

Substance use disorders in hospice palliative care: A narrative review of challenges and a case for physician intervention

Review Article



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Abstract

Objectives. Substance use disorders (SUDs) are frequently encountered in hospice palliative care (HPC) and pose substantial quality-of-life issues for patients. However, most HPC physicians do not directly treat their patients' SUDs due to several institutional and personal barriers. This review will expand upon arguments for the integration of SUD treatment into HPC, will elucidate challenges for HPC providers, and will provide recommendations that address these challenges.

Methods. A thorough review of the literature was conducted. Arguments for the treatment of SUDs and recommendations for physicians have been synthesized and expanded upon.

Results. Treating SUD in HPC has the potential to improve adherence to care, access to social support, and outcomes for pain, mental health, and physical health. Barriers to SUD treatment in HPC include difficulties with accurate assessment, insufficient training, attitudes and stigma, and compromised pain management regimens. Recommendations for physicians and training environments to address these challenges include developing familiarity with standardized SUD assessment tools and pain management practice guidelines, creating and disseminating visual campaigns to combat stigma, including SUD assessment and intervention as fellowship competencies, and obtaining additional training in psychosocial interventions.

Significance of results. By following these recommendations, HPC physicians can improve their competence and confidence in working with individuals with SUDs, which will help meet the pressing needs of this population.

Substance use disorders (SUDs) are a critical health and quality-of-life concern for individuals receiving hospice palliative care (HPC). Given the rates of SUDs in the general US population (12% for alcohol use disorder and 2–3% for illicit drugs; Merikangas and McClair 2012), the rise in substance use rates over the past decade (Substance Abuse and Mental Health Services Administration 2020), and the association between substance misuse and life-threatening illnesses like cirrhosis and certain types of cancer, patients with SUDs are regularly encountered in HPC (Berger et al. 2013). Approximately half (53%) of palliative care clinicians surveyed in the US reported spending more than 30 minutes each day managing patient behaviors that are associated with substance use, such as patients using more opioids than prescribed or engaging in risky alcohol use (Merlin et al. 2019). With HPC now being introduced earlier in the illness trajectory and expanding to outpatient settings, substance use may frequently occur outside the awareness of health-care providers (Rosenstein and Park 2022). In palliative patients, unmanaged SUDs are associated with substantial distress and impairment, shame, loneliness, fractured relationships, under-controlled pain, comorbid mental health problems, and potential health complications like cancer, heart disease, stroke, cognitive decline, and early mortality (Centers for Disease Control and Prevention 2022; Ebenau et al. 2019, 2020; Reisfield et al. 2015; Tedesco et al. 2021).

The overarching goal of HPC, as reflected in standardized guidelines, is to provide comfort and dignity to patients and their families through the relief of suffering in physical, psychological, social, practical, and spiritual life domains (Ferrell et al. 2018; World Health Organization 2020). Much of the supportive care work for HPC patients is undertaken by physicians and nurses (Fan et al. 2017), as well as social workers and chaplains (National Coalition for Hospice and Palliative Care 2018). HPC physicians may be among the last health-care touchpoints for terminally ill patients with SUDs. Several clinicians and researchers have argued that psychological and pharmacological interventions for SUDs should be within the purview of the HPC physician (Jones et al. 2022; Magoon and Shalev 2022; Moryl and Malhotra 2021; Passik and Theobald 2000). As SUDs threaten quality of life across many domains (Armoon et al. 2022),

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including psychosocial health, HPC physicians who address the needs of patients with SUDs will be acting in congruence with the ethos and mandate of HPC (Magoon and Shalev 2022).

Unfortunately, many HPC physicians report low confidence in their ability to address substance misuse, and it is rare for HPC physicians to treat their patients' SUDs (Childers and Arnold 2012; Jones et al. 2022; Tedesco et al. 2021). Some HPC physicians question whether treating SUDs should even be within palliative care's scope (Merlin et al. 2020). Barriers to the identification and treatment of SUDs in HPC include a lack of training in the pharmacological and psychosocial treatment of SUDs, stigma toward individuals with SUDs, misconceptions about SUDs, and ethical and practical challenges when managing patients' pain. If these challenges are addressed, HPC physicians may be well-suited to the role of treating SUDs in their patients.

