FY 2020 Houston EMA Ryan White Part A/MAI Service Definition **Substance Abuse Services - Outpatient**	
HRSA Service Category Title: **RWGA Only**	Substance Abuse Services Outpatient
Local Service Category Title:	Substance Abuse Treatment/Counseling
Budget Type: **RWGA Only**	Fee-for-Service
Budget Requirements or Restrictions: **RWGA Only**	Minimum group session length is 2 hours
HRSA Service Category Definition: **RWGA Only**	***Substance abuse services outpatient*** is the provision of medical or other treatment and/or counseling to address substance abuse problems (i.e., alcohol and/or legal and illegal drugs) in an outpatient setting, rendered by a physician or under the supervision of a physician, or by other qualified personnel.
Local Service Category Definition:	Treatment and/or counseling HIV-infected individuals with substance abuse disorders delivered in accordance with State licensing guidelines.
Target Population (age, gender, geographic, race, ethnicity, etc.):	HIV-infected individuals with substance abuse disorders, residing in the Houston Eligible Metropolitan Area (EMA/HSDA).
Services to be Provided:	Services for all eligible HIV/AIDS patients with substance abuse disorders. Services provided must be integrated with HIV-related issues that trigger relapse. All services must be provided in accordance with the Texas Department of Health Services/Substance Abuse Services (TDSHS/SAS) Chemical Dependency Treatment Facility Licensure Standards. Service provision must comply with the applicable treatment standards.
Service Unit Definition(s): **RWGA Only**	**Individual Counseling:** One unit of service = one individual counseling session of at least 45 minutes in length with one (1) eligible client. **A single session lasting longer than 45 minutes qualifies as only a single unit** – no fractional units are allowed. Two (2) units are allowed for initial assessment/orientation session. **Group Counseling:** One unit of service = 60 minutes of group treatment for one eligible client. A single session must last a minimum of 2 hours. Support Groups are defined as professionally led groups that are comprised of HIV-positive individuals, family members, or significant others for the purpose of providing Substance Abuse therapy.
Financial Eligibility:	Refer to the RWPC's approved *Financial Eligibility for Houston EMA/HSDA Services.*
Client Eligibility:	HIV-infected individuals with substance abuse co-morbidities/ disorders.
Agency Requirements:	Agency must be appropriately licensed by the State. All services must be provided in accordance with applicable Texas Department of State Health Services/Substance Abuse Services (TDSHS/SAS) Chemical Dependency Treatment Facility Licensure Standards. Client must not be eligible for services from other programs or providers (i.e. MHMRA of

	Harris County) or any other reimbursement source (i.e. Medicaid, Medicare, Private Insurance) unless the client is in crisis and cannot be provided immediate services from the other programs/providers. In this case, clients may be provided services, as long as the client applies for the other programs/providers, until the other programs/providers can take over services. All services must be provided in accordance with the TDSHS/SAS Chemical Dependency Treatment Facility Licensure Standards. Specifically, regarding service provision, services must comply with the most current version of the applicable Rules for Licensed Chemical Dependency Treatment. Services provided must be integrated with HIV-related issues that trigger relapse. Provider must provide a written plan no later than 3/30/17 documenting coordination with local TDSHS/SAS HIV Early Intervention funded programs if such programs are currently funded in the Houston EMA.
Staff Requirements:	Must meet all applicable State licensing requirements and Houston EMA/HSDA Part A/B Standards of Care.
Special Requirements: **RWGA Only**	Not Applicable.

FY 2023 RWPC "How to Best Meet the Need" Decision Process

Step in Process: **Council**		Date: **06/09/2022**
Recommendations:	Approved: Y:_____ No: _____ Approved With Changes:_____	If approved with changes list changes below:
1.		
2.		
3.		

Step in Process: **Steering Committee**		Date: **06/02/2022**
Recommendations:	Approved: Y:_____ No: _____ Approved With Changes:_____	If approved with changes list changes below:
1.		
2.		
3.		

Step in Process: **Quality Improvement Committee**		Date: **05/03/2022**
Recommendations:	Approved: Y:_ ___ No: _____ Approved With Changes: _____	If approved with changes list changes below:
1.		
2.		
3.		

Step in Process: **HTBMTN Workgroup #2**	Date: **04/19/2022**
Recommendations:	Financial Eligibility:
1.	
2.	
3.	

FY 2020 PERFORMANCE MEASURES HIGHLIGHTS

RYAN WHITE GRANT ADMINISTRATION

HARRIS COUNTY PUBLIC HEALTH (HCPH)

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Highlights from FY 2020 Performance Measures

Measures in this report are based on the *2021-2022 Houston Ryan White Quality Management Plan*, *Appendix B. HIV Performance Measures*. The document can be referenced here: https://publichealth.harriscountytx.gov/Services-Programs/Programs/RyanWhite/Quality

Substance Abuse Treatment

- During FY 2020, 9 (50%) clients utilized primary medical care after accessing Part A substance abuse treatment services.
- Among clients with viral load tests, 89% were virally suppressed during this time period.

Ryan White Part A
HIV Performance Measures
FY 2020 Report

Substance Abuse Treatment
All Providers

HIV Performance Measures	FY 2019	FY 2020	Change
*A minimum of 70% of clients will utilize Parts A/B/C/D primary medical care after accessing Part A-funded substance abuse treatment services	17 (70.8%)	9 (50.0%)	**-20.8%**
80% of clients for whom there is lab data in the CPCDMS will be virally suppressed (<200)	19 (82.6%)	16 (88.9%)	**6.3%**
90% of clients will complete substance abuse treatment program	See data below		

***Overall, the number of clients who received primary care in FY 2020 was 11, with 9 receiving the services through Ryan White and 2 receiving the services through other insurance such as Medicare.**

Number of clients engaged in substance abuse treatment program during FY20: **18**

Number of clients completing substance abuse treatment program during FY20 (March 2020 to February 2021): **7**

Number of clients completing substance abuse treatment during FY20 who entered treatment in FY19: **3**

Number of FY20 substance abuse treatment clients who are receiving primary care through other insurance, such as Medicare: **2**

Number of FY20 clients engaged in substance abuse treatment who completed treatment after FY20: **2**

Substance Use Disorders and HIV (Last updated June 3, 2021; last reviewed June 3, 2021)

