

Alcohol and Opioid Use Disorder in Older Adults: Neglected and Treatable Illnesses

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Abstract The purpose of this article is to provide an overview of alcohol use disorder (AUD) and opioid use disorder (OUD) in older adults for general psychiatrists. The rapid growth of the geriatric population in the USA has wide-ranging implications as the baby boomer generation ages. Various types of substance use disorders (SUDs) are common in older adults, and they often take a greater toll on affected older adults than on younger adults. Due to multiple reasons, SUDs in older adults are often under-reported, under-detected, and under-treated. Older adults often use substances, which leads to various clinical problems. Space limitations prevents a comprehensive review; therefore, we primarily focus on alcohol use disorder and the problem of opioid use disorder, with more emphasis given to the latter, because the opioid use epidemic in the USA has gained much attention. We reviewed the literature on the topics, integrated across geriatric psychiatry, addiction psychiatry, research, and national trends. We discuss

unique vulnerabilities of older adults to SUDs with regard to management of SUDs in older adults, medication-assisted treatment (MAT), and psychosocial treatments. We encourage general psychiatrists to raise their awareness of SUDs in older adults and to provide brief intervention or referral for further assessment.

Keywords Older adults · Elderly · Substance use disorders · Addiction · Alcohol · Opioids · Chronic pain · Guidelines

Introduction

Overview

Substance use disorders (SUDs) are common in older adults, complex in their nature, difficult to detect, and associated with poorer clinical outcomes [1, 2•, 3•, 4•]. It has become more common in older adults (age 60 years and above) with the baby boomer cohort (70–80 million adults) steadily entering older adulthood since 2006 [5]. The baby boomer cohort came of age in the 1960s and 1970s when alcohol and drug use became more accepted in the USA [6•]. Providing psychiatric care for patients presenting with dual geriatric and SUD care requires complicated management, and more information on the topic is needed [6•].

Substance use-related causes are among the leading causes of death in the USA. Mokdad et al. [1] published an interesting study by re-analyzing the typically reported *leading* causes of death (i.e., heart disease, malignant neoplasm, cerebrovascular disease) [7] and further accounting for risk behaviors like SUD. They termed these *actual* causes of death and found tobacco use to be the most common cause of death in the USA. They additionally found alcohol consumption the

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fifth actual cause of death and illicit drug use (e.g., opioids) the ninth actual cause of death [1].

Opioid use disorders have increased rapidly over the past decade. In 2012, an estimated 2.1 million people in the USA were suffering from SUDs related to prescription opioid pain relievers and an associated 467,000 were addicted to heroin [8]. The number of unintentional overdose deaths from prescription pain relievers has soared in the USA and more than quadrupled since 1999 [9]. Volkow recently reported that there is growing evidence to suggest a relationship between increased non-medical use of opioid analgesics and heroin use in the USA [9, 10].

National concern has led to several paradigm shifts in how the medical profession prescribes opioids. In the early 1990s, national experts and the Joint Commission encouraged liberal use of opioid analgesics for treatment of non-cancer pain [11]. As the use of opioids increased throughout the first decade of the twenty-first century, so did reports of related adverse events including increasing incidence of overdose deaths, of falls in older adults, and of prescription opioid use disorder [12]. In the recent CDC guidelines [13], opioid use is discouraged in chronic pain that is not cancer, palliative care, or end-of-life care related [13, 14••]. Primary-care patients on opioids with no clear indication should therefore be tapered [14••]. Providers are educated that the overdose potential of opioids is potentiated by concurrent use of other opioids, alcohol, and/or benzodiazepines [15].

In this review, we look at the complicating factors in the diagnosis and treatment of SUDs in older adults. We focus on alcohol use disorder and opioid use disorder in older adults and the problem of opioid use disorder nationally. We additionally focus on the challenge of detecting SUD in older adults and the importance of an index of suspicion and lower threshold for SUD specialty referral.