As of 2019, only 1883 physicians in the US were certified specialists in addiction medicine (Scutti 2019). Though psychologists may be adept at managing SUDs in HPC due to their training, they are not always involved in HPC teams due to systemic constraints, particularly underfunded health-care systems (Abramson 2022). Thus, although the treatment of SUDs has historically fallen beyond the scope of HPC medicine, changes in the scope of practice need to reflect the increasing prevalence of SUDs in the US population.

This review will synthesize the disparate literature on patients with SUDs in HPC in the United States, with a focus on (a) integrating arguments for substance misuse as a valuable target for intervention, (b) illuminating the challenges that SUDs pose for HPC physicians, (c) providing recommendations for physicians and health-care systems to address these challenges, and (d) outlining pharmacological and psychological interventions that can be implemented by HPC physicians. This paper focuses on the US due to the disproportionately high number of opioid-related deaths in this country every year and due to the relatively greater availability of data on substance use, palliative care practices, and intervention implementation compared to other English-speaking countries. Further, controlled substances such as prescription opioids may be less accessible in low- and middle-income countries, and as such, physician practices and substance use concerns vary widely across the globe. Our recommendations are tailored to the US and may not be applicable to countries with different physician training requirements and opioid prescribing practices.

Methods

A narrative review of the existing literature on the treatment of SUDs in HPC was undertaken, with an emphasis on identifying challenges for physicians and guidelines for addressing these challenges. A narrative review presents a nonsystematic summation and analysis of available literature on a specific topic of interest, while a systematic review employs a more rigorous approach to reviewing literature in a well-defined way, often with the use of standardized guidelines (e.g., PRISMA; Gregory and Denniss 2018). While systematic reviews attempt to answer a well-defined research question, the questions addressed by narrative reviews are by contrast broader in scope, and the resulting review is more descriptive (Gregory and Denniss 2018). A narrative literature review was chosen for this article rather than a systematic review due to the limited and disparate literature presently available on the topic, which requires a more exploratory and less constrained approach to review. To that end, a wide variety of article types were reviewed.

Articles were retrieved from MEDLINE, EBSCOhost, Google Scholar, PsychINFO, and PubMed. Search terms included [Substance use disorder OR Buprenorphine OR Opioid use disorder OR Substance use interventions] AND [Hospice palliative care OR Palliative care physicians]. The database search was conducted between October and December 2022. The reference lists of all articles read were also searched for relevant articles.

To be eligible for inclusion in our review, studies needed to be published between 1995 and the present, written in the English language, be relevant to the hospice and palliative care context, and be applicable to physicians. Articles from the US were preferred, but due to the scarcity of relevant literature on the topic in general, articles from other English-speaking countries were also included. The search included empirical studies, qualitative, quantitative, and mixed-methods studies, literature reviews, government reports, clinical guidelines, and editorials.

Harms associated with untreated SUDs in HPC

Substance misuse may compromise HPC patients' adherence to care (Milward et al. 2014; Palepu et al. 2004; Prater et al. 2002). The diagnosis of a chronic or terminal illness is a time of great stress for an individual and their family. As substances can provide temporary relief from physical pain and psychological distress, individuals with illnesses are at risk of misusing them (Novak et al. 2009; Votaw and Witkiewitz 2021). For instance, youth diagnosed with chronic medical conditions are more likely than their healthy peers to engage in substance use, and heavy substance use in particular (Wisk and Weitzman 2016). Substance misuse places patients with chronic illnesses at risk of not following through with their patient care plans. In their qualitative study on concerns related to prescribing opioids for chronic pain, Merlin and colleagues reported that physicians classify missed appointments as one of the most frequent and challenging behaviors exhibited by their patients who misuse substances (Merlin et al. 2018). For instance, Passik and Theobald discussed the example of an advanced cancer patient who missed a vital radiation therapy appointment after he was prescribed – and began to misuse – fentanyl patches by his physician (Passik and Theobald 2000).

In addition to missed medical appointments, untreated SUDs contribute to many other quality-of-life concerns for HPC patients, including reduced effectiveness of pain management interventions (Rupp and Delaney 2004), increased safety risks (including due to interactions of misused substances with prescribed medications; McCance-Katz et al. 2010), receiving incorrect psychiatric diagnoses (as withdrawal from certain substances can resemble other mental illnesses; Moadel et al. 1999), experiencing new or worsening physical and mental health problems (National Institute of Mental Health 2021; Osborne et al. 2020), and, vitally, the prevention of important end-of-life projects, like restoring dignity and self-esteem, mending relationships, and legacy work (Allen 2017).