Key Considerations and Recommendations
• Substance use disorders (SUDs) are prevalent among people with HIV and contribute to poor health outcomes; therefore, screening for SUDs should be a routine part of clinical care (AII). • The most commonly used substances among people with HIV include alcohol, benzodiazepines, cannabinoids, club drugs, opioids, stimulants (cocaine and methamphetamines), and tobacco. • Health care providers should be nonjudgmental when addressing substance use with their patients (AIII). • People with HIV and SUDs should be screened for additional mental health disorders (AII). • People with HIV and SUDs should be offered evidenced-based pharmacotherapy (e.g., opioid agonist therapy, tobacco cessation treatment, alcohol use disorder treatment; see Table 16 below) as part of comprehensive HIV care in HIV clinical settings (AI). • Ongoing substance use is not a contraindication to antiretroviral therapy (ART) (AI). Persons who use substances can achieve and maintain viral suppression with ART. • Substance use may increase the likelihood of risk-taking behaviors (e.g., risky sexual behaviors), the potential for drug-drug interactions, and the risk or severity of substance-associated toxicities (e.g., increased hepatotoxicity or an increased risk of overdose). • Selection of antiretroviral (ARV) regimens for individuals who practice unhealthy substance and alcohol use should take into account potential adherence barriers, comorbidities that could impact care (e.g., advanced liver disease from alcohol or hepatitis viruses), potential drug-drug interactions, and possible adverse events associated with the medications (AII). • ARV regimens with once-daily dosing of single-tablet regimens, high barriers to resistance, low hepatotoxicity, and low potential for drug-drug interactions are preferred (AIII).
Rating of Recommendations: A = Strong; B = Moderate; C = Optional
Rating of Evidence: I = Data from randomized controlled trials; II = Data from well-designed nonrandomized trials or observational cohort studies with long-term clinical outcomes; III = Expert opinion

Background on Substance Use Disorders among People with HIV

Ending the HIV epidemic requires addressing substance use among people with HIV, which poses a barrier to optimal engagement in the HIV care continuum. Ongoing substance use may prevent an individual from being tested for HIV, initiating antiretroviral therapy (ART), or adhering to ART, and it may increase the frequency of behaviors that put a person at risk for HIV transmission. Substance use may increase the likelihood of risk-taking behaviors (e.g., risky sexual behaviors, needle sharing, and injection of substances), the potential for drug-drug interactions, and the risk or severity of substance-related toxicities (e.g., increased hepatotoxicity and increased risk of overdose). In the United States, the death toll for drug overdose (70,237 deaths in 2017)[1] now far exceeds the death toll for HIV (15,807 deaths in 2016).[2] As the drug overdose epidemic continues to expand, health care providers need to have a basic understanding of how to screen for and treat substance use disorders in persons with HIV in clinical settings.[3]

Substance use exists on a continuum from episodic use to a substance use disorder (SUD) with its concomitant negative consequences. Research on alcohol consumption has defined a threshold at which consumption does not reach a diagnosis of a SUD, but where the level of consumption is nonetheless hazardous to the person. This level of consumption has been defined as "hazardous drinking." A comparable category does not exist for other substances. The prevalence of substance use and SUDs is higher among people with HIV than among the general public,[4] and polysubstance use is common. This section will focus on the most commonly used substances among people with HIV: alcohol, benzodiazepines, cannabinoids, club drugs,[5] opioids, stimulants (cocaine and methamphetamines), and tobacco.

People with HIV may use more than one substance and may not be ready to consider reducing the use of substances or seeking treatment for SUDs. Polysubstance use occurs for multiple reasons, including to improve the euphoria associated with use (e.g., use of cocaine and heroin mixtures called "speedballs") and to reduce the adverse effects of a particular substance (e.g., the use of alcohol or benzodiazepines to reduce the anxiety caused by cocaine use).

Substance Use and Sexual Risk Taking

There is a growing body of literature describing the intersection of substance use and sexual risk taking ("chemsex"). This research highlights the impact of substance use on sexual risk behaviors; although there is no precise definition of "chemsex", studies have investigated the use of many different substances used to enhance sexual pleasure, decrease inhibitions related to particular sexual acts, and combat low self-esteem. In a retrospective study in a London sexual health clinic, individuals who disclosed substance use (463 of 1,734 patients) had higher odds of acquiring new HIV infection, bacterial sexually transmitted infections (STIs), and/or hepatitis C virus (HCV).[6] A much larger analysis using the European Men Who Have Sex with Men (MSM) Internet Survey, which collected data from 16,065 United Kingdom-based respondents, found that MSM who reported using methamphetamines or gamma-hydroxybutyrate (GHB) during the previous year were more likely to have gonorrhea infection than MSM who did not use these drugs, with odds ratios of 1.92 and 2.23, respectively.[7] These data emphasize the need to screen patients for substance use and STIs in clinical settings.

Screening for Substance Use Disorders

Screening for SUDs should be incorporated into the routine clinical care of all people with HIV. The following questions can be used to screen for drug or alcohol use: "How many times in the past year have you used an illegal drug or used a prescription medication for nonmedical reasons?" and "How many times in the past year have you had X or more drinks in a day?" (X is five for men and four for women).[8] Data are lacking on the appropriate threshold for alcohol use among transgender individuals, so until data clarifies the risks, providers should use the more conservative threshold of four drinks. Individuals with liver disease, including active HCV infection, should not consume alcohol. A positive response at least one time on either screen should prompt additional screening with other short, yet effective screening tools (see the Screening and Assessment Tools Chart from the National Institute on Drug Abuse). These tools can identify substance use and guide decisions on appropriate treatment interventions. There is currently not enough data to determine how often patients should be screened for SUDs; however, given the potential negative impact that SUDs may have on persons with HIV, it is advisable to ask these questions during every clinical visit.

Health care providers should be nonjudgmental when discussing substance use with their patients. Patients who experience stigma or who feel judged may not trust the health care provider's recommendations, may avoid returning to see that provider again, and may consequently have poorer health outcomes.[9] Language is one way in which stigma is communicated, and words such as "addict" and "dirty urine" convey a negative connotation. The Office of National Drug Control Policy (ONDCP), the American Medical Association, the American Society of Addiction Medicine, the International Society of Addiction Journal Editors, and others have recommended the adoption of clinical, non-stigmatizing language for substance use as described in the "Changing the Language of Addiction" report from ONDCP.