Unique Vulnerability of Older Adults

The physiology of aging and decreased reserves [16, 17] makes older adults particularly vulnerable to the effects of opioids, alcohol, and sedatives. Additionally, aging is associated with more degeneration-related physical pain and therefore more opportunities for exposure to opioid analgesics. At least 30 % of Americans report some form of acute or chronic pain. Among older adults, the prevalence is more than 40 % [18, 19]. Furthermore, some older adults have experienced complex trauma over the extent of a lifetime, which further increases the risk of SUD and which can present complex psychiatric and personality needs such as anxiety and depression often treated with benzodiazepines. Late life is also often characterized by challenging psychosocial factors, for example, social isolation, being home-based, or in institutional care [6••]. Lastly, there is often misguided social acceptance and

enabling of older adults using alcohol, sedatives, and opioid pain relievers [20, 21].

Barriers to Identifying and Treating Older Adults With SUD

There are various challenges in assessment with opportunity to miss a SUD. The nature of the presentation of addiction is to be “cunning, baffling, and powerful” [22] and likely to be disguised. Older adults and their families might fear stigma and deflect substance-related questions. Providers might be uncomfortable asking older individuals about substance use [2••, 6••]. A systematic and meticulous examination is critical with an index of suspicion that SUD might be disguised as geriatric syndromes such as a cognitive decline, incontinence, falls, and depression [23]. If there is a suggestion of substance use and a patient presents with any combination of the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5) criteria [24] that could resemble a SUD, further enquiry or referral is warranted.

Alcohol Use Disorder in Older Adults

A recent survey in 2013 showed that 86.8 % of people 18 years and older reported alcohol drinking in their lifetime and more than half (56.4 %) reported alcohol drinking in the past month [8]. The same survey also showed that 7.0 % of adult population had an alcohol use disorder (AUD), 9.4 % in men and 4.7 % in women. A recent large epidemiological study, which included 10,015 respondents age 50–64 years and 6289 respondents older than 65 years, found that the 12-month prevalence of alcohol dependence was 0.6 % and prevalence of alcohol abuse was 0.9 % in community-living elderly adults age 65 years and over [25]. However, it is estimated that up to 30 % of older patients in general hospitals meet the criteria for alcohol use disorder and up to 50 % of elderly patients in psychiatric hospitals meet the criteria for AUD. In addition, chronic alcohol use is associated with multiple physical diseases and psychiatric disorders, including depression, anxiety, and dementia [26].

While AUD has a set of well-defined criteria, some argue that measures that are instead based on quantity or frequency of alcohol consumption may be more accurate in describing the extent of problematic alcohol use in older adults. For example, the National Health Interview Survey in 2012 found that, of those aged 60 years and older who reported drinking during the past year, 50 % of men and 39 % of women reported daily drinking 5.9 % of all men and 0.9 % of all women aged over 60 reported binge drinking once a month or more [27].

According to the Dietary Guidelines for Americans, moderate drinking is up to one drink per day for women and up to

two drinks per day for men [28]. The National Institute on Alcohol Abuse and Alcoholism (NIAAA) defines the limits to avoid heavy drinking, as summarized in Table 1. It is important to note that these limits are for healthy individuals who do not have a medical condition worsened by alcohol or take any medications that interact with alcohol. The NIAAA further states that “drinking more than these amounts puts people at risk of serious alcohol problems. If you have a health problem or take certain medications, you may need to drink less or not at all [29].”

Screening, Assessment, and Diagnosis

AUD is often under-diagnosed and many clinicians do not routinely ask questions about alcohol use or screen for alcohol use [2••]. Drinking in the elderly is often ignored or rationalized, as many elderly people are retired and do not need to fulfill an obligation outside of their homes.

When an AUD is suspected, clinicians should proceed to assess patients by using questionnaires or seek referral to specialist services. The most commonly used instrument for screening of AUD in older adults is the Alcohol Use Disorders Identification Test (AUDIT) [30]. The full AUDIT is well validated but difficult to administer in most clinic settings. We recommend the AUDIT-C (questions 1 through 3) [31–35] for detecting drinking above recommended limits. Obtaining collateral information from family, friends, and other health care providers (such as primary-care physicians) may also be helpful. Most screen-positive patients will not have AUD and will be appropriate candidates for brief alcohol intervention as the initial treatment approach [31].

Unlike traditional alcoholism treatment, which focuses on helping people with moderate to severe AUD, brief interventions—or short, one-on-one counseling sessions—aim to reduce the risk of developing an alcohol use disorder and other adverse health effects in people who drink more than the recommended limits [36]. There are four elements common to most brief interventions, summarized in Table 2 [31].