Social support is essential as palliative patients approach the end of life (Keeley 2017). Family members and close friends often take on the intensive roles of primary caregiver (in outpatient HPC), emotional supporter, and health-care proxy, carrying out patients' wishes when they are no longer able to make medical decisions (Keeley 2017). Without the support of loved ones, patients at the end of life are less likely to receive services such as HPC consults, chaplain visits, and a "do not resuscitate" order (Sudore et al. 2014). Unmanaged SUDs may negatively impact the HPC patient's relationships, with implications for quality of care. Substance misuse disrupts social reward processing, reducing the pleasure that

individuals derive from social interactions (Preller et al. 2014), and it also reduces one's ability to inhibit behavior, which can lead to impulsivity (Volkow et al. 2011). As a result of these changes, people with unmanaged SUDs may miss out on social obligations, divest from relationships, or behave in secretive or evasive ways to hide or acquire substances (Christie 2021). Perhaps due to the erosion of relationships, individuals with SUD report experiencing loneliness at rates 7 times that of the general population (Ingram et al. 2018). HPC patients who are lonelier tend to be subject to more aggressive and potentially painful treatments to sustain life (such as CPR), which may contribute to the greater symptoms they also experience (e.g., worse pain, fatigue, confusion; Abedini et al. 2020).

Challenges for physicians

Assessment

Identifying SUDs in palliative patients can be difficult for physicians for various reasons. In HPC, symptom management often relies on controlled substances, with a high potential for disordered use (e.g., benzodiazepines, opioids). When opioid doses are escalated for a medical reason, such as an increase in pain, it can be difficult to distinguish medically necessary use from an SUD (Fairman et al. 2016). For example, in the Diagnostic and Statistical Manual criteria for opioid use disorder (American Psychiatric Association 2013), the criterion of impaired control includes taking a substance in larger amounts over a longer period of time, and spending excessive amounts of time to procure a substance. For many HPC patients, the structure of their days *necessarily* revolves around opioid use to manage pain (Fairman et al. 2016). Thus, an SUD can easily be overlooked or incorrectly diagnosed in a chronically ill person.

Assessment for SUDs can incorporate unstandardized questionnaires and interviews, standardized questionnaires, and urine toxicology screens (Lau et al. 2021). In a study of 105 US hospices, all of the hospices that assessed for patient substance use (68% of the total sample) reported using unstandardized instruments (Sacco et al. 2017), typically simple checkboxes prompting clinicians to inquire about substance use. A problem with these types of unstandardized assessments is that patients may be reluctant to disclose problematic use (Sacco et al. 2017). As well, the lack of follow-up questions embedded in these questionnaires means that pertinent information (e.g., frequency of use) may be missed. Standardized substance use measures are more likely to correctly identify problematic substance use, but few such instruments have been developed or validated in the palliative setting (Lau et al. 2021). Only the Screener and Opioid Assessment for Patients with Pain – Short Form (SOAPP-SF) and the Cut Down-Annoyed-Guilty-Eye Opener – Adapted to Include Drugs (CAGE-AID) have thus far been tested within an HPC population, but results are still preliminary (Greiner et al. 2018; Lau et al. 2021; Yennurajalingam et al. 2018).

The use of urine drug screens can also be problematic. "Random" urine drug tests are frequently not random at all and are often ordered at the discretion of the clinician when the patient exhibits certain characteristics, like aberrant drug behavior or a history of substance misuse (Lau et al. 2021). Personal characteristics such as age, ethnicity, and education level predict a patient's likelihood of receiving a drug screen, which raises concerns about the role of stigma and stereotyping in the selection of patients to test (Lau et al. 2021). Patients who perceive their physicians as not trusting their self-reports, or as unfairly selecting them for

drug screening based on their personal characteristics, may be less likely to be open and honest about their substance use with their physician, impeding accurate diagnosis of an SUD.