Co-Occurring Mental Illness

Many people who use substances have co-occurring mental health disorders, including a history of trauma that may drive and/or exacerbate their substance use. Conversely, ongoing use of substances can place individuals at risk of trauma, such as sexual assault and sexual exploitation, which may further exacerbate their substance use.[6,10] People with SUDs should undergo evaluation and treatment for concurrent mental health disorders using standardized screening instruments (e.g., the Patient Health Questionnaire-2 [PHQ-2] for depression).[11] Where applicable, clinicians should use available behavioral and pharmacological interventions to address mental health concerns, because recommending that patients stop their substance use without providing treatment for underlying mental health conditions has very limited efficacy.[11]

Several behavioral interventions have shown promise in randomized trials. Motivational interviewing, cognitive behavioral therapy, or a combination of the two have led to decreases in stimulant use, decreases in risky sexual behaviors, and improved adherence to ART.[12] Contingency management, a behavioral

intervention that provides rewards for abstinence, has been shown to be effective in decreasing stimulant use among people with HIV, but whether decreases in stimulant use are sustained over time is less clear.[13]

Selecting, Initiating, and Maintaining Antiretroviral Therapy

Ongoing substance use is not a contraindication to having ART prescribed. Indeed, ART reduces the risk of HIV transmission to sexual partners and to individuals who share drug paraphernalia. These clinical, community, and individual benefits should encourage health care providers to initiate ART in people with HIV who use substances, and for those with SUDs.

When selecting antiretroviral (ARV) regimens for individuals who use substances, clinicians should consider potential barriers to adherence (see Adherence to the Continuum of Care), co-morbidities that could impact care (e.g., advanced liver disease from alcohol or HCV), potential drug-drug interactions, and possible adverse events that are associated with the medications. Providers should discuss adherence with their patients during multiple, nonjudgmental evaluations. In general, the use of simplified ARV regimens should be considered to aid ART adherence. Regimens for people with SUDs should be easy to take, such as a once-daily, single-tablet regimen,[14] and should have a high barrier to resistance or a low risk of hepatotoxicity. Adherence counseling should highlight the benefits of ART use, irrespective of concurrent substance use. Additionally, a reduction in substance use may improve adherence to ART.[15]

The development of long-acting injectable (LAI) antiretrovirals provides additional options for patients on ART. The combination of injectable cabotegravir (CAB) and rilpivirine (RPV) is an optimization option for patients who demonstrate retention in HIV care and who are virologically suppressed on oral therapy (see Optimizing Antiretroviral Therapy in the Setting of Virologic Suppression). Current research on these medications is limited to individuals with expected good adherence and an ability to achieve virologic suppression on oral therapy prior to starting LAIs. To date, little research has examined the use of these medications to support individuals struggling with adherence. Specifically, data on the use of CAB and RPV to improve medication adherence for people who actively use substances and/or have SUDs are currently lacking. LAI anti-psychotics have been studied in people with schizophrenia and SUDs. Starr and colleagues, for example, found fewer treatment failures using a once-a-month injectable paliperidone when compared to an oral anti-psychotic regimen.[16] The use of LAIs, however, presents unique concerns in people with HIV and SUDs, given the potential for the emergence of HIV drug resistance if there is reduced adherence to or delay in receiving scheduled injections.

The following factors should be considered when contemplating the use of LAIs in people with HIV and SUDs.

- As with all treatment conversations, providers should discuss adherence with their patients during multiple, nonjudgmental evaluations.
- Providers and people with HIV should consider the impact of using LAIs in the context of current or past substance use behaviors. While some people may welcome or even prefer LAIs,[17] one qualitative study highlighted that some people who either currently inject or previously injected substances may find that LAIs are a trigger for the injection of illicit substances.[18]
- Studies utilizing LAIs have included individuals with good adherence prior to starting the LAIs, but this should not exclude people with SUDs who are struggling with adherence from being considered for LAIs. Rather, the clinical team should consider what additional support may be needed to help people with SUDs to be successful with LAIs. Some people with HIV may benefit from the administration of LAI in conjunction with methadone for the treatment of opioid use disorder, given anticipated adherence with methadone clinic visits. Case management, patient navigators, and/or peer navigators should be considered to help patients return for follow-up injections.
- Given the often unpredictable lifestyles of people with SUDs, clinical care teams should be flexible in scheduling patients for injections or accommodating walk-ins for injections.

- Patients with hepatitis B virus (HBV) have not been studied with CAB and RPV, since these patients would need oral agents for HBV treatment. People with HIV should be screened for HBV infection and vaccinated prior to consideration of CAB/RPV, if not already immune or infected.
- Depressive disorders have been associated with CAB and RPV, so patients with SUD should be screened for depressive disorders and treatment for depression initiated if indicated. If depressive disorders worsen while on CAB and RPV, patients should be reevaluated to determine whether continued therapy with this regimen is advisable.

Importantly, there are multiple knowledge gaps regarding the use of LAIs among people with HIV and SUDs. The results from the ongoing Long-Acting Therapy to Improve Treatment Success in Daily Life (LATITUDE) Study (NCT 03635788) will provide needed information on using LAIs among people with HIV and SUDs who have struggled with ART adherence.[19] Additional research is needed to determine optimal methods to support ART adherence (including LAI adherence) among people with HIV and SUDs. These research studies will need to take into consideration the combination of various interventions (e.g., peer support, case management, pharmacotherapy for SUDs, etc.) and the appropriate individual interventions needed to support overall ART adherence.

Commonly Used Substances and Their Impact on HIV and Antiretroviral Therapy

Health care providers should have a basic understanding of evidence-based treatments for SUDs, including alcohol, benzodiazepines, cannabinoids, club drugs, opioids, stimulants (cocaine and methamphetamines), and tobacco. The sections below discuss the impact of these substances on people with HIV and how these substances affect ART use.