Laboratory tests can be helpful to identify an AUD. For example, elevation in alanine aminotransferase (ALT), aspartate aminotransferase (AST), and gamma-glutamyl transpeptidase (GGT) often suggest alcohol-related hepatic

Table 1 NIAAA alcohol consumption limits [29]

For men ≤65 years old:	For men >65 years old and for all women:
No more than four standard drinks (SD) on any occasion	No more than three standard drinks (SD) on any occasion
No more than fourteen SD weekly	No more than seven SD weekly

It is important to note that these limits are for healthy individuals who do not have a medical condition worsened by alcohol or take any medications that interact with alcohol

Table 2 Elements of a brief intervention

Express concern
Advise (to abstain or decrease alcohol use)
Provide feedback linking alcohol use and health
Offer referral to addiction treatment, if appropriate

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involvement. One early study suggests that an increase in mean corpuscular volume (MCV) or GGT is more specific in detecting AUD in older than in younger populations [37]. A high MCV in older adult patients often suggests primary alcoholism. Other secondary causes of a high MCV (i.e., vitamin B₁₂ and/or folate deficiency) can be a complication of AUD.

Medical Stabilization and Prevention of Severe Complications

Medical stabilization always needs to be prioritized in older adult patients with AUD, as co-morbid medical conditions in these patients are common. Identifying the risk for alcohol withdrawal and treating it early is critical as many complications may occur as a result of misdiagnosis.

For older adult patients whose symptoms resemble alcohol withdrawal syndrome, physicians first need to rule out other medical causes that may co-exist with or mimic alcohol withdrawal symptoms. It is helpful to maintain a high index of suspicion for co-existing substance-related disorders, such as opioid (pain killers), cocaine, benzodiazepine, or even drug poisoning [38]. In some patients, treating co-existing severe medical conditions, such as pneumonia or a urinary tract infection, may be required in addition to managing alcohol withdrawal syndrome.

In the emergency setting, for any patient suspected of alcohol withdrawal syndrome, it is critical to give thiamine, folate, and multivitamins early. Thiamine should be administered before glucose solutions, because giving glucose without administering thiamine first may cause the patient to develop Wernicke’s encephalopathy, since glucose depletes thiamine in the body. Once a patient is suspected of having Wernicke’s encephalopathy, immediate and higher-dose thiamine is required. Some suggest that thiamine should be given 200 mg three times daily for 3 to 5 days, preferably intravenously or intramuscularly [39].

Management of Alcohol Withdrawal Symptoms—Use of Benzodiazepines

For various reasons, older adult patients with AUD often have more severe alcohol withdrawal symptoms. They are also at a higher risk of developing delirium tremens or seizures. Therefore, they often need closer monitoring, and for those who have a past history of delirium tremens and seizures, it is

recommended to monitor them in the hospital setting or even on an intensive care unit. We recommend using a standardized assessment such as the Clinical Institute Withdrawal Assessment for Alcohol-revised (CIWA-Ar) to aid in the diagnosis of withdrawal, to indicate the need for medications, and to predict severity of alcohol withdrawal and need for intensive care [40, 41].

Regardless of age, benzodiazepines are the mainstay for alcohol withdrawal syndrome [42]. However, due to concerns for liver function and accumulation of active metabolites, clinicians should consider avoiding chlordiazepoxide (Librium®) and diazepam (Valium®) in older adults, as both have a long half-life and they are extensively metabolized through the liver. Short-acting benzodiazepines such as lorazepam (Ativan®) or oxazepam (Serax®) are recommended for patients with concerning liver function.

With respect to actual dosing schedule, both fixed dosing with supplementation as indicated and symptom-triggered-only dosing schedules have been used in adult patients, but limited studies have been published in older adults. Recently, Taheri et al. [41] reported their findings based on a sample of geriatric inpatients (aged 70 years and older) at a tertiary-care center in Canada, and they compared clinical data from 30 patients who were enrolled in the symptom-triggered protocol with data from pre-protocol group. They found the median duration of benzodiazepine treatment decreased in the symptom-triggered treatment group from 96 h in the pre-protocol period to 48 h ($P = .04$), and the median cumulative lorazepam dose administered decreased from 9 to 3 mg ($P = .001$). A lower incidence of severe withdrawal complications ($P = .007$) and adjunctive medication use ($P = .02$) were also seen in the symptom-triggered group. Overall, their findings support the use of a symptom-triggered protocol in older adults in the hospital setting.