Another limitation of using urine drug screening to detect the presence of misused substances in a palliative care population is that many of the substances that HPC patients misuse, particularly opioids, are prescribed to them. Given its low cost and immediate results, immunoassay-based testing is the type of urine testing most often employed in routine care (Hadland and Levy 2016). Immunoassay-based testing is not quantitative; it detects the presence or absence of a substance or class of substances but cannot determine when a substance was last used, how often it is used, and, importantly, how much was used (British Columbia Centre on Substance Use 2021). Patients who are using more opioids than prescribed may therefore not be identified by routine testing. Confirmatory testing, by contrast, generates both quantitative and qualitative results, but is expensive, can only be done in a laboratory setting, is time consuming (due to transport, processing, analysis, and reporting time), and is generally not employed in routine care (British Columbia Centre on Substance Use 2021). As well, many substances that patients misuse are difficult to capture with urine tests. For example, alcohol can be difficult to flag using standard laboratory measures due to its relatively short window of detection. While opiates can be detected in urine up to 5 days after use, alcohol is only detectable up to 10–12 hours after use on common urine screens (Hadland and Levy 2016), making chronic alcohol use difficult to identify. Additionally, some short-acting benzodiazepines like Alprazolam (Xanax), which are highly misused, are only detectable up to approximately 36 hours after use (Temte et al. 2019).

Provider training

Although patients with SUDs are often encountered in HPC, most HPC physicians do not receive adequate training in caring for these patients. Multiple studies have been conducted highlighting hospice and palliative medicine trainees' and clinicians' lack of confidence in their ability to work with this group, often due to limited educational and training opportunities (Childers and Arnold 2012; Moryl and Malhotra 2021; Tedesco et al. 2021). While 77.2% of a sample of 57 palliative medicine fellows in the US had seen a patient with an SUD in the last 2 weeks, only 47.2% reported having a working knowledge of addiction (Childers and Arnold 2012). Less than half (41.4%) felt their training had prepared them to manage opioid misuse and only 33.9% felt confident diagnosing an SUD in a patient for whom they are prescribing opioids. Research suggests that limited training opportunities for health-care providers who prescribe opioids contribute to a lack of knowledge and confidence in identifying, taking care of, communicating with, and treating patients with SUDs (Arthur et al. 2021).

As of 2014, certification in the HPC physician subspecialty requires that physicians complete a 12-month hospice and palliative medicine fellowship accredited by the American Board of Medical Specialists (American Academy of Hospice and Palliative Medicine n.d.). The specialty of internal medicine, for example, is one of the most common pathways to becoming an HPC physician. In an overview of the curriculum milestones and final exam requirements outlined by the American Board of Internal Medicine (American Board of Internal Medicine 2023), only one milestone within internal medicine training covers substance misuse: understanding issues around comorbid SUDs (e.g., diversion risk and addiction treatment). The associated exam category on SUD

comprises only 2% of the final exam. If physicians are to increase their comfort in treating patients with SUDs, they will need to undergo training at the fellowship level.

Provider attitudes and stigma

Stigma and negative attitudes toward people with SUDs are also often the result of a lack of education and training and may be contributing to HPC physicians' reluctance to treat SUDs (Haffajee et al. 2018). Across health professionals and clinical contexts, studies of provider attitudes have found that patients with SUDs are perceived as deceitful, difficult, noncompliant with treatment, untrustworthy, and more likely to divert their medication (Haffajee et al. 2018). The majority (77%) of primary care physicians in one study reported not wanting to work closely with a person with an opioid use disorder, and more than half (66%) reported that they believed the opioid-using patient population to be more dangerous than the general population (Kennedy-Hendricks et al. 2016). Clinicians in various studies report concern about becoming "inundated" by too many patients with opioid use disorder (Gordon et al. 2011; Ho et al. 2022; Huhn and Dunn 2017), homeless patients, or patients with comorbid mental health concerns (Storholm et al. 2017) if they begin prescribing buprenorphine for opioid use disorder, and similar attitudes are found in HPC physicians (Ho et al. 2022).

Physician attitudes about the utility of SUD intervention also present barriers to effective SUD assessment and treatment. Some HPC physicians view substance misuse as intractable and therefore not a worthwhile use of a palliative patient's limited time, or as tantamount to "depriving a dying patient of a source of pleasure" (Passik and Theobald 2000). Such attitudes reflect a misconception that substance use primarily provides pleasure and comfort for the user (e.g., euphoria and calm), which fails to consider the distress that SUDs produce over time (Passik and Theobald 2000). In the progression of recreational to disordered use, the pleasure and euphoria that one initially experiences from substance use is gradually replaced by tolerance, compulsion, cravings, and diminishing pleasure due to a process called incentive sensitization (Robinson and Berridge 2008). A lack of understanding of this process can deter physicians from managing their patients' SUDs.