Alcohol

Epidemiology

Alcohol consumption is common among people with HIV. Recent estimates indicate that >50% of people with HIV in the United States consume any amount of alcohol (range, 54% - 67%).[20, 21] Among a sample of people with HIV across seven university-based HIV clinics in the United States, 27% of people screened positive for unhealthy alcohol use as determined by the Alcohol Use Disorders Identification Test-Consumption (AUDIT-C).[21] Unhealthy alcohol use includes a spectrum of consumption, including risky or hazardous use, heavy episodic use (binge drinking), and alcohol use disorder (AUD).[22]

Risk-Taking Behaviors, the HIV Care Continuum, and Comorbidities

Unhealthy alcohol use has been linked to HIV acquisition, because it can increase the frequency of behaviors that put a person at risk for sexual transmission of HIV.[23-25] In a meta-analysis of 27 studies, any alcohol use, unhealthy alcohol use, and alcohol use in sexual contexts were all associated with condomless sex among people with HIV.[24]

In addition, unhealthy alcohol use has been associated with interruptions in all steps of the HIV care continuum, including lower adherence to ART.[26, 27] Studies have demonstrated both temporal and dose-related relationships between alcohol use and adherence, where ART is more likely to be missed on a given drinking day and the day after drinking, with a stronger association on heavy (binge) drinking days.[28-30] The negative impact of unhealthy alcohol use on ART adherence is likely multifactorial and driven by the effects of intoxication, ARV regimen complexity, and patient perceptions of adverse interactions between alcohol and ARV drugs.[31-33] Studies have also demonstrated an association between unhealthy alcohol use and the loss of durable viral suppression,[34, 35] greater time spent with a viral load >1,500 copies/mL after ART initiation,[36] increased risk of viral rebound, lower retention in care,[37,38] and increased mortality.[39-41] Unhealthy alcohol use alone (hazardous or AUD) and in combination with other common comorbidities, including viral hepatitis coinfection, can hasten liver fibrosis progression in people with HIV.[42, 43] Finally, in general medical populations, unhealthy alcohol use complicates the management of diabetes mellitus, hypertension, mental health disorders, other substance use, and other chronic diseases, and it increases the

risk for pneumonia, osteoporosis, a number of cancers (e.g., liver, head and neck, and breast cancers), and tuberculosis.

Management of Unhealthy Alcohol Use

Ongoing alcohol use is not a contraindication for a person to receive ART. However, treatment for unhealthy alcohol use may improve HIV treatment outcomes. Behavioral treatments for unhealthy alcohol use among people with HIV demonstrate a small but significant reduction in alcohol use[44] (see additional resources for alcohol management from the National Institute on Alcohol Abuse and Alcoholism and the Substance Abuse and Mental Health Services Administration [SAMHSA]). Pharmacotherapy can also reduce alcohol use among people with HIV. There are three Food and Drug Administration (FDA)-approved pharmacotherapies for AUD: naltrexone, disulfiram, and acamprosate (see Table 16 below).

Clinical trials have demonstrated the efficacy of naltrexone in reducing the number of heavy drinking days among those with HIV and among the general population. Naltrexone appears to be safe to use in people with HIV,[45, 46] and it is not associated with significant drug-drug interactions or irreversible hepatotoxicity. However, it is not recommended for individuals with decompensated liver disease and should be used with caution in individuals with elevated transaminase levels. Use of naltrexone in people with HIV and AUD can improve HIV treatment outcomes. In a randomized placebo-controlled trial of 100 prisoners with HIV who met the criteria for AUD, individuals who were provided depot naltrexone upon release from prison were more likely to achieve viral suppression at 6 months than the placebo group (56.7% vs. 30.3%).[46]

Data on the use of disulfiram and acamprosate among people with HIV are lacking. Notably, integrating treatment for AUD with treatment for HIV has been shown to increase the number of patients who receive alcohol treatment medication, counselling, and formal outpatient alcohol treatment services. Integrating these treatments may also improve the likelihood that a patient will achieve viral suppression on ART. A randomized controlled trial of 128 individuals with HIV and AUD compared an integrated stepped-care model of alcohol treatment in Veterans Administration HIV clinics to treatment as usual. At the end of treatment (24 weeks), integrated stepped care resulted in more participants receiving pharmacotherapy for AUD and participating in counseling. Though differences in alcohol use and viral suppression were not seen at 24 weeks, at 52 weeks, integrated stepped care was significantly associated with an increased number of alcohol abstinent days, a decrease in the number of drinks per drinking day, and a decreased number of heavy drinking episodes. In addition, the patients in the stepped care group had increased odds of achieving viral suppression (odds ratio [OR] 5.58; 95% confidence interval [CI], 1.11–27.99).[47]

Liver cirrhosis, whether related to chronic heavy alcohol use, viral hepatitis, or nonalcoholic fatty liver disease, can result in altered metabolism of ARV drugs. For those who have hepatic impairment due to alcohol-related liver disease, ART dosing should follow the recommendations in Appendix B, Table 10, which are based on Child-Pugh classifications.

Benzodiazepines

Epidemiology

While specific epidemiologic data on the prevalence of benzodiazepine use among people with HIV are limited, the use of benzodiazepines can impact both morbidity and mortality. Benzodiazepines cause anterograde amnesia, defined as difficulty recalling events after taking the medication. Individuals do not develop tolerance to this neurocognitive effect, and long-term use of benzodiazepines may result in impairment of neurocognitive functioning.[48]

Risk-Taking Behaviors and the HIV Care Continuum

People who inject drugs and who also use benzodiazepines engage in riskier behaviors than the people who inject drugs but do not use benzodiazepines; these behaviors may include paying for sex, sharing injection

equipment with more people, and performing more frequent injections.[49] A cohort of 2,802 people who injected drugs was followed from 1996 to 2013. During that time, benzodiazepines were the substances with the greatest association with mortality.[50] The long-term neurocognitive impact of benzodiazepines on ART adherence among people with HIV is unclear, but prescribing a memory-impairing medication to people with HIV who are prone to neurocognitive impairments from other causes may increase the risk of poor ART adherence.[51] Benzodiazepines are also used illicitly to counteract the negative side effects of stimulants, such as cocaine and methamphetamine.[52]

Management of Benzodiazepine Use

Repeated use of benzodiazepines can result in physiologic dependence and life-threatening withdrawal in some patients. When feasible, individuals who chronically take benzodiazepines should be slowly tapered off the benzodiazepines under the supervision of an experienced clinician. Different benzodiazepines have different potencies (e.g., alprazolam is more potent than diazepam) and therefore require different tapers in terms of length and graduated decrease in dosage.