Relapse Prevention in AUD—Psychosocial Rehabilitation and Pharmacotherapy

Irrespective of the particular substance(s) involved, substance use disorder treatment takes place in various medical settings, depending on the severity of symptoms and availability of resources. While intensive treatment can vary from a few weeks to several months, substance use disorders are chronic illnesses that respond best to continuing care rather than brief or episodic treatments alone.

Individuals are referred to a level of care that is least restrictive: (1) outpatient once a week (mild), (2) outpatient three to five times a week (moderate severe), (3) residential treatment (moderate severe), and (4) hospital-based care (emergencies or high-risk older adults). These treatment locations of increasing intensity are also known as the American Society of Addiction Medicine (ASAM) levels of care [43].

AUD is a complex brain disorder that involves biological, psychological, and social aspects of the affected individuals. For most AUD patients, it is recommended to offer an

evidence-based psychosocial intervention (which may be delivered in group and/or individual sessions), encourage and facilitate attendance to mutual-help meetings such as Alcoholics Anonymous or Self-Management and Recovery Training (SMART) recovery, and offer pharmacotherapy using a shared decision-making approach. If patients are interested, pharmacotherapy should be offered and a follow-up plan should be discussed.

Many clinicians typically recommend psychosocial interventions for patients with AUD, but current evidence shows that psychosocial treatments alone are often ineffective. Accumulating evidence shows that medication-assisted treatment (MAT) combined with psychosocial interventions is often associated with better results in reducing cravings, preventing relapse, or maintaining abstinence [44].

So far, there have been three medications approved by the Food and Drug Administration for alcohol dependence: disulfiram, naltrexone (both oral and injectable), and acamprosate. A recent systematic review of alcohol use disorder medications by Jonas and colleagues [45] found strong evidence to support the use of acamprosate, naltrexone, and topiramate in patients with AUD. Disulfiram is not generally recommended for older adult patients due to its increased risk of serious adverse effects and safety concerns. Instead, naltrexone has been recommended for relapse prevention in older adults. Naltrexone reduces craving for alcohol and prevents relapse to heavy drinking. It is administered orally once daily or by gluteal injection once monthly. It is metabolized through the liver and may be used with caution in patients with mild liver impairment. Because it blocks opioid receptors, it may not be appropriate for patients who periodically need opioids for pain management. For patients with liver failure or who need opioid analgesics, acamprosate can reduce alcohol craving and improve abstinence from alcohol. It has few drug interactions, but is eliminated through the kidneys, so patients must have adequate renal function. Its safety and efficacy in elderly patients have not been studied. It must be dosed three times daily, and the large pills may be difficult for some older patients to swallow.

In addition to oral naltrexone, the extended-release (ER) injectable form of naltrexone is another option. It can help address patients' non-adherence by reducing the frequency of medication administration from daily to monthly. One study [46] followed a group of patients with alcohol dependence for 24 weeks and compared the efficacy of injectable naltrexone with placebo. They found that, during the first month after injection, patients receiving injectable naltrexone (380 mg IM monthly) had 37 % fewer heavy drinking days versus placebo ($P < .01$). The superiority of injectable naltrexone over placebo started to show as early as day 2, and this superiority was maintained throughout the study. Thus far, there have been no studies examining the efficacy and safety of ER injectable naltrexone in older adult patients.

Most clinical evidence of acamprosate is based on studies done in Europe. Findings in more than 4000 patients in Europe support the efficacy in reducing risk of relapse and amount of alcohol consumption after relapse. However, evidence from US studies has been somewhat mixed. A 2010 Cochrane review by Rosner et al. [47] conducted a meta-analysis of 24 randomized trials comparing acamprosate to placebo with a total of nearly 7000 participants. They found that acamprosate reduced the rate of relapse and increased the cumulative abstinence duration by an average of 11 %.

