persons with psychiatric needs are underutilized and underprovided.<sup>49</sup> The current bias toward institution-based services is in stark contrast to the expressed

preferences and specific needs of older persons who are increasingly demanding acute and long-term care services in home and community-based settings.

## **MEDICARE REIMBURSEMENT ISSUES**

Despite the major impact that mental health and substance use disorders have on total health care costs, mental health expenditures under Medicare accounted for only 2.59 percent of all Medicare expenditures and substance abuse expenditures accounted for only 0.37 percent of all Medicare expenditures in 2001.<sup>109</sup> Nearly one-quarter (23.5%) of all mental health and substance abuse expenditures were allocated toward inpatient hospital-based services, while 50 percent were allocated toward outpatient services.<sup>109</sup>

Several financing barriers impede the delivery of appropriate mental health and substance abuse services to older adults. First, there is an inequitable copayment for current Medicare payment policy for psychologically-based services (50% copayment) compared to medical visits (20% copayment). In addition to the immediate benefits of improving the quality of life for many older Americans, it is likely that the additional expenditures associated with an equitable mental health co-payment will have the benefit of improving functioning and health outcomes, potentially reducing general health care costs. Second, there is a growing gap between costs and Medicare payments. This factor has been implicated in declining numbers of physicians and other providers re-enrolling as providers under Medicare.<sup>147</sup> Thirdly, current payment structures for mental health services under Medicare emphasize outpatient clinic-based service settings, despite the need and preference of older persons to receive assessments and services where they live or where they receive adult day care or other nonclinic-based services. Finally, cost containment policy decisions do not match clinical guidelines. For example, although Medicare has generally covered 12 days of inpatient alcohol treatment since its inception in 1965, most managed care companies eliminate coverage for as much inpatient treatment as possible and often cut services for alcohol treatment altogether to keep costs down. As older adults typically have a greater number of physical and cognitive problems than younger adults, these cuts in inpatient coverage are antithetical to what is known about treating older adults with alcohol problems.

## MISSING DATA AND FUTURE DIRECTIONS

Attention to the prevention and appropriate treatment of substance abuse and mental health problems was identified as a major priority for older adults by the President's Commission on Mental Health.<sup>148</sup> While the last two decades have provided the foundation for effective treatment and prevention strategies aimed at these issues, the developing knowledge base has received minimal dissemination and implementation within routine health care settings.<sup>91</sup> An emerging evidence base supports the efficacy of a variety of pharmacological and psychotherapeutic interventions for substance abuse problems and major psychiatric disorders in older persons. There is a need for organizing, disseminating, and understanding evidence-based prevention and early intervention programs for late-life substance abuse and mental illness.

A range of prevention/intervention strategies available to older adults includes prevention and education for persons who are at risk but nondependent drinkers, brief advice during medical visits by primary care providers, structured brief intervention protocols, and formalized treatment for older persons with alcohol abuse/dependence. These approaches offer providers and consumers options that meet different needs and preferences of older adults across the spectrum of drinking patterns. While progress has been made in understanding the effectiveness of preventive alcohol screening and brief interventions with older adults, there are challenges to matching these models to different service settings and different subgroups of older adults. Cost-effective methods of screening, intervention, and treatment are needed that are based on evidence-based practices that are tailored to the needs of the growing and under-recognized population of older adults at risk for substance use disorders. In contrast to a substantive literature on preventive service models for older adults with substance abuse problems, preventive strategies for mental health problems are less developed. Mental health programs have tended to focus on the development of interventions and treatments with few examples of preventive models for older adults.

Despite dramatic advances in developing effective interventions and services for older persons, a substantial gap remains between research findings and routine clinical practice. Reasons for this include 1) organizational barriers, 2) provider bias and ageism, and a 3) lack of collaboration and coordination between providers.<sup>79, 149, 150</sup> These barriers are further complicated by national shortages of medical and social service professionals with training and expertise in geriatric substance abuse and mental health care.<sup>79, 151</sup> The different priorities, capacities, and levels of expertise in aging, substance abuse and misuse, and mental health among primary care, long-term care, and specialty substance abuse and mental health providers further complicate implementation of evidence-based treatments.<sup>37, 48, 152</sup>

The growth in the aging population will have a significant impact on the substance abuse and mental health service delivery systems. In anticipation of this growing problem, it is essential that improved tools for measuring substance abuse and mental health problems among older adults be developed. Better data are needed for predicting the future trends and also for measuring current problems as they continue to emerge.<sup>3, 72</sup> It may also be necessary to develop new data systems tailored to the unique information needs related to substance abuse and mental health disorders among the aging baby boom population. For example, the development of innovative and effective screening and treatment methods for substance misuse among older adults is an important focus of future research.<sup>71</sup> Some mental health systems are moving toward medical information systems that will integrate assessment, decision support, evidence-based practice protocols, and outcome assessment. These information systems will also support the critical need of better integrating substance abuse, mental health, and primary care by supporting information transfers and communication across different providers and systems of care. Consumers can also use electronic resources to participate in self-assessments and to access information on the most effective service options. Web-based “patient portals” are being introduced in health care systems to support informed, shared decisionmaking by consumers in partnership with providers. Finally, ethnic minorities and non-English speaking persons comprise the fastest growing subgroup of older adults, underscoring the need to develop culturally and linguistically competent services. Given the complexity and size of the current and future aging population, it is of utmost importance that resources are mobilized in order to optimally prevent, and to provide appropriate early identification and intervention strategies, targeted to those who are at high risk for substance abuse and mental disorders in late life.

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