Benzodiazepine and Antiretroviral Drug Interactions

Several pharmacological interactions with ARV drugs have also been described. For example, some benzodiazepines are cytochrome P (CYP) 3A4 substrates; thus, when these benzodiazepines are used with a ritonavir-boosted or cobicistat-boosted ARV drug, their half-lives and concentrations can increase significantly, leading to enhanced and prolonged sedating effects. See Drug-Drug Interactions for available data on benzodiazepine-related interactions.[53]

Cannabis and Cannabinoids

Epidemiology

Both medical and recreational cannabis (marijuana) use are prevalent among people with HIV.[54] Cannabis belongs to a class of compounds that activate cannabinoid receptors. This class, known as cannabinoids, also includes synthetic compounds, such as K2. In recent years, cannabinoids have become more popular. In 2009, two cannabinoids were reported to the National Forensic Laboratory Information System. By 2015, 84 compounds had been reported.[55] These compounds most commonly cause tachycardia, agitation, and nausea, but they have a wide range of psychiatric effects, including psychosis and paranoia.[56]

Risk-Taking Behaviors and the HIV Care Continuum

Cannabis has not been shown to negatively impact adherence to ART or a patient's ability to achieve viral suppression. In one study, among 874 people with HIV, daily cannabis use did not predict lower odds of ART use or achieving an undetectable HIV RNA level, except when combined with binge drinking.[57] Data from the Multicenter AIDS Cohort Study have supported the idea that marijuana use does not predict problems with adherence to ART or achieving viral suppression.[58] In some cases, however, cannabinoids have been listed as the cause of death in overdoses. While data are lacking among adults with HIV, the nationally representative 2015 Youth Risk Behavior Survey (which includes data from 15,624 adolescent students in Grades 9 to 12) found that students who had ever used synthetic cannabinoids engaged in riskier activities, including sex, than students who only used marijuana.[59] While the available data suggest that the use of marijuana is not associated with decreased adherence to ART,[60] data are currently lacking on the impact of synthetic cannabinoids on ART adherence. Finally, with the growing use of synthetic cannabinoids, there is concern that fentanyl could be added to these products, which may increase the risk of opioid overdose.

Management of Cannabis and Cannabinoid Use

Due to the aforementioned concerns regarding cannabinoid use, particularly the variety of compounds and neuropsychiatric effects, people with HIV should be discouraged from using cannabinoids until more data are available. There is no pharmacological treatment for cannabinoid use disorder; however, behavioral health treatment may be effective for some patients.[61-63]

Club Drugs

Epidemiology

Club drugs are recreational substances that have euphoric or hallucinogenic effects or that are used to enhance sexual experiences.[5] The use of multiple club drugs or other drugs simultaneously is common. While these substances are used by many different people with HIV, the majority of data comes from MSM with HIV. Use of club drugs in this population has been shown to negatively impact HIV treatment.[64] Club drugs include methylenedioxymethamphetamine (MDMA), GHB, ketamine, benzodiazepines (see the benzodiazepine section above), and other drugs that are used to enhance sexual experiences (e.g., mephedrone, inhaled nitrates [poppers], and phosphodiesterase-5 inhibitors [PDE5] for erectile dysfunction). Survey data from users of club drugs have also revealed that efavirenz is purchased by people without HIV for its intoxicating effects.[65]

Risk-Taking Behaviors and the HIV Care Continuum

Club drugs have disinhibitory effects. Using club drugs increases the likelihood that a person will engage in high-risk sexual practices, which can increase the risk of HIV transmission. In addition, these disinhibitory effects can lead to poor ART adherence.[53, 64, 66]

Management of Club Drug Use

Treatment strategies for club drug use have not been well studied in controlled trials.[67] There are no recommended pharmacotherapies at this time, and the most common strategy for treating patients who use club drugs is to employ the behavioral interventions that are used for other drug use disorders.

Club Drug and Antiretroviral Drug Interactions

MDMA, GHB, ketamine, and methamphetamine all have the potential to interact with ARV drugs, because they are metabolized, at least in part, by the CYP450 system.[53, 66] Overdoses secondary to interactions between club drugs (i.e., MDMA or GHB) and protease inhibitor-based ART have been reported.[53] For instance, using PDE5 or ketamine concurrently with potent CYP3A4 inhibitors, such as ritonavir or cobicistat, can lead to potentiation of the effects of these substances.[64]

Cocaine

See the discussion in the section on stimulants below.

Opioids

Epidemiology

Opioids remain a significant concern for people with HIV, both for the acquisition of HIV and as major contributors to morbidity and mortality. Overdose involving opioids is the leading cause of accidental death in the United States.[68] The appropriate use of opioids while caring for people with HIV and chronic pain is an important component of combating the opioid epidemic, but this subject is beyond the scope of this section. Please refer to additional resources, such as those from the Centers for Disease Control and Prevention (CDC) and the Infectious Diseases Society of America.[69] To combat the opioid overdose epidemic, health care providers should prescribe naloxone for opioid overdose prevention for all patients who are using opioids beyond the short-term treatment of acute pain.[3]

Risk-Taking Behaviors and the HIV Care Continuum

Many people who use opioids start by using opioid tablets (e.g., oxycodone) that are ingested orally or crushed and sniffed. Once tolerance develops, some individuals move from sniffing the crushed tablets to injecting heroin purchased on the streets. This transition from sniffing to injecting dramatically increases the risk of HIV and HCV infection.

Low-cost heroin is often a mix of heroin and higher potency synthetic opioids, such as fentanyl.[68] Methamphetamines and cocaine have also been combined with fentanyl but at a lower rate than heroin.[70,

[71] With the growing use of synthetic cannabinoids, there is concern that fentanyl could be added to these as well. In all instances where fentanyl or other high-potency opioids are added to other drugs, the risk of overdose increases.

While treatment for an opioid use disorder can improve HIV treatment outcomes, it is not a prerequisite for treating HIV, as some patients are able to successfully adhere to ART despite ongoing opioid use. Although ART coverage among people with HIV who injected drugs increased from 58% to 71% between 2009 and 2015, additional work is needed to improve ART coverage in this population.[72] Data from the Johns Hopkins HIV Clinical Cohort (2001–2012) demonstrated that in the early years of the cohort, people who injected drugs were less likely to be retained in care; however, this gap in retention had closed by 2012, and people who injected drugs and noninjectors had similar probabilities of being on ART and having a suppressed viral load during the later years of the cohort.[73]

Management of Opioid Use

There are three FDA-approved medications for the treatment of opioid use disorder that can help decrease or eliminate opioid use, reduce the risks of morbidity and mortality that are associated with opioid use, and improve HIV treatment success. These medications, collectively termed medication-assisted treatment (MAT), include buprenorphine, methadone, and naltrexone (see Table 16 below). Buprenorphine and methadone are opioid agonists (the use of these drugs is termed opioid agonist therapy [OAT]), while naltrexone is an opioid-antagonist or "blocker." Both buprenorphine and naltrexone can be prescribed in the setting of routine HIV clinical care.[74] Prescribing buprenorphine requires specific training and licensure (known as an X-waiver; see the SAMHSA website for more information). Methadone must be prescribed through a licensed opioid treatment program (OTP). An OTP directory can also be found on the SAMHSA website.