Opioid Use Disorder in Older Adults

Although non-opioid medications have been proven to be effective for non-cancer chronic pain, opioid medications have been disproportionately overused in the USA, and this overuse is associated with overdose, addiction, and diversion [14••]. Diversion is a medical and legal term describing the illegal transfer of a legally prescribed controlled medication (e.g., an opioid) to another individual. According to the data collected by the National Institute on Drug Abuse, in 2014 alone, US retail pharmacies dispensed 245 million prescriptions for opioid pain relievers and opioid analgesics are widely diverted and improperly used, which led to the national epidemic of opioid overdose deaths and addictions [14••]. Of the 44,000 drug-overdose deaths reported in 2013, more than a third were secondary to pharmaceutical opioids. Heroin accounted for about a fifth of the 44,000 overdoses [8, 14••]. The major source of diverted opioids is physician prescription [48, 49].

In response to the opioid epidemic, the Department of Veterans Affairs (VA) for example, has initiated a multifaceted approach in 2013 to reduce the use of opioids among American veterans, called the Opioid Safety Initiative (OSI) [50]. Patients are redirected to take non-opioid medications for non-specific chronic pain, and they are taught extensive self-care skills. It has significantly impacted the way physicians prescribe opioids in the VA [51].

Screening, Assessment, and Diagnosis

A subset of older adult patients on opioid medications may have developed opioid use disorder, and they often pose clinical challenges to their treating/prescribing physicians. Some patients are referred to addiction specialists for evaluation to determine whether they meet the DSM-5 criteria for opioid use disorder, which can often co-exist with chronic pain, for example, taking more opioids than prescribed, inability to reduce the amounts taken, and/or interpersonal conflict [24]. It is often very difficult for patients with chronic pain to accept the diagnosis of opioid use disorder and enroll in a substance treatment program. Some patients are very resistant and prefer to find alternative (legal or illicit) methods to obtain opioids than to receive substance abuse

treatment. The risk of opioid overdose death and addiction are exponentially higher for this group of patients [52].

Medical Stabilization and Prevention of Severe Complications

If patients receiving opioid analgesics do not meet opioid use disorder criteria, they may be effectively tapered off opioids in primary-care or medical specialty-care settings. If withdrawal symptoms emerge, the taper can be slowed and supplemented with clonidine and symptomatic treatment (i.e., targeting individual symptoms of opioid withdrawal). Alternatively, a patient may be switched to buprenorphine and gradually tapered. Buprenorphine (with or without added naloxone) is an opioid and has a strong affinity for the opioid receptor and can induce opioid withdrawal symptoms if taken concurrently with another opioid. Detoxification with buprenorphine requires the patient be in objective and moderate to severe opioid withdrawal before initiating a switch and taper with buprenorphine.

Opioid use disorder is diagnosed using the DSM-5 criteria mainly, but as Kuerbis et al. [6••] noted, older adults might not trigger certain DSM-5 criteria; hence, a broader understanding of addiction [53] is required to diagnose the condition. If possible, a chart review before seeing the patient may be helpful. Once the diagnosis is made, it is helpful to rule out conditions that require immediate medical attention before treatment for opioid use disorder can proceed.

The next step is to assess for basic medical, psychiatric, and personality diagnoses (which may need concurrent treatment) and then proceed to explain to the patient that DSM criteria [24] are met for opioid use disorder and that treatment is recommended. The twofold purpose of addiction treatment is to educate patients about addiction and to motivate (inspire) them to engage a comprehensive program of recovery.

Relapse Prevention—Psychosocial Rehabilitation and Pharmacotherapy

As stated above in “Relapse Prevention in AUD—Psychosocial Rehabilitation and Pharmacotherapy” section, SUD treatment takes places in various settings, depending on the level of addiction and according to the ASAM levels of care [43]. For example, a person with mild addiction that can safely and comfortably abstain from opioids might be treated as an outpatient, whereas a patient struggling to avoid illicit opioid use might be treated initially in a more controlled environment like an intensive outpatient program or a residential treatment facility with access to Medication-Assisted Treatment (MAT). MAT involves using medications to assist with cravings and relapse prevention.