Pain management

Pain is one of the most common and debilitating symptoms for individuals receiving HPC, and managing pain related to medical illness with opioids is considered the standard of care (Dalal and Bruera 2019; Rosenblum et al. 2008). Despite the effectiveness of opioids for pain management, many physicians are reluctant to prescribe them to patients with past or present SUDs for fear of misuse (Health Care Resource Centre Clinical Team 2022). Patients with SUD histories also fear this outcome and may thus reject opioid prescriptions for pain management (Sacco et al. 2017). Indeed, individuals with current opioid use disorder often require larger and more frequent opioid doses to adequately control their pain because of developed tolerance, which puts them at greater risk of opioid-related harms like overdose (Prater et al. 2002). Furthermore, opioids may interact with other misused drugs (in particular, nervous system depressants like benzodiazepines and alcohol), with the potential for harmful drug interactions, greatly increasing the risk of overdose and death (National Institute on Drug Abuse 2022).

Despite these risks, only 5% of patients with a history of SUDs develop opioid use disorder when treated with opioids for chronic pain (compared to 0.2% of patients *without* SUD history; Moe et al. 2019). Individuals with a history of SUDs who are given less potent medications by their doctor out of concern for relapse are actually at *higher* risk of relapse because they may be induced to self-medicate their unmanaged pain (Prater et al. 2002).

For patients with severe pain, not prescribing opioids also carries great risks beyond SUD relapse. Uncontrolled chronic pain can negatively impact the endocrine system, weaken the immune system, lead to muscular deconditioning, contribute to hypertension, and lead to mental health and cognitive issues like insomnia, attention and memory problems, and mood disorders (Tennant 2012). Regardless of misuse history, the principles of pain control management assert that *all* patients must be provided with effective pain management and that medications should be chosen based on their ability to provide pain relief (Prater et al. 2002). While mild pain may be treated with non-narcotics (e.g., acetaminophen) and moderate pain may be sufficiently managed with "weak" opioids (e.g., codeine and hydrocodone), severe pain most often necessitates the use of strong opioids (e.g., oxycodone; Prater et al. 2002). HPC physicians have a legal and ethical obligation to sufficiently treat their patients' pain (Jackson and Leiter 2023), and this may necessitate the use of opioids. In many cases, the necessity of managing pain may outweigh the small risk of relapse opioids present.

Recommendations

A summary of barriers and our recommendations can be found in Table 1.

Assessment

Accurate identification of SUDs can be difficult in practice environments that do not prioritize standardized SUDs assessments. HPC physicians can overcome this limitation by keeping abreast of the emerging literature on validated instruments for HPC and introducing them into their practice environments. Recent efforts to validate standardized SUD assessment tools in HPC medicine have found that separate clinical cutoff scores may be appropriate for the HPC population. For example, a cutoff score of ≥ 3 rather than the usual ≥ 4 on the SOAPP-SF was deemed more appropriate for HPC patients in a preliminary analysis with a palliative oncology population (Greiner et al. 2018). As well, a score of 1 out of 4 on the CAGE-AID questionnaire was adequately sensitive and specific enough to screen cancer patients at risk of opioid misuse (Yennurajalingam et al. 2018), in contrast to the usual cutoff score of 2 (Brown and Rounds 1995). Though not yet validated for the HPC context, other standardized questionnaires that are sometimes used in HPC due to their relevance in medical settings include the original CAGE, the Opioid Risk Tool, the original SOAPP, and the SOAPP-revised (Lau et al. 2021). All measures are freely available online, simple to administer, and brief, taking approximately 1–10 minutes to complete. HPC clinicians can utilize these measures, particularly the SOAPP-SF and the CAGE-AID, to improve accurate detection of SUDs in their patients and facilitate treatment planning.