Use of buprenorphine or methadone can lead to reductions in risky behaviors associated with HIV transmission, psychosocial and medical morbidity related to opioid use disorder, and criminal behaviors. People who are receiving treatment for opioid use are already engaging with the health care system; therefore, they are more likely to initiate treatment for HIV and to be adherent to their ARV regimens. Both buprenorphine and methadone are cost-effective interventions at the societal level.[75] Methadone has better retention in SUD treatment than either buprenorphine or naltrexone, and it should be considered for individuals who do not achieve successful outcomes with buprenorphine or naltrexone.[76] Buprenorphine has a lower risk of overdose than methadone. In addition, it can be prescribed in primary care offices. Patients who are taking buprenorphine have significantly better retention in treatment than those who are taking daily oral naltrexone.[77] While several randomized, controlled clinical trials have demonstrated efficacy for naltrexone when treating opioid use disorder, subsequent study results have been disappointing; one meta-analysis revealed that oral naltrexone was equivalent to placebo.[78] To address the adherence challenges with naltrexone, a depot formulation was created for monthly administration. This preparation has the potential to improve adherence; however, studies that compare opioid agonists, such as buprenorphine and methadone, to depot naltrexone as treatments for opioid use disorder have not been conducted. In a randomized, placebo-controlled trial in people with both HIV and opioid use disorder, participants who received at least three doses of depot naltrexone prior to discharge from prison achieved longer periods of continuous abstinence after transitioning from prison to the community than those who received either placebo or two or less doses of depot naltrexone.[46] On the basis of these data, methadone or buprenorphine are generally used as first-line agents for the treatment of opioid use disorder. Depot naltrexone is used as an alternative treatment for people who have recently been released from correctional facilities when other options are not available.

Important pharmacokinetic interactions between these medications (particularly methadone) and certain ARV drugs are listed in Drug-Drug Interactions.

Stimulants

Epidemiology

Cocaine and methamphetamine are powerful stimulants that have been associated with multiple detrimental effects to people with HIV, including accelerated disease progression, poor ART adherence, and lack of viral suppression. Cocaine powder is snorted or injected, while the free-base form (crack) is smoked. Methamphetamines can be taken orally or rectally, injected, or smoked. Cocaine and methamphetamine are commonly used with other substances, including alcohol, and can be combined with fentanyl, which increases the risk of overdose.[70, 71] Individuals who use stimulants experience a sense of euphoria and may have heightened sexual desire and arousal. This can lead to disinhibited sexual behaviors, increasing the risk of HIV transmission.

The prevalence of stimulant use among people with HIV has been estimated to be 5% to 15% across multiple studies.[79-81] Methamphetamine use is more common among MSM,[82] and increased rates of cocaine use have been observed among ethnic and racial minorities and persons with a history of incarceration.[83]

Risk-Taking Behaviors and the HIV Care Continuum

There are multiple negative health consequences of stimulant use among people with HIV, including rapid development of dependence and adverse effects on multiple organ systems, particularly the central nervous and cardiovascular systems. Stimulant use is associated with neurocognitive impairment,[84] delirium, seizures, hemorrhagic strokes, and mental health disturbances, including anxiety, psychosis, and paranoia.

Stimulant use may independently lead to HIV disease progression even among persons who are taking ART and who have achieved viral suppression. Research to identify the cellular mechanisms responsible for this is ongoing, but increased viral replication, direct effects on the immune system that lead to declines in CD4 T lymphocyte cell count, enhanced immune activation, and disruption of the blood brain barrier that facilitates HIV entry into the brain have been implicated.[85-88] Stimulant use has been associated with poor HIV continuum of care outcomes, including suboptimal rates of ART adherence, retention in care, and viral suppression. Lack of viral suppression, combined with the increased likelihood of risky sexual behaviors that occur under the influence of stimulants, poses a threat to the HIV treatment-as-prevention paradigm.[89]

Management of Stimulant Use

Several pharmacologic and behavioral interventions for stimulant dependence have been investigated, and some trials have included people with HIV. The results of pharmacologic interventions have generally been disappointing. There is no FDA-approved pharmacotherapy for cocaine use disorder at this time, despite research on multiple drug classes, including antidepressants, antipsychotics, anticonvulsants, and dopaminergic medications (e.g., disulfiram).[90, 91] Among people with HIV who use crack and opioids, MAT for opioid use disorder may improve ART adherence and viral suppression.[92, 93] There is limited evidence that some pharmacologic interventions (e.g., methylphenidate, modafinil, bupropion, naltrexone)[94] can reduce methamphetamine use or cravings. A double-blind, placebo-controlled trial of extended-release injectable naltrexone plus oral extended-release buproprion in adults with moderate or severe methamphetamine use disorder demonstrated a higher response of urine samples free of methamphetamines compared to placebo (weighted average response of 13.6% with naltrexone-buproprion and 2.5% with placebo, $P < 0.001$); however, the overall response rate was low.[95] There is no recommended pharmacotherapy to treat stimulant use disorder in people with HIV.

Several behavioral interventions have shown promise in randomized trials. People with HIV who received motivational interviewing sessions, cognitive behavioral therapy, or a combination of the two decreased their stimulant use and improved their adherence to ART, and they were less likely to engage in risky sexual behaviors.[12] Contingency management has been shown to be effective in decreasing stimulant use among people with HIV, but the sustained effects on the reduction of stimulant use and improvements in ART adherence are less clear.[13, 80, 96] Technology-based interventions, such as text messaging, may have a role

in supporting ART adherence and decreasing methamphetamine use among people with HIV, but further research is needed.[97] People with HIV who use stimulants benefit most from multidimensional interventions that target substance use, ART adherence, and risky sexual behaviors.[12]

Despite the challenges discussed above, people with HIV who use stimulants can achieve viral suppression with ART[98] and should be prescribed ART even if stimulant use is ongoing.