MAT is strongly recommended as a first-line treatment for most patients with moderate-severe opioid use disorder, because abstinence-based treatment is often ineffective and even dangerous in this population [43, 44]. The risk of opioid overdose is typically elevated after detoxification. FDA-approved medications for opioid use disorder include buprenorphine, methadone [administered only through a federally regulated opioid treatment program (OTP)], and naltrexone.

Although oral naltrexone is FDA approved for treatment of opioid use disorder, recent systematic reviews and clinical trials have found that oral naltrexone is not significantly different than placebo [54–56], and in one direct comparison was less effective than buprenorphine [57]. This is due in part to difficulty with adherence to the medication, but even in trials that incentivize adherence and observe medication administration, oral naltrexone has not demonstrated significant benefit for opioid use disorder. One randomized controlled clinical trial found that ER injectable naltrexone was more effective than placebo for treatment of opioid use disorder [58]. Another found that ER injectable naltrexone improved outcomes for patients involved in the criminal justice system, compared to treatment as usual [59]. ER injectable naltrexone has not been studied in older adult populations.

By contrast, there is strong evidence from multiple clinical trials and systematic reviews supporting the effectiveness of opioid agonist therapy using buprenorphine and methadone [60–62]. Buprenorphine is a partial mu-receptor agonist but with very high affinity for the mu-receptor. The Drug Enforcement Agency (DEA) allows buprenorphine to be prescribed from a physician's office for opioid use disorder, which gives patients much needed flexibility compared with the more highly regulated OTP. Physicians can prescribe a 1-day supply or up to a 3-month supply based on the patient's stability and safety profile. Methadone, a full mu-receptor agonist, may only be dispensed from federally regulated opioid treatment programs (OTPs), also known as methadone clinics. There is typically an ideal dose range for both medications. If the dose is too low, the patient will report ongoing cravings. The optimal dose is the minimal dose that can suppress cravings for opioids, and minimize the risks of relapse and overdose. Patients need to be monitored for sedation or respiratory depression when the doses are high, and in patients with other risk factors such as sleep-disordered breathing. Buprenorphine or methadone can cause a synergistic central nervous system (CNS) depression. This is of clinical importance when combined with other CNS depressants like alcohol, sedatives, hypnotics, and other licit or illicit opioids. Patients need to be monitored with frequent detailed urine drug screening as a requirement (contingency) for ongoing safe participation in MAT programs.

All patients receiving MAT need to have an emergency naloxone rescue kit prescribed, in case they overdose and are found unresponsive by family members. Instructional videos on how to use naloxone are available online.

Educating a patient's family in overdose prevention at the doctor's office can be a means to engage them more directly in support of the patient's recovery.

For patients and many clinicians, MAT is easier to understand when a mu-receptor antagonist like naltrexone is used for either alcohol or opioid use disorder. But providers are slowly beginning to understand the paradigm shift that a mu-receptor agonist (buprenorphine or methadone) for opioid use disorder provides effective treatment and is not "replacing one addiction with another." An agonist should not be prescribed without associated psychosocial treatment and monitoring. The modern use of MAT is complimentary to the 1935 12-step concept [22] of abstinence. Abstinence is integrated with MAT when one uses the definition of abstinence as the patient abstains from self-medicating and strictly allows an addiction specialist to direct care. It is further recommended that all patients with opioid use disorder attend community-based Narcotics Anonymous (NA) or similar mutual help meetings. Patients receiving buprenorphine or methadone may benefit from being prepared that not all NA members are either understanding or accepting of these medications despite strong evidence of their effectiveness.

Summaries and Comments on Recent Clinical Guidelines

In response to the opioid use epidemic, several *clinical guidelines* have been published to assist in managing opioid use disorder:

1. The US Department of VA and the Department of Defense (DoD) have updated the "VA/DoD Clinical Practice Guideline for the Management of Substance Use Disorders" in 2016 and focus on evidenced-based addiction treatment, using GRADE methodology of systematic evidence reviews supporting its recommendations and suggestions [44].
2. The ASAM published the "National Practice Guideline for the Use of Medications in the Treatment of Addiction Involving Opioid Use" in 2015 [53].
3. Substance Abuse Mental Health Services Administration (SAMHSA) Treatment Improvement Protocol 26 "Substance Abuse Among Older Adults," revised in 2012, offers a detailed discussion of treating older adults with addiction [63].
4. The American Psychiatric Association's (APA) guidelines "Treatment of Patients with Substance Use Disorders" in 2006 and the Guideline Watch Update in 2007 [64, 65].
5. The Center for Disease Control's "CDC Guideline for Prescribing Opioids for Chronic Pain—USA" in 2016 explains the concerns with opioids for non-cancer and non-palliative care chronic pain [13].