Some clinicians have suggested implementing routine urine drug screening for all palliative patients, to reduce the biases engendered by elective screening (Fairman et al. 2016). Other recommendations include normalizing urine drug screening for palliative

Table 1. Barriers and recommendations for HPC physicians who encounter patients with substance use disorders

Barriers	Recommendations
Difficulty identifying SUDs in HPC patients with severe illness	Introduce standardized SUD assessment tools that have been validated with HPC patients, such as the SOAPP-SF and the CAGE-AID.
Urine drug screens used only selectively, in a potentially stigmatizing manner	Routinely administer urine drug screens to all patients, not solely those who exhibit characteristics stereotypically associated with SUDs. Use neutral language (e.g., refer to screens as “positive” or “negative,” instead of “clean” or “dirty”).
Training gaps in the assessment, diagnosis, and treatment of SUDs	Incorporate these skills, specifically the competencies outlined by Chua et al. (2021), into fellowship training programs. HPC physicians can access continuing education through courses, webinars, and workshops. Free, brief online courses are offered by Yale University and the University of Missouri-Kansas City.
Stigma toward people with SUDs may lead to lower quality of care	Visual campaigns have been found to reduce stigma toward patients with SUDs (Kennedy-Hendricks et al. 2022). Physicians can champion and disseminate such campaigns in their practice settings. Direct contact with patients with SUDs, and specifically prescribing buprenorphine, may decrease physician stigma.
Reluctance to deprive dying patients of pleasure, without appreciating the harmful consequences of problematic substance use	Continuing education, including the concept of incentive sensitization (i.e., how with habitual substance use, pleasure diminishes as cravings increase over time) and the impact of disordered substance use on physical and mental health, end-of-life work, and pain management.
Fear that prescribing opioids for pain management will trigger a relapse or overdose	Access continuing education and follow practice guidelines (e.g., those published by the American Society of Clinical Oncology and the National Collaborating Centre for Cancer) to inform prescribing decisions. Only 5% of patients with a history of SUDs will develop opioid use disorder when treated with opioids for chronic pain (Moe et al. 2019); routine SUD assessment through standardized measures and urine drug screens can facilitate early identification and intervention for problematic use.
Underutilization of effective pharmacological and psychosocial interventions to treat SUDs	Continuing education to increase competence in pharmacological (e.g., acamprosate, disulfiram, and naltrexone for alcohol use disorder) and psychosocial interventions (e.g., motivational interviewing and cognitive behavioral therapy).

patients by comparing screening for substances to other screenings they are used to, such as hemoglobin testing in diabetes (Fairman et al. 2016). Clinicians can aim to reduce the number of unexpected urine drug results they receive by maintaining open communication with patients throughout their treatment and by working to ensure patients feel comfortable disclosing use (British Columbia Centre on Substance Use 2021). One way they can encourage this

is by using destigmatizing language (British Columbia Centre for Disease Control 2017). This can include using people-first language (e.g., “person with an opioid use disorder” vs. “opioid user” or “addict”), using language that promotes recovery (e.g., refrain from saying a patient is “unmotivated” or “noncompliant”), and avoiding slang or idioms that reinforce the idea that substance use is a moral failing (e.g., referring to positive urine tests as “dirty” and negative tests as “clean”; British Columbia Centre for Disease Control 2017). Further recommendations for facilitating the urine screening process have been outlined by the British Columbia Centre on Substance Use (2021).

Provider training

In a recent Delphi study consisting of 18 experts on SUDs in HPC, 53 out of a possible 62 addiction medicine skills were deemed appropriate to include in fellowship programs, and 38 of those skills reached total consensus (Chua et al. 2021). One of the skills deemed appropriate to include was using a counseling intervention – motivational interviewing – to enhance patients’ motivations to change substance use behaviors. Another included assisting patients in accessing appropriate pharmacologic treatment for an opioid use disorder, although there was no consensus regarding whether to directly prescribe buprenorphine to patients. Nevertheless, it appears that SUD experts in HPC see value in directly assessing and managing patients’ substance misuse. The skills outlined by the Delphi panel could help inform the integration of SUD courses into future updates of HPC fellowship programs.

In the interim, practicing HPC physicians who wish to supplement their knowledge about SUDs can access courses, webinars, and workshops. Several resources have been developed to teach health-care providers to assess, diagnose, and treat SUDs. These include a free 4-week online course offered by Yale University (Tetrault et al. n.d.), a free 3.5-hour online course offered by the University of Missouri-Kansas City (University of Missouri-Kansas City n.d.), and a 6 module graduate-level course offered by the American Psychological Association (Liese et al. n.d.), among others.