Tobacco

Epidemiology

The prevalence of tobacco smoking among people with HIV in the United States is approximately twice that of the general population (33.6% vs. 16.8%).[99] Prevalence is even higher among specific subgroups, including those who use alcohol and/or other drugs, those who have concurrent mental health disorders, and those of a lower socioeconomic status. While smoking rates are declining overall in the United States, people with HIV are less likely to quit smoking than people in the general population.[99]

Associated Risks of Tobacco Use and HIV Infection

With respect to substance use and HIV, tobacco smoking is the biggest threat to health-related gains achieved through ART. Among individuals with viral suppression on ART, more years of life may be lost from continued smoking than from HIV infection itself.[100, 101] Tobacco smoking among people with HIV is associated with an increased risk of numerous health conditions, including lung cancer and other smoking-related cancers, cardiovascular disease, and pulmonary disease. In a sample of 17,995 people with HIV on ART in Europe and North America, individuals who smoked had nearly twice the mortality of those who did not (mortality rate ratio 1.94; 95% CI, 1.56–2.41) with significant mortality attributed to cardiovascular disease and non-AIDS-related malignancy.[100] Importantly, tobacco cessation reduces the incidence of cardiovascular disease and smoking-related cancers (though definitive data on lung cancer are not available) and improves quality of life.[102-104]

Managing Tobacco Use

To maximize the survival benefits of ART, clinicians should consider using evidence-based behavioral and pharmacological[105-107] cessation strategies when treating patients with HIV who smoke tobacco (see the tools and recommendations provided by the CDC and the U.S. Preventative Services Task Force). These include (but are not limited to) advising the patient to quit smoking, using the five A's, employing motivational interviewing, and referring the patient to a tobacco quitline. Pharmacotherapies for smoking cessation (nicotine replacement therapy, bupropion, and varenicline) have few clinically significant interactions with ARV drugs and can lead to enormous reductions in morbidity and mortality if the person is able to stop smoking. Nicotine replacement is efficacious;[108] however, bupropion doubles rates of smoking cessation compared with nicotine replacement therapy.[109] Varenicline is a partial nicotine receptor agonist. In comparative studies, varenicline was more effective than bupropion in smoking cessation.[109, 110] Clinical trials among people with HIV have found varenicline to be both effective and safe.[105, 107] In a recent randomized controlled trial among 179 individuals with HIV who were randomized to receive 12 weeks of behavioral counseling and either varenicline or placebo, varenicline use led to an increase in the percentage of participants who achieved a 7-day abstinence period at 12 weeks (28.1% vs. 12.1%, OR 4.5; 95% CI, 1.83–11.2) and produced higher continuous abstinence between weeks 9 and 12 (23.6% vs. 10%, OR 4.65; 95% CI, 1.71–12.67) compared to placebo.[107] While significant between-group differences were not observed after 24 weeks, these data support the use of varenicline among people with HIV. Varenicline should be used in combination with relapse prevention strategies and other measures for long-term tobacco cessation.

Table 16. Medications for Treatment of Substance Use Disorders

Medication	Dose and Recommendations	Potential Interaction with ARV Drugs	Comments
Alcohol Use Disorder			
Acamprosate	666 mg PO three times a day *or* 333 mg PO three times a day for patients with CrCl 30–50 mL/min	No significant interaction with ARV drugs expected.	Contraindicated in patients with CrCl <30 mL/min.
Disulfiram	250 mg PO once daily	Use with caution when prescribing an ARV oral solution that contains ethanol and/or propylene glycol (e.g., FPV, LPV/r, RTV).	Counsel patients regarding disulfiram reaction when taken with alcohol; symptoms for the reaction may include flushing, tachycardia, nausea, vomiting, or hypotension.
Naltrexone	50–100 mg PO once daily Depot formulation is a fixed-dose monthly injection.	No significant interaction with ARV drugs expected.	Has the greatest efficacy of all FDA-approved medications for alcohol use disorder.
Opioid Use Disorder			
Buprenorphine	Individualize buprenorphine dosing based on a patient's opioid use. The dose range is 4–24 mg sublingually. Dosing is once daily or twice daily.	Potential interaction with ARV drugs that are CYP inhibitors or inducers. See Drug-Drug Interactions for further recommendations.	Buprenorphine has 90% first pass hepatic metabolism. Verify that the patient is using the appropriate technique for sublingual administration before adjusting the dose, as improper administration will result in poor absorption and low drug levels.
Methadone	Individualize dose. Patients who receive higher doses (>100 mg) are more likely to remain in treatment.	Potential interaction with ARV drugs that are CYP inhibitors or inducers. See Drug-Drug Interactions for further recommendations.	QTc prolongation is a concern at higher doses. Methadone can only be prescribed for OUD by a licensed OTP.
Naltrexone	50–100 mg PO once daily Depot formulation is a fixed-dose monthly injection.	No significant interaction with ARV drugs expected.	Longer time of continuous abstinence in those who received depot formulation naltrexone compared to placebo after transition from prison to community.
Nicotine Use Disorder			
Nicotine Replacement Therapy	There are a wide variety of FDA-approved nicotine replacement products. All formulations are effective.	No significant interaction with ARV drugs expected.	Work with the patient to identify the route of delivery that the patient will use and find most helpful.
Bupropion	Start at 150 mg PO daily for three days, then increase to either 150 mg twice daily or 300 mg once daily (only use formulations that are approved for once daily dosing).	Concentration may be reduced when used with ARV drugs that are CYP2D6 inducers. See Drug-Drug Interactions for further recommendations.	Tobacco quit date should ideally be 1 week after starting therapy.
Varenicline	Titrate dose based on tolerability until desired effect is achieved. The goal is to reach a dose of 1 mg PO twice daily. Requires dose adjustment in patients with CrCl <30 mL/min.	No significant interaction with ARV drugs expected.	Tobacco quit date should ideally be 1 week after starting therapy.

Key: ARV = antiretroviral; CrCl = creatinine clearance; CYP = cytochrome P; FDA = Food and Drug Administration; FPV = fosamprenavir; LPV/r = lopinavir/ritonavir; OUD = opioid use disorder; OTP = opioid treatment program; PO = orally; RTV = ritonavir;

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AIDS and Behavior
https://doi.org/10.1007/s10461-020-02976-1

ORIGINAL PAPER

Potential Influences of the COVID-19 Pandemic on Drug Use and HIV Care Among People Living with HIV and Substance Use Disorders: Experience from a Pilot mHealth Intervention

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Abstract

People living with HIV (PLWH) and substance use disorder (SUD) are particularly vulnerable to harmful health consequences of the global COVID-19 pandemic. The health and social consequences of the pandemic may exacerbate substance misuse and poor management of HIV among this population. This study compares substance use and HIV care before and during the pandemic using data collected weekly through an opioid relapse prevention and HIV management mobile-health intervention. We found that during the pandemic, PLWH and SUD have increased illicit substance use and contact with other substance-using individuals and decreased their confidence to stay sober and attend recovery meetings. The proportion of people missing their HIV medications also increased, and confidence to attend HIV follow-up appointments decreased. Optimal support for PLWH and SUD is critical during pandemics like COVID-19, as drug-related and HIV antiretroviral therapy (ART) non-adherence risks such as overdose, unsafe sexual behaviors, and transmission of infectious diseases may unfold.