In Table 3, we further compare the latest clinical guidelines for assessing and treating opioid use disorder, their methods, amount of key recommendations, and particular strengths.

Table 3 Opioid use disorder-related recent clinical guidelines

Year	Title	Agency/ organization	Method	Key recommendations	Limitations	Comments
2016	VA/DoD Clinical Practice Guideline for the Management of Substance Use Disorders (VA/DoD CPG SUD)	VA/DoD	GRADE method	12 key questions 36 recommendations	Literature 2009–2015 Adults only Although target audience are physicians caring for veterans and active duty personnel, literature reviews encompassed general adult populations Patients aged 18+	Systematic review method Strictly evidence based Not restricted to veterans or active duty personnel but applicable to general population
2016	CDC Guideline for Prescribing Opioids for Chronic Pain—USA CDC Guideline Prescribing Opioids for Chronic Pain	CDC	GRADE method	3 areas of consideration 12 recommendations	Patients aged 18+	Focus is on chronic pain management, not opioid use disorder per se
2015	The National Practice Guideline for the Use of Medications in Treatment of Addiction Involving Opioid Use ASAM National Practice Guideline Opioid Use Disorder	ASAM	RAND/UCLA Appropriateness Method Review other guidelines, literature, and clinical knowledge Expert consensus	13 sections 111 recommendations	Adults mostly	Practical Complimentary to other guidelines
2012	Substance Abuse Among Older Adults, Treatment Improvement Protocol (TIP) 26 SAMHSA Substance Use Older Adults, TIP 26	SAMHSA	Expert consensus	Approximately 60 recommendations	Older adults aged 60+	Bridges the gap between the promise of research and need for clinical information in the field Older adult specific

ASAM American Society of Addiction Medicine; CDC Centers for Disease Control; DoD US Department of Defense; GRADE Grading of Recommendations Assessment, Development, and Evaluation System; RAND RAND Corporation (RAND)/University of California, Los Angeles (UCLA) Appropriateness Method; RAND Rand Corporation; SAMHSA Substance Abuse and Mental Health Services Administration; TIP Treatment Improvement Protocol; VA US Department of Veterans Affairs

Discussion

Older adults in our society carry a wealth of historical, experiential, and cultural knowledge and are a valuable resource for working families and our society as a whole. Losing an older adult to the disease of addiction or SUD comes at great personal and societal cost.

SUDs are often disguised and cleverly wedged between two psychiatric subspecialty areas, i.e., addiction and geriatric psychiatry. SUDs in older adults can be detected, prevented, and managed effectively. With increased awareness of effective screening, brief intervention, or care management strategies, general and geriatric psychiatrists can make a tremendous positive impact upon the health and quality of life of older adults and their families.

General or geriatric psychiatrists need to raise the awareness level for SUDs among older adults and be more willing to explore any possible cases. It is helpful to be reminded that tobacco continues to be the most common SUD-related cause of death in the USA. After tobacco, alcohol is the second most common SUD, followed by opioid use disorder.

Physicians are challenged to view chronic pain differently and reserve the prescribing of opioids for cancerous, palliative, or end-of-life care only. For patients with unhealthy alcohol use, brief intervention strategies are easy, effective, and evidence-based interventions. Psychiatrists familiar with SUD can manage the patient from the office if appropriate; however, more severe and complex patients may require referral to specialty services for coordinated and comprehensive treatments that often consist of both MAT and addiction-specific psychosocial interventions.

Similar to depression, SUD in older adults should not be accepted without investigation.

Compliance with Ethical Standards

Conflict of Interest Christoffel Le Roux and Karen Drexler declare that they have no conflict of interest.

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Human and Animal Rights and Informed Consent This article does not contain any studies with human or animal subjects performed by any of the authors.

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