Attitudes and stigma

Targeted campaigns within health-care systems can help combat stigma toward patients with SUDs. One study with 1842 health-care professionals in the US found that those exposed to a visual campaign (posters) and narrative vignettes (written from the perspective of a patient with opioid use disorder) had significantly lower levels of stigma compared to a control group (Kennedy-Hendricks et al. 2022). The content of the posters and narrative vignettes included (a) an emphasis on the harms of using stigmatizing language and alternative language to use and (b) information about the effectiveness of FDA-approved drugs like buprenorphine in the treatment of opioid use disorders. Both conditions were associated with lower levels of stigma. Thus, implementing such campaigns in HPC settings may reduce stigma toward patients with SUDs.

Direct contact with patients with SUDs, and with the buprenorphine prescribing process itself, seems to facilitate attitude change among providers (Green et al. 2014). With such experience, providers show increased motivation to prescribe buprenorphine, improved self-efficacy in treating SUDs, and reduced concern over attracting homeless patients or too many patients with opioid use

disorder (Storholm et al. 2017). Encouraging HPC physicians to initiate their first prescription may therefore correct some of the beliefs they have about the process, particularly beliefs routed in stigma (Ho et al. 2022). This process can be facilitated by a strong clinical leader encouraging the adoption of buprenorphine into their organization by advocating for its placement on their hospital or clinic's formulary, by working to integrate its use into existing infrastructure, by promoting it with staff, and by arranging for and supporting professional training (Green et al. 2014). Given their degree of influence in health-care systems (Carsen and Xia 2006), physicians may be well-suited to such leadership roles.

Pain management

In response to the opioid epidemic, much research has gone into developing practice guidelines to help inform decision-making, outline the ethical pros and cons of prescribing opioids to specific patient populations, and minimize risk to patients. Although not specific to HPC, the American Society of Clinical Oncology's guidelines for managing chronic pain in adult cancer survivors (Paice et al. 2016) can be applied to the HPC context. These guidelines are fairly cautious: they recommend trials of opioids only for carefully selected patients with chronic pain who do not respond to more conservative pain management strategies, such as nonsteroidal anti-inflammatory drugs, acetaminophen, or topical analgesics. Despite erring on the side of caution, these guidelines do not state that patients with SUDs should be categorically denied opioids. Instead, they suggest that physicians should conduct thorough and ongoing risk assessment, including critically deciding if there are reasonable alternatives that could ameliorate pain with lower risk (Paice et al. 2016). The decisional flowchart structure of these guidelines can help HPC physicians make reasonably informed, safe decisions when managing their patients' pain and may help mitigate some of the apprehension they have reported feeling when working with patients with SUDs. Additionally, guidelines for strong opioid prescribing in the HPC context have been developed by the National Collaborating Centre for Cancer (National Collaborating Centre for Cancer 2012). These include more specific recommendations for dosage, monitoring, opioid types, and symptom management than the American Society of Clinical Oncology's guidelines (Paice et al. 2016) but do not explicitly discuss disordered use. Taken together, however, these guidelines may serve as a foundation for safe opioid prescribing in HPC.

Interventions for SUDs

Pharmacological interventions

Evidence-based pharmacological interventions for SUDs can be used on their own or in tandem to catalyze behavior change in HPC settings. These interventions include buprenorphine or methadone for opioid use disorder (Centre for Addiction and Mental Health 2022), buspirone for cannabis use disorder (Weinstein and Gorelick 2011), acamprosate, disulfiram, and naltrexone for alcohol use disorder (National Collaborating Centre for Cancer 2012), and nicotine replacement therapy, bupropion, and varenicline for nicotine use disorder (Aubin et al. 2014). These interventions are not standard practice in HPC, but multiple researchers have argued for their inclusion (Kahraman et al. 2020; Quibell and Baker 2005). If HPC physicians are careful to identify potential drug interactions (e.g., naltrexone can block the analgesic

effects of opioids; Anton 2008), contraindications, and side effects of such interventions, these therapies may prove to be beneficial to patients in HPC (Kahraman et al. 2020).

Psychological interventions

A psychological intervention with robust evidence for its effectiveness in reducing many types of substance use is motivational interviewing, which is a directive, person-centered counseling style that helps individuals explore and resolve their ambivalence about change (Rubak et al. 2005). Motivational interviewing has been found to help patients reduce cigarette smoking, high-risk drinking, heroin use, cocaine use, and other types of substance use (Bernstein et al. 2005; Jhanjee 2014; Schaus et al. 2009; Smedslund et al. 2009; Soria et al. 2006). It also significantly reduced overdose risk behaviors (e.g., using opioids when no one is around) in opioid misusers with a prior nonfatal overdose compared to those not given an intervention (Bohnert et al. 2016).