Keywords HIV · COVID-19 · Substance use disorder · Mobile-health intervention

Resumen

Personas con VIH y con trastornos por abuso de sustancias son más vulnerable a las consecuencias de la pandemia: COVID-19. Dentro estas poblaciones, las consecuencias sociales y de la salud, causadas por la pandemia, pueden exacerbar el mal uso de las sustancias, y la adherencia a los antiretrovirales. Este estudio compara el abuso de sustancias y el cuidado del VIH, antes y durante la pandemia, usando datos colectados semanal de otro programa que también investigo la prevención entre personas que han recaído con el uso de opioides y que tienen VIH. Nuestro análisis encuentra, que durante la pandemia, incrementaron el uso de sustancias ilícitas, y contacto con otras personas que usan sustancias, y perdieron la capacidad de mantenerse sobrios, y tambien dejaron de asistir reuniones de recuperación/apoyo. También, el porcentaje de personas con VIH no siguiendo con sus planes de tratamiento de VIH, incrementó; perdieron su motivacion en mantener sus citas médicos. Es muy crítico, durante una pandemia como COVID-19, tener recursos para personas que pertenecen a estas poblaciones, si no, casos de sobredosis, sexo sin protección y la transmisión de enfermedades infecciosas van a prevaler.

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Published online: 23 July 2020

Introduction

On March 11, 2020, the World Health Organization (WHO) declared COVID-19 a global pandemic [1]. COVID-19 is an illness caused by a novel betacoronavirus, SARS-CoV-2, which typically causes common cold symptoms and may cause severe pneumonia, respiratory failure, and even death [2]. Infection was first reported in late 2019 in Wuhan, China [3] and has since then spread rapidly across the globe from person to person through respiratory droplets [2].

Millions of Americans are experiencing the detrimental effects of this health, economic, and social crisis. Among the various marginalized communities who already suffer significant social and economic disadvantages and often live with poverty, health inequities, and other burdens are people living with HIV (PLWH) [4–6]. As the COVID-19 pandemic increases stress, anxiety, fear, sadness, and loneliness, PLWH, who are already disproportionately burdened by mental illness [7], are particularly vulnerable to worsening mental health. Conditions may be especially exacerbated among PLWH who have other medical comorbidities or poorly managed HIV (e.g. a low CD4 cell count or high viral load), and are more susceptible to severe illness from COVID-19 [8]. Poor mental health and social isolation are both strong risk factors for substance use disorders (SUDs), which also disproportionately affects PLWH [9, 10]. Increased substance use, which is highly correlated with risky sexual behavior and antiretroviral therapy (ART) non-adherence, has many dangerous consequences including overdose death and transmission of HIV and other blood borne diseases [11–15]. Therefore, it is important to monitor substance use behaviors among PLWH during the COVID-19 pandemic to prevent drug-related risks.

Medical providers and public health services have taken drastic measures to prevent the spread of COVID-19, including canceling face-to-face visits and even closing clinics altogether. Mobile-health applications may provide a useful tool to collect data and retain PLWH and SUD in care during pandemics like COVID-19. Prior to the introduction of COVID-19, an existing mobile-health application, called A-CHESS, was implemented among PLWH and SUDs in Wisconsin to reduce substance use and improve HIV outcomes. The A-CHESS platform, described in detail elsewhere [16], was developed by the Center for Health Enhancement System Studies at the University of Wisconsin-Madison to support people with opioid use disorders. Key features of A-CHESS include public and private discussion forums, cognitive behavioral therapy boosters, games and relaxation activities to distract from cravings, hepatitis C virus and HIV educational information, and more [16, 17]. The goals of this ongoing pilot project are to tailor the A-CHESS application to meet the complex needs of PLWH and SUD and test the effectiveness among this population. The aims of this paper are to determine whether (1a) substance use, including alcohol, marijuana, and other illicit substances, and (1b) precursors to substance use, including confidence to stay sober, recovery support meeting attendance, and being around other people using drugs, have increased and (2a) HIV ART adherence and (2b) confidence to attend their next HIV appointment have decreased during the COVID-19 pandemic among PWLH and SUD enrolled in this pilot project.

Methods

Overview

Research coordinators identified PLWH and SUD who were at high risk for treatment failure at HIV clinics in Wisconsin through provider referrals and by reviewing clinic's administrative databases. Enrollment began March 2019 and ended March 2020. Study participants have access to all A-CHESS support tools and are delivered brief surveys weekly to assess their general health status, mood, social support, drug use, and ART adherence for 12 months.

Setting and Timeline

Wisconsin is among the many regions heavily impacted by COVID-19, changing everyday lives as the sequence of events unfolded in early 2020. On February 5, the first case of COVID-19 was detected in Wisconsin. As the number of confirmed cases rose to seven on March 12, the governor of Wisconsin declared a State of Emergency. The next day, on March 13, he ordered all public and private K-12 schools to close by March 18. That same day, the President of the United States addressed the nation and declared the pandemic a national emergency. As confirmed cases in Wisconsin reached 72 on March 17, the governor announced a statewide ban on all gatherings with more than 10 people, and 1 week later, on March 24, a 'Safer at Home' order went into effect, ordering the closure of all non-essential businesses and urging citizens to stay at home to reduce the spread of COVID-19. As of May 4th, 2020, there were 8599 confirmed cases state-wide, but health officials warn that many more people are likely infected [18].

This study compares drug and alcohol use and HIV care reported on weekly surveys completed 6 weeks prior to a State of Emergency being declared in Wisconsin, from January 31 to March 12, to surveys completed 6 weeks after the 'Safer at Home' order went into effect, from March 24 to May 4. All weekly surveys completed during the period

of rapidly spreading COVID-19 infections and changing government responses, from March 13 to March 23, were excluded because awareness and responsiveness to the pandemic varied substantially across the population.

Measures

Each week individuals were asked whether they used alcohol, marijuana, and other illicit drugs (including heroin, prescription opioids, cocaine, methamphetamine, or