OLDER ADULTS AND CO-OCCURRING DISORDERS

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Executive Summary

Introduction

- Substance use problems among the elderly are projected to increase dramatically in the upcoming decades because of the aging "baby boom" generation, which had historically high levels of exposure to substance use and resulting substance use disorders.

- The current capacity of the substance abuse and mental health treatment systems may be inadequate to address the anticipated need for treatment of this aging cohort that is at high risk for co-occurring disorders.

- Substance use among the elderly may exacerbate preexisting mental health problems as well as complicate treatment for physical health problems. Conversely, mental health disorders among older adults, particularly depression, are a risk factor for substance misuse.

- Little research has specifically examined the prevalence and treatment of co-occurring substance use and mental health problems among older adults, although research into these separate areas can be synthesized to describe the prevalence, treatment needs, and outcomes related to co-occurring disorders in this population.

Substance Use Disorders Among Older Adults

- Alcohol: Although alcohol consumption is lower among older as compared with younger adults, alcohol abuse among older adults frequently co-occurs with depression, may interact with medications prescribed for physical and psychiatric problems, and is associated with higher levels of cognitive impairment.

- Heroin/opioids: Many individuals continue to use heroin into older age, and they have poorer physical and mental health status as compared with the general population. Older patients in methadone maintenance treatment do not differ

from younger patients in their level of psychiatric severity, but, as would be expected, have poorer overall health status.

- Prescription drugs: Older adults have higher rates of prescription drug use, and they are at risk for problems stemming from their combined use of prescription medications with alcohol. Misuse of prescription medications among the elderly, particularly sedatives, leads to problems in cognitive functioning, such as memory impairment, and overall poorer levels of functioning.

Mental Health Disorders Among Older Adults

- Older adults have a lower prevalence of most mental disorders as compared with younger adults; however, they may be uniquely susceptible to depression stemming from changes related to aging, such as health problems, loss of work roles and productivity, loss of loved ones, boredom, and social isolation.

- Older adults with serious mental disorders, such as schizophrenia, bipolar disorder, and major depression, who have co-occurring substance use problems have more functional and cognitive impairment, compared with those without substance use problems.

- Depression among the elderly is a risk factor for misuse of alcohol and prescription drugs, such as sedatives. A common pattern of co-occurring disorders among the elderly is depression, alcohol misuse, and personality disorder.

- Older women are particularly at risk for depression and misuse of alcohol and/or prescription medications given their generally higher rates of prescription medication use and risks for social isolation and chronic health problems.

Diagnosis and Assessment

- Diagnosis of co-occurring substance use and mental disorders among older adults is hampered by the lack of validated instruments for this age group, particularly regarding diagnostic criteria that are not relevant to them because of changes in their social roles and functioning and reduced levels of tolerance related to age-related changes in metabolism.

- Diagnosis of substance misuse among the elderly is also made difficult by the reluctance of many older-age patients to self-disclose substance use, by family members who do not recognize it, and by health care workers who discount the significance of these disorders among the elderly.

Treatment Seeking and Utilization

- Over the past 10 years, older adults have constituted an increasingly larger proportion of admissions to substance abuse treatment, with greater increases among older adults with drug-use (versus alcohol) disorders.

- Older adults are likely to seek behavioral health services from primary care physicians or geriatric mental health providers, yet these providers are unlikely to have been trained to diagnose or treat co-occurring among this population.

- Older adults who are the victims of elder abuse are at risk for substance misuse and mental health problems. Screening for these disorders can be incorporated into interventions provided by adult protective services who are responsible for investigating these cases.

- Older adults present to substance abuse treatment with lower levels of psychiatric stress and mental health disorders compared with younger adults, although some studies show that up to one third of older adults in substance abuse treatment have co-occurring mental health disorders.

Treatment Processes

- Treatment of older adults with co-occurring disorders may be complicated by dementia and other forms of cognitive impairment that make it hard for them to follow instructions or to utilize cognitive-behavioral strategies.

- Older adults have been shown to be amenable to both medication and motivational-based psychosocial interventions for treatment of co-occurring alcoholism and depression, and high levels of treatment adherence is associated with lower levels of relapse.

Treatment Outcomes

- Older adults appear to have similar outcomes compared with younger adults; however, they are less likely to engage in continuing care, including mental health services, following treatment.

- Although there has been limited research on the efficacy of medication-based treatment for older adults with co-occurring disorders, there is some evidence that antidepressants are effective in treating older adults who have co-occurring depression and alcohol dependence.

Recommendations for Policy and Treatment Planning

- Treatment planning should assess the capacity of the current mental health and substance abuse treatment systems to address the projected increase in older patients who have either type of disorder, including the development of programs that provide integrated substance abuse and mental health services for older patients with co-occurring disorders.

- Treatment staff in substance abuse and mental health programs should be trained in the assessment and diagnosis of these disorders among elderly patients, particularly regarding factors that need to be modified when considering older adults, including diagnostic criteria regarding role functioning (due to loss of productive work or social roles among the aging) and physical signs of dependence.

- Although older adults have been shown to have comparable outcomes to younger adults in substance abuse treatment, treatment providers might consider providing special groups or services that address the particular needs of older patients, especially those with co-occurring mental disorders who typically suffer from more impairments in functioning.

- In consideration of the impairments in information processing among older patients who have dementia, cognitive-based treatment approaches should be modified so that information is presented in a simple, concrete, and repetitive format.