Jones et al. (2022) have suggested that, by virtue of their training and experience, HPC physicians possess many of the foundational skills and traits necessary to provide effective support and psychosocial interventions to those misusing substances. In an acceptability and feasibility study in which HPC clinicians were coached in motivational interviewing skills, 88% rated the intervention as helpful and 100% stated that they would recommend it to a colleague (Pollak et al. 2020). Compared to the control group, the motivational interviewing-trained clinicians had higher objectively rated communication skills and lower rates of burnout. Motivational interviewing for HPC communication is also well-received by patients (Pollak et al. 2015). Although more studies investigating the effectiveness of HPC physicians' motivational interviewing interventions on SUDs will need to be undertaken, it is promising that physicians find motivational interviewing skills to be useful and relevant to their practice. Plenty of motivational interviewing courses and programs are available online. Stephen Rollnick, the co-founder of motivational interviewing, has developed (along with colleagues) an 8-hour self-directed online course for health-care providers (Rollnick et al. n.d.), and the University of Massachusetts offers an online certification program for intensive training in motivational interviewing, also for health-care providers (Mullin et al. n.d.).

Cognitive behavioral therapy is another psychological intervention with evidence for effectiveness in treating SUDs. Cognitive behavioral therapies are a class of interventions based on the premise that maladaptive cognitions maintain emotional and behavioral problems, and that modifying cognitions (and behaviors) can improve functioning (Hofmann et al. 2012). These interventions are skills-based and can be administered in brief sessions, which makes them well-suited to the medical setting (Dorflinger et al. 2016). Cognitive behavioral therapy has been found to be effective in reducing marijuana, alcohol, cocaine, opioid, and polysubstance use, with effect sizes across studies generally in the small to moderate range (Dutra et al. 2008; Magill and Ray 2009). Physicians who are trained in cognitive behavioral therapy tend to report global satisfaction with the training they receive (Dorflinger et al. 2016). In one sample of 42 family physicians trained in cognitive behavioral therapy, 80% reported using therapy methods such as thought records, reframing, and behavioral modification in their practice (Wiebe and Greiver 2005). The Beck Institute (<https://beckinstitute.org/>) provides training in cognitive behavioral therapy and its application to the treatment of SUDs.

Limitations

Given the paucity of literature on the topic of SUD treatment in HPC and the wide variations in article type, study methodology, article quality, and research focus, a standardized, rigorous approach to reviewing the literature was not undertaken at this time. It is recommended that future studies take a more systematic and focused approach to reviewing this topic, as there are unanswered questions in this area and few central sources of information available. For instance, future researchers may wish to conduct a systematic review of studies on the effects of ongoing substance misuse on HPC patients (e.g., on their quality of life, health outcomes, pain, lifespan, financial costs, etc.), as the literature on this topic is diffuse. As well, an experimental design that tests the effectiveness of psychosocial interventions (e.g., motivational interviewing) for substance misuse delivered by HPC physicians would greatly benefit this area of inquiry.

Summary

Untreated SUDs represent a threat to quality of life. SUDs can particularly impact individuals in HPC and impede important end-of-life projects like making amends and engaging in legacy work (Allen 2017). HPC physicians are faced with multiple challenges when working with individuals who misuse substances that contribute to their reluctance to treat SUDs (Ebenau et al. 2020). Challenges can be understood as those specific to SUD treatment (e.g., lack of training in identifying SUDs) and those that arise from working with this population more generally (e.g., systemic stigma toward individuals with SUDs).

To address the growing challenge of SUDs in HPC, we recommend (a) physicians utilize standardized assessment measures for SUDs in HPC; (b) physicians familiarize themselves with destigmatizing language and spearhead anti-stigma campaigns; (c) physicians initiate the buprenorphine prescribing process; (d) physicians enroll in SUDs treatment courses, webinars, and continuing education; (e) physicians consult opioid dosing guidelines; (f) physicians gain awareness of psychosocial and pharmacological interventions that can be implemented in HPC; and (g) medical schools and HPC fellowship programs include SUD assessment and treatment as core competencies in training.

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