- Relapse prevention approaches should focus on identifying cues and triggers for relapse specific to this population, including social isolation, loneliness, depression, anxiety, and anger.

- Older women have higher rates of prescription drug use and thus are at particular risk for misuse of these substances. Older women are also at higher risk of depression and social isolation, both of which are associated with their alcohol misuse. Gender-specific issues need to be addressed with regard to assessment and diagnosis of different combinations of substance use and mental disorders, patterns of help-seeking, access to social supports and caretakers, and the stigma associated with substance misuse among older women.

- Prevention planning should address the relatively high rate of co-occurrence of depressive disorders, alcohol misuse, and prescription drug abuse among the elderly, particularly among women. Interventions aimed at preventing the onset

or worsening of depression and/or substance misuse should target stressful life events typically experienced among the elderly and the cultivation of supportive networks and caregivers.

- Since the elderly are high utilizers of primary medical services, primary care physicians should be trained to screen for and diagnose these disorders among elderly patients and to provide appropriate interventions or referrals to treatment specialists.

- Screening and brief interventions using motivational interviewing strategies may be an effective and cost-effective approach for intervening with older adults at risk for co-occurring disorders. Outreach workers can screen older adults for substance misuse and mental health problems in a variety of settings, including health fairs, senior centers, retirement communities, and senior housing sites, as well as obtain referrals from health services and other providers utilized by older adults.

Older Adults and Co-occurring Disorders

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The aging process presents developmental challenges for all adults stemming from inevitable changes in their work, family and social life, and in their health status, functioning, and mobility. Moreover, older adults are invariably faced with the loss of loved ones and the grief that accompanies those losses. Many of the inevitable experiences associated with aging present risks for depression and substance misuse, or, conversely, may aggravate pre-existing substance use or mental health problems among the elderly (Benshoff & Harrawood, 2003; Gossop & Moos, 2008). Issues pertaining to the prevalence and treatment of co-occurring substance use and mental disorders among older adults have been under-researched, and it is not clear that conclusions extrapolated from studies of younger adults with co-occurring disorders (COD) are applicable to older adults (Speer, 1990).

This paper provides an overview of current research and an assessment of key issues relevant to COD among older adults based on a review of published literature. Due to the limited research that examines older adults and COD, this report broadly examines the prevalence and treatment of mental health and alcohol and other drug (AOD) disorders as related to older adults and synthesizes the implications of research on these separate disorders for older adults with COD, where possible. Topics covered include the following in relation to older adults: (1) prevalence of substance use disorders, with specific attention to use of alcohol, heroin/opioids, and prescription drugs; (2) prevalence of mental health disorders; (3) treatment seeking and utilization; (4) treatment processes; (5) treatment outcomes, including findings from long-term outcome studies; and (6) recommendations for future directions in treatment planning and policy development.

Substance Use Disorders Among Older Adults

The "baby boomer" cohort (born between 1946 and 1964) contains a historically high number of individuals who developed substance use disorders during the upsurge in drug use that occurred in the 1970s. National epidemiological surveys have demonstrated a strong cohort effect for substance use disorders, with higher risk of these disorders among current teenagers and younger adults (aged 20–40) as compared with much older adults (aged 60 or older), and higher risk among those currently aged 45–59 (the baby boomer cohort) compared with much older adults (Kessler et al., 2005).

Indeed, only 2% of individuals born from 1930–1940 had tried marijuana as a teenager, compared with about half of those born from 1956–1965 (Johnson & Gerstein, 1998). Moreover, progression to other drug use (i.e., marijuana, cocaine, heroin) after initiation of alcohol or tobacco use was uncommon among persons born before World War II, peaked among persons born around 1960, and declined with the cohort born in the 1970s (Golub & Johnson, 2001).

Estimates from population-based surveys and demographic projections of the increase in the cohort aged 50 and older suggest that the proportion of illicit drug users among this cohort will increase from 2.2 percent (1.6 million) in 1999–2001 to 3.1 percent (3.5 million) in 2020 (Colliver, Compton, Gfroerer, & Condon, 2006). Further, it is estimated that the number of adults aged 50 or older with alcohol- or drug-related problems will double from 2.8 million (annual average) in 2002–2006 to 5.7 million in 2020 (Han, Grroerer, Colliver & Penne, 2009). In particular, increases in older-age marijuana users and non-medical users of prescription psychotherapeutic drugs are expected to be especially large. Overall, many researchers who have examined demographic and drug use trends have concluded that the levels of substance use disorders and need for treatment among this aging cohort will be unprecedented among the U.S. population, and that the service delivery system is unprepared to meet the level of treatment need they may present (Gfroerer, Penne, Pemberron, & Folsom, 2003; Patterson & Jeste, 1999).

In a recent national probability survey, substance use was examined among older adults (aged 65 and over; Moore et al., 2009). Over the previous 12 months, 45 percent of older adults had used alcohol, 14 percent used tobacco, and 1 percent engaged in non-medical drug use. Being younger, male, White, and divorced or separated were factors consistently associated with alcohol and tobacco use compared to being older, female, non-White, and married. Non-medical use of drugs is rare among older adults, compared with younger adults. Several reasons may underlie the lower levels of illicit drug use among older adults, including cohort effects, in which today's elderly had less exposure to these drugs when they were young (Golub & Johnson, 2001); high mortality rates associated with illicit drug use, so that heaviest users are less likely to survive into older age (Smyth, Hoffman, Fan, & Hser, 2007); and easy access to many psychoactive drugs (e.g., sedatives and opioids) with a physician's prescription.

Alcohol. Estimates are that about two thirds of older-age alcoholics can be characterized as "early onset," that is alcohol-related problems were first manifested in their 20s or 30s, whereas the remaining one third are characterized as having "late-onset" alcoholism (Menniger, 2002). Early-onset older alcoholics are more likely to have

chronic alcohol-related medical conditions, estrangement from family members, family history of alcoholism, and comorbid psychiatric disorders. Onset of problems typically occurs after age 40 or 50 for those with "late-onset" alcoholism, and the onset of their alcohol misuse is often triggered or exacerbated by stressful life events. Late-onset alcoholics have fewer comorbid medical problems and are usually more amenable to treatment (Liberto & Oslin, 1995). Generally, alcohol consumption decreases with age. A recent 20-year follow-up study of a community-based cohort of older adults showed that their likelihood of excessive drinking declined as they matured into their 70s and 80s. However, at ages 75-85, 27.1 percent of women and 48.6 percent of men exceeded the recommended guidelines of alcohol consumption (i.e., more than two drinks per day or seven drinks per week) and these individuals were more likely to display alcohol-related problems (Moos, Schutte, Brennan, & Moos, 2009).

Chronic alcohol abuse or dependence can lead to significant memory impairment and some estimates are that alcohol-induced dementia may account for up to one quarter of all dementia (Reid & Anderson, 1997). However, criteria for alcohol-induced dementia are difficult to discriminate from other forms of dementia. Moreover, a history of heavy alcohol consumption increases the risk of psychiatric disorders among the elderly. In a longitudinal study of a community-based sample, men who had been heavy drinkers for 5 or more years at some point had a 5 times greater chance of having a psychiatric disorder (most often depression or dementia), compared to other men, controlling for current level of consumption (Saunders et al., 1991). Similarly, in a study that was conducted with primary care patients aged 55–97, at-risk drinkers (9 or more drinks/week for women, 12 or more for men) had poorer mental health functioning than low-risk drinkers, although the magnitude of the difference did not meet the clinically significant criterion (Blow, Walton, Barry, et al., 2000).

Many clinicians have observed that increasing exposure to life stressors, such as loss of loved ones, health problems, and loss of productive work or social roles, may precipitate or increase alcohol misuse among the elderly. This possible relationship was examined in a longitudinal study of late middle-aged and older women and men who were assessed at three time points over a period of 4 years. The study found no evidence that heightened stressors significantly predicted increased quantity of alcohol consumption for either men or women. Higher alcohol consumption was actually related to fewer negative life events, health stressors, and financial stressors for women, and to fewer health stressors for men (Brennan, Schutte, & Moos, 1999). The authors noted that people frequently cite health problems as the reason why they reduce their alcohol use; financial problems may also reduce discretionary income that is used to purchase alcohol or to go to restaurants or other venues where it is served.

Many older adults take prescription medications that may interact negatively with alcohol (Pringle et al., 2005). These interactions are exacerbated by age-related changes in the absorption, distribution, and metabolism of alcohol and other drugs (Moore, Whiteman, & Ward, 2007) and a corresponding increased sensitivity to their effects. In one study, women who were at-risk drinkers were more likely than men who were risky drinkers to have a history of anxiety disorder (defined as having a "nervous breakdown" or taking a medication for "nerves"), suggesting that older women may be more likely to abuse alcohol as a form of self-medication for anxiety (Moore et al., 2006). A particular concern is the combined misuse of alcohol and benzodiazepines, given the physiological changes that occur in aging, which make individuals more sensitive to misuse of these substances, as well as the under-detection of the combined misuse of these substances.

Estimates are that 12 percent of older women regularly drink in excess of recommended guidelines (no more than one drink per day or seven drinks per week) and can be considered at-risk drinkers (Blow, 2000). These women are at risk for adverse medical, psychological, and social consequences, including accidents and injuries, medication interactions, and family problems. Yet their alcohol use often remains invisible to others, including family members and health care workers. Older women have specific risks and vulnerabilities related to their alcohol use, which includes a more rapid progression to alcohol-related illness, increased sensitivity to alcohol and psychoactive drugs, more financial issues related to health care coverage, and greater social stigmatization than older men (National Center on Addiction and Substance Use, 1998). As women age, they are subject to even greater physiological susceptibility to alcohol's effects, as well as to a risk of synergistic effects of alcohol in combination with prescription drugs (Epstein, Fischer-Elber, & Al-Otaiba, 2007). Older women are at particular risk of comorbid depression and alcohol-related problems because of risk factors that intensify with aging, including loss of loved ones, social isolation, boredom, impaired health and mobility, and poverty. In a study of the impact of negative life events on alcohol consumption among the elderly (65 years and older), several events, including loss of a friend, having a sick or injured relative, death of a close friend, and being a victim of crime, were associated with increased alcohol use over a 3-year follow-up period, and the effect was intensified among those who were already heavier drinkers (Glass, Prigerson, Kasl, & de Leon, 1995). In addition, older women with substance use disorders are prone to social stigma (whereas older male alcoholics are more commonplace and less socially "deviant"), and this stigma is heightened among women with co-occurring mental disorders, such as in stereotyped depictions of "bag ladies" (Koenig & Crisp, 2008).

Heroin/opioids. Heroin-dependent individuals are projected to become an increasingly large proportion of the older population in need of drug treatment in the next 20 years (Colliver, Compton, Gfroerer, & Condon, 2006). Because heroin users generally have poorer physical and mental health and lower levels of social functioning as compared with age- and gender-based population norms, their health problems and need for care are likely to intensify as they reach older age by 2020–2030 (Knickman & Snell 2002; Lofwall et al., 2005). In particular, these individuals often have impaired mobility and suffer from chronic health disorders, such as hepatitis C infection (HCV), respiratory problems, heart disease, and alcohol-related problems, which require long-term care and disease management.

A significant proportion (approximately 30%) of heroin users continues to use heroin into old age. Longitudinal studies have shown that heroin addiction is a chronic condition, typically marked by alternating periods of abstinence (often incarceration-related) and periods of use and accompanying severe health and social consequences (Goldstein & Herrera 1995; Hser, Hoffman, Grella, & Anglin 2001; Vaillant, 1973). In a 33-year longitudinal study of a cohort of male heroin addicts sampled from a criminal justice setting (average age of 57 at most recent assessment), over half (59%) maintained high levels of use over the follow-up period, about one third (32%) decreased their use after about 10 years of use, and about 9 percent quit all use within 3–7 years following initiation (Hser, Huang, Chou, & Anglin, 2007). Those who continued using at high levels had more lifetime treatment episodes, were more likely to also be dependent on alcohol, and had more psychological symptoms, including depression and anxiety. Because of the observational nature of the study, however, the findings do not indicate whether the psychological problems observed among those with persistent heroin use were a cause or consequence of their continued use. Another study showed that older methadone patients were more likely to report illegal drug use if they were exposed to drug use in their social networks and neighborhoods (Rosen, 2004), showing the continuing role of social relationships in sustaining drug use into older age. Similarly, among men in the 33-year follow-up study, those who persisted in heroin use were more likely to use substances to cope with stressful conditions, to have spouses who also abused drugs, and to lack social support from non-drug-using individuals (Hser, 2007).

A recent qualitative study of older heroin users (over 50 years) evaluated gender differences in quality of life, relationships with family, and health concerns (Hamilton & Grella, 2009). Both males and females manifested similar health concerns (predominantly about HCV infection and functional impairments), but women expressed more concerns about their fractured relationships with children and other

family members, whereas men more often discussed their relief (or surprise) regarding their survival of years of criminal involvement and drug use. Both groups expressed their grief over loss of friends to drug use or illness. Another qualitative study examined differences between adults who had initiated heroin use at an earlier age as compared with those who had initiated at later ages. Although the earlier initiators had experienced more years of physical health consequences stemming from their drug use, in some ways they were better able to navigate their experiences of aging than were the later initiators. The authors focus on the life experiences of users and role adjustments that occur across the lifespan, such as retirement, grandparenting, and loss of mobility, and suggest that later-onset users have a more difficult time negotiating these changes (Boeri, Sterk, & Elifson, 2008).

Prescription drugs. Although use of illicit drugs is relatively rare among older adults compared with younger adults and adolescents, there is growing misuse and abuse of prescription drugs among this age group. These substances include narcotic analgesics that are prescribed for management of chronic pain as well as sedatives, tranquilizers, and anti-anxiety medications. It is estimated that nonmedical use of prescription drugs among adults aged 50 or older will increase to 2.7 million by the year 2020. Data from the National Survey on Drug Use and Health provides evidence of the association between older age and misuse of sedatives or tranquilizers. Among individuals reporting any non-medical use of these substances, adults aged 50 and over were significantly more likely than younger adults to meet criteria for abuse of or dependence on these substances (Becker, Fiellin, & Desai, 2007). Older adults who misuse these medications may not view their misuse as problematic because they obtained them with a physician's prescription (Moore et al., 2009).

Generally, women are more likely than men to misuse prescription drugs, particularly narcotic analgesic and minor tranquilizers (Simoni-Wastila & Strickler, 2004; Simoni-Wastila & Yang, 2006), and this gender difference intensifies with age. It is estimated that up to 11 percent of older women misuse prescription drugs (Simoni-Wastila, Ritter, & Strickler, 2004). As noted earlier, misuse of prescription medications among older women is strongly associated with co-occurring alcohol misuse and/or depression, yet is often undetected by health care providers and overlooked by family members.

Even among older individuals who do not misuse these substances, their use may lead to impairments in cognitive functioning. A longitudinal study of over 2,700 elderly individuals (aged 65 years or older) in North Carolina examined the relationship of benzodiazepine use (documented by prescription medication records) and cognitive

functioning over a 3-year follow-up period. Among the 10 percent of the sample who reported benzodiazepine use at baseline, there was a significant association between dose and duration of use with memory impairment: individuals who used benzodiazepines at the daily recommended or higher dose or who were long-term users had greater impairments in cognitive functioning (Hanlon et al., 1998). These findings have implications for quality of life and functioning for elderly adults who rely upon benzodiazepines to manage anxiety or sleep problems.

A subsequent 10-year follow-up of this community-based elderly cohort showed that about 12 percent of the sample continued to use prescription medications (i.e., sedatives, hypnotics, and anti-anxiety drugs) over the follow-up period. Individuals who continued use of these substances were more likely to be female or White and to have depressive symptoms, poor self-rated health, and impaired physical functioning (Blazer, Hybels, Simonsick, & Hanlon, 2000). The authors note that although these substances may provide benefits to older adults, their use may also increase their risk of adverse outcomes, including cognitive dysfunction, hip fracture, and car accidents.

Mental Health Disorders Among Older Adults

Concurrent with the projected increase in the number of older adults with substance use disorders in the coming decades, the projected number of older adults (aged more than 65 years) with psychiatric disorders in the United States will increase from about 4 million in 1970 to15 million in 2030. Moreover, the current mental health care system is unprepared to meet the treatment needs of this increasing population of older adults with mental health problems (Jeste et al., 1999), including those with co-occurring substance use disorders (Speer, O'Sullivan, & Schonfeld, 1991). Quality of life and functioning among older adults with serious mental disorders is negatively affected by social isolation, depression, cognitive impairment, and chronic medical illness (Bartels & Pratt, 2009); these factors also put older adults with mental disorders at risk for substance misuse.

Alcohol use is prevalent among schizophrenics (Dixon, 1999); its widespread availability makes it easy to procure, thus facilitating its use among individuals who suffer from impaired functioning and mobility. One study examined the relationship of neurocognitive functioning and alcoholism among patients with schizophrenia. Older-aged patients with alcoholism showed poorer performance on tests of cognitive functioning compared with those without alcoholism; however, they also had poorer cognitive performance compared to younger-aged schizophrenics with alcoholism. The authors concluded that although the effects of alcohol misuse on cognitive functioning

may not be apparent in younger schizophrenics, the deleterious effects of alcohol misuse manifest with older age (Mohamed et al., 2006).

Patients with bipolar disorder also suffer from high rates of co-occurring alcohol use disorders, and these individuals experience a more severe course of illness, including poorer long-term recovery, more psychosocial disability, and greater neurocognitive impairments beyond that normally associated with bipolar disorder (BPD; Levy et al., 2008). One study of over 16,000 geriatric patients with BPD in the Department of Veterans Affairs (VA) system showed that approximately 9 percent had co-occurring substance use disorders; these individuals were more likely to be younger, male, minority, unmarried, and homeless compared with elderly patients with BPD who had co-occurring anxiety disorders or dementia (Sajatovic, Glow, & Ignacio, 2006).

Depression among the elderly is a pervasive problem and is a risk factor for inducing or increasing their alcohol use. Elderly depressed individuals are 3–4 times more likely to have an alcohol use disorder compared with non-depressed elderly individuals, with approximately 15–20 percent of clinical samples having these comorbid disorders (Devanand, 2002). In a study conducted with older-age patients who were discharged from a residential psychiatric facility, about one fifth had co-occurring substance use disorders; about half of those had more than two disorders, including 60 percent who had a personality disorder (Speer & Bates, 1992). The authors suggested that a common diagnostic profile among the elderly is the co-occurrence of alcoholism, depression, and personality disorder, which is particularly difficult to treat.

Several studies have examined the mental health status of older adults in the VA system. One study showed that the rates of dual diagnosis declined significantly as the age of patients increased: from 27 percent of patients less than 65 years of age to 7 percent of patients 65 years and older (Prigerson, Desai, & Rosenheck, 2001). However, dually diagnosed older adults had longer inpatient stays for substance abuse treatment and more outpatient substance abuse visits than did those who were not dually diagnosed. They also had more outpatient general psychiatric visits than all others.

Many studies on the prevalence of mental disorders among substance abusers have been conducted with individuals in methadone treatment, as they are relatively easy to sample because of their daily attendance at treatment and are relatively homogeneous with regard to their primary substance (i.e., heroin or other opioids). In one such study, which focused on 140 adults over the age of 50, over half (57%) had at least one mental health disorder in the past year. The most prevalent disorders were major depressive episode (33%), post-traumatic stress disorder (PTSD; 28%), and

generalized anxiety disorder (30%). Women had significantly higher levels of depression than men (44% vs. 27%) and nearly twice the prevalence rate of agoraphobia and panic disorders (Rosen, Smith, & Reynolds, 2008).

In another study of methadone patients, older (aged 50–66) and younger (aged 25–34) patients were compared on physical and mental health status. Although both groups had higher rates of lifetime psychiatric and substance abuse/dependence and poorer health as compared with population norms, the older group had significantly more medical problems and poorer general health than the younger group (Lofwall, Brooner, Bigelow, Kindbom, & Strain, 2005). There were no differences in level of psychiatric severity as measured by the Addiction Severity Index composite score. Both groups had similar rates of traumatic life experiences, but older adults were less likely to report having nightmares, flashbacks, and unwanted thoughts related to traumatic exposure. It is not clear, however, whether these differences in trauma-related symptoms were related to a diminishing of symptoms over time or less willingness to disclose or less ability to recall these symptoms among older adults.

Similarly, another study comparing older and younger methadone patients (N = 156) found that older adults had lower levels of overall drug use, including current heroin use. Further, advanced age was associated with less impulsiveness, hostility, paranoia, and interpersonal sensitivity, more chronic medical problems, and greater use of medication for medical problems (Rajaratnam, Sivesingd, Todman, Roane, & Seewald, 2009). However, no differences were found between older and younger methadone patients with respect to their levels of social support, personal well-being, and satisfaction with life, suggesting comparable levels of quality of life.

Lastly, several community-based studies have examined the prevalence of co-occurring mental and substance use disorders among older adults. A study conducted with older (aged 49–60) individuals who had a history of heroin or cocaine use, and who were recruited through community health or treatment programs that focused on populations at risk for HIV, showed that overall current drug use was higher among males, although women had higher rates of depressive symptoms (about one third) (Hartel, Schoenbaum, Lo, & Klein, 2006). A study using a subsample of older African Americans in a national survey found that alcohol abuse, PTSD, and major depression were the most prevalent lifetime disorders, and PTSD, major depression, and social phobia were the most common past-12 month disorders (Ford et al., 2007).

Assessment and Diagnosis

Evaluation of older adults at risk for substance use and mental disorders should include a thorough medical, psychiatric, and social history (Bartels & Liberto, 1995). Assessment of these disorders among older adults is complicated by the lack of validated instruments for screening and diagnosing substance use and mental disorders among this population (Simoni-Wastila, & Yang, 2006). In addition, memory impairment and problems in cognitive functioning may hinder their ability to respond to assessment questions, particularly those that are time-related. Denial of misuse because of shame and stigma may also complicate diagnosis. Further, many diagnostic criteria for substance use disorders do not pertain to the elderly. For example "tolerance" is less relevant to the elderly given age-related changes in how alcohol and other drugs are metabolized (Jeste, Blazer, & First, 2005), leading to possible adverse effects from even small amounts of consumption. Failure to fulfill major role obligations related to work, school, or family, which is a criterion of substance abuse, is not relevant to elderly adults who no longer enact these roles. Detection of alcohol or drug misuse among older women is further hampered by a tendency to attribute their symptoms of substance misuse to depression (Finfgeld-Connett, 2004).

Further, healthcare workers may discount the clinical significance of alcohol misuse among the elderly. Since the elderly are less productive in society, health care workers may view their alcohol misuse as less consequential, both to the patient and to society. They may excuse excessive drinking among the elderly as understandable, given the problems that confront them, such as loss of loved ones, loneliness, health problems, and social isolation (O'Connell, Chin, Cunningham, & Lawler, 2003). Or health care providers may feel that there is no reason to intervene, since they believe the elderly are unlikely to change their behavior (Shafer, 2004). Yet research suggests that even small amounts of alcohol consumption can be deleterious for older adults who have chronic medical or psychiatric disorders, leading to excessive disability and poorer overall health status and functioning (Oslin, 2000). Conversely, reductions in even modest amounts of alcohol consumption can have beneficial effects in treatment of older patients with depressive disorders (Oslin, Katz, Edell, & TenHave, 2000).

Treatment Seeking and Utilization

Several studies examine the factors that facilitate treatment seeking and utilization among individuals with mental and substance use disorders. There may be cohort effects in willingness to seek care for these disorders and the factors that impel individuals to treatment. National survey data demonstrate that older adults with

depressive disorders are less likely to report unmet need for treatment of these disorders, regardless of whether they had received any treatment in the past year (Mojtabai, 2009). Yet objectively measured unmet need for mental health service (i.e., whether the individual has received medication, therapy, or other services/intervention) is typically higher among older than younger adults (Wang et al., 2005). Data from the National Comorbidity Survey Replication Study showed that older adults (aged 55–74 years) held generally positive attitudes towards mental health care, and were actually 2–3 times more likely to report positive help-seeking attitudes as compared with younger adults (Mackenzie, Scott, Mather, & Sareen, 2008). The authors suggest that underutilization of mental health care among older adults may not stem from negative attitudes toward its use, but rather from lack of resources or other factors that facilitate treatment access (e.g., transportation, information on where to access care).

Older adults receive the majority of their behavioral health care from primary care settings or from mental health providers; thus it is imperative that primary care physicians and geriatric mental health providers are able to assess for substance use disorders and provide appropriate interventions (Oslin, 2004). Further, older men and women may access treatment from different sources. One study of older-age problem drinkers who were sampled from community health centers showed that men were more likely to seek care from specialized alcohol treatment providers, whereas women, who more often reported symptoms of depression, were more likely to seek help from a mental health provider (Brennan, Moos, & Kim, 1993). In addition, the majority of men and women had discussed personal or emotional problems with a physician in the past year. The authors suggested that these findings reinforce the need for health care providers to be sensitive to the possibility of alcohol-related problems among older adults, who may present for treatment for other physical or emotional complaints.

Adults who are the victims of elder abuse are also at risk for mental health and substance misuse problems. Elder abuse includes a wide range of conditions, including physical abuse, sexual abuse, emotional or psychological abuse, financial or material exploitation, neglect by a caretaker, or self-neglect. Limited research has been conducted on the relationship of these various forms of abuse or neglect with substance misuse and mental health problems, including dementia. A potential source of screening and intervention for co-occurring disorders among older adults is through providers of adult protective services, including investigators and other services providers who come into contact with older adults who have been abused or neglected (Schonfeld, Larsen, & Stiles, 2006).

A study examining data from the national Treatment Episode Dataset (TEDS), which tracks all admissions for substance use treatment in the United States, showed that from 1992–2005, treatment admissions of individuals aged 50 or older increased to approximately 10 percent of all admissions. Alcohol abuse was the most common reason for treatment admission among older persons, although a growing proportion of older-aged admissions report polysubstance and illicit drug abuse, particularly cocaine and heroin use (Lofwall, Schuster, & Strain, 2008). While the proportion of older adults entering into treatment for alcohol problems decreased from 1995–2005 (with most of the decrease among admissions by men), treatment admissions for primary use of opiates, cocaine, and sedatives among adults aged 65 or older increased over this same time period (Office of Applied Studies, 2007).

Treatment Processes

Treatment of older adults with substance use problems may be complicated by cognitive impairments that stem from dementia (Patterson & Jeste, 1999). Some research suggests that substance abuse treatment outcomes are poorer among individuals with cognitive impairment. This may be particularly true when applying cognitive behavioral treatments that require participants to identify and use cognitive strategies for coping with risks for relapse. Therefore, special treatment strategies may be needed for elderly patients with dementia.

Treatment for older adults with substance use disorders should take into consideration age-related brain changes, such as changes in neurotransmitter systems and in drug metabolism, as well as differences in the types of drugs abused by older adults and in the settings/contexts in which they use these drugs (Dowling, Weiss, & Condon, 2008). Changes in brain functioning associated with aging, and in how drugs interact with the brain, are further complicated among individuals with COD given that many of the same parts of the brain are implicated in the commonly occurring mental disorders and are acted upon by the medications prescribed for these disorders.

Despite these changes in cognitive and physical functioning associated with aging, several studies have shown that older adults are just as likely to engage in treatment as younger ones and, in some cases, may be more amenable to treatment. One study of a combined medication and motivational-based psychosocial intervention for alcohol dependence found that older adults had greater attendance at therapy sessions and greater adherence to the medication, and that greater adherence was associated with less relapse among the older-age group (Oslin, Pettinati, & Volpicelli, 2002).

Treatment Outcomes

Although few studies have specifically examined treatment outcomes among older adults with COD, some treatment outcome studies have examined mental health symptoms as outcomes or covariates of substance abuse treatment among older adults. In a study of patients admitted to a residential rehabilitation program for alcohol dependence, there were few differences in outcomes between younger and older adults. Older adults were less impaired on several measures of psychiatric distress and addictive severity, but they were more impaired in physical health (Oslin et al., 2005). Further, older adults were less likely to engage in aftercare services following treatment.

A series of studies examined differences in rates and predictors of abstinence outcomes over time for older (aged 55 and older at baseline treatment) and younger adults who were admitted into substance abuse treatment in an HMO. Older adults had more commitment to abstinence as a goal, demonstrated lower levels of hostility and psychiatric symptoms, stayed in treatment longer, and had somewhat higher rates of abstinence compared with younger adults at 6 months posttreatment (Satre, Mertens, Arean, & Weisner, 2003). Moreover, a later study showed that older women had higher rates of abstinence than older men at periods up to 5 years following treatment (Satre, Mertens, Arean, & Wesiner, 2004). Yet the strongest influence on abstinence outcomes for both men and women was not having friends or family who encouraged drinking or drug use, which increased the likelihood of abstinence by approximately 3 times. Women continued to have higher rates of past-30 day abstinence than men at a 7-year follow-up (76% vs. 54%, respectively), although there were no differences in psychiatric severity (as measured by the ASI), nor was psychiatric severity related to abstinence outcomes (Satre, Blow, Chi, & Weisner, 2007).

In a study of "elder-specific" inpatient alcoholism treatment, one third of the sample of 90 participants (average age of 70.8, range from 55 to 91 years) had at least one comorbid psychiatric (non-substance use) disorder. Anxiety disorders were the most prevalent (26.3%), followed by major depression (17.5%). In addition to alcohol dependence, 13.8 percent were dependent on sedatives and 6.2 percent on opiates. At 6 months following treatment, levels of psychological distress had decreased for abstainers and non-binge drinkers, but did not change for binge drinkers (Blow, Walton, Chermack, et al., 2000). Among those who had relapsed following treatment, the most common reasons cited were social pressures to use (33.3%) and to cope with negative emotional states (26.7%).

In another study, younger and older (aged 55 years or older) adults in residential treatment for alcohol disorders were compared on baseline characteristics and outcomes (Lemke & Moos, 2003). Older adults had lower levels of psychiatric distress and mental disorders at baseline. There were few differences in outcomes at 1 and 5 years; however, older adults were less likely to receive outpatient psychiatric services following treatment, even controlling for level of psychiatric distress and co-occurring mental disorders. Hence, although older adults may present to substance abuse treatment with lower levels of psychiatric problems, those who do have COD appear to be less likely to receive needed services.

There is a general lack of well-controlled treatment trials of antidepressant medication or psychotherapy in elderly depressed patients with alcohol use disorders (Devanand, 2002). Some evidence suggests that successful treatment of depression among the elderly with antidepressant medication may lead to reductions in their alcohol use (Oslin et al., 2000). One controlled trial examined the effects of naltrexone combined with sertraline (an anti-depressant) for treatment of older adults (average age of 63 years) with co-occurring major depression and alcohol dependence (Oslin, 2005). Overall, 42 percent of the patients had achieved remission of both depression and alcohol use over the 12-week trial; however, there was no added benefit of combining naltrexone with the anti-depressant medication. Relapse to alcohol use was strongly associated with continued depression, showing the linkage between these co-occurring disorders in the elderly.

Several studies conducted with patients receiving substance abuse or mental health treatment from the VA have examined the outcomes of those with COD, given the large national network of VA programs that provide substance abuse, psychiatric and medical detoxification services, and continuing care. In a study of over 21,000 patients in the VA system who were aged 55 years and older (98% male and over 80% White), almost one third (28%) were diagnosed with both substance use and psychiatric disorders at the time of treatment admission (Moos, Brennan, & Mertens, 1994a). Patients with COD had more outpatient medical and mental health visits prior to admission for substance abuse treatment and were more likely to be readmitted for treatment (including for multiple episodes) over a 1-year follow-up period, compared to those without COD. A similar pattern of services utilization was found over a 4-year follow-up period (Moos, Mertens, & Brennan, 1994). These findings show that older adults with COD have higher levels of service utilization prior to admission to inpatient substance abuse treatment compared with older adults with substance use only, and that this pattern continues over time.

A subsequent study conducted with this same sample from the VA examined their mortality over the 4-year follow-up period. Overall, patients in the study sample were over twice as likely to be deceased compared with general population rates (controlling for age, race, and gender); however, those with co-occurring organic brain disorders and anxiety disorders or PTSD had even higher odds of death (approximately 3 times or greater). Among those patients who survived for 1 year after discharge from the index episode, individuals who had between one and five outpatient mental health visits had lower mortality rates in the subsequent 3 years than did their counterparts who received no mental health aftercare (Moos, Brennan, & Mertens, 1994b).

An age-specific outpatient program for older veterans with substance abuse problems has also shown promising results (Schonfeld et al., 2000). The program provided a relapse-prevention intervention consisting of 16 weekly group sessions using cognitive-behavioral approaches and social skills training. Sessions addressed identifying high-risk situations for relapse and developing coping skills for dealing with social pressure, being alone, feelings of depression and loneliness, anxiety and tension, anger and frustration, and cues for relapse. The participants had significant medical, social, and drug problems and over one third were homeless. Although over half of the 110 participants dropped out of treatment prior to completion, those who completed demonstrated higher rates of abstinence compared to the non-completers.

Lastly, a recent pilot study in Florida tested a screening and brief intervention model that aimed to address the underutilization of substance abuse treatment among older adults (Schonfeld et al., 2009). Outreach, screening, and intervention services were provided by addiction specialists, nurses, social workers, and mental health counselors in a variety of settings targeted to the elderly, including health fairs, senior centers, retirement communities, and senior housing sites. The intervention team also worked with community agencies to develop referral networks that included primary care, social, aging, and other service providers. Screening protocols assessed for misuse of alcohol, prescription medications, over-the-counter medications, and illegal drugs, as well as symptoms of depression and risk of suicide. Out of approximately 3,300 adults who were referred for screening, about 60% screened positive for at least one problem. Among those who screened positive for alcohol misuse, approximately half also screened positive for moderate or serious depression. Individuals who screened positive for any problem were offered brief interventions consisting of one to five sessions that were delivered in their home or other settings using motivational interviewing techniques. Assessments conducted at discharge and at a 30-day follow-up showed that those who received the screening and brief intervention had significantly lower depression and alcohol severity scores and reduced levels of

medication misuse compared with baseline scores. Although the findings from this pilot study are preliminary, given the relatively brief follow-up period and lack of a controlled design, they suggest that a screening and brief intervention that is tailored to elderly adults may be an effective and cost-effective approach for intervening with this population.

Recommendations for Treatment Planning and Policy Development

The following recommendations for treatment planning and policy development are derived from this review of the literature on older adults and COD.

- Treatment planning should assess the capacity of the current mental health and substance abuse treatment systems to address the projected increase in older patients who have either type of disorder, including the development of programs that provide integrated substance abuse and mental health services for older patients with COD.

- Treatment staff in substance abuse and mental health programs should be trained in the assessment and diagnosis of these disorders among elderly patients, particularly regarding diagnostic criteria regarding role functioning, physical signs of dependence, and other factors that need to be modified when considering older adults.

- Although older adults have been shown to have comparable outcomes to younger adults in substance abuse treatment, treatment providers might consider providing special groups or services that address the particular needs of older patients, especially those with co-occurring mental disorders who typically suffer from more impairments in functioning.

- In consideration of the impairments in information processing among older patients who have dementia, cognitive-based treatment approaches should be modified so that information is presented in a simple, concrete, and repetitive format.

- Relapse prevention approaches should focus on identifying cues and triggers for relapse specific to this population, including social isolation, loneliness, depression, anxiety, and anger.

- Older women have higher rates of prescription drug use and thus are at particular risk for misuse of these substances. They may also be at higher risk for depression due to social isolation and boredom. Gender-specific issues need to be addressed with regard to assessment and diagnosis of different combinations of substance use and mental disorders, patterns of help-seeking, and access to social supports and caretakers.

- Prevention planning should address the relatively high rate of co-occurrence of depressive disorders, alcohol misuse, and prescription drug abuse among the elderly, particularly among women. Interventions aimed at preventing the onset or worsening of depression and/or substance misuse should target stressful life events typically experienced among the elderly and the cultivation of supportive networks and caregivers.

- Since the elderly are high utilizers of primary medical services, primary care physicians should be trained to screen for and diagnose these disorders among elderly patients and to provide appropriate interventions or referrals to treatment specialists.

- Screening and brief interventions using motivational interviewing strategies may be an effective and cost-effective approach for intervening with elderly adults at risk for COD. Outreach works can screen older adults for substance misuse and mental health problems in a variety of settings, including health fairs, senior centers, retirement communities, and senior housing sites, as well as obtain referrals from health services and other providers utilized by older adults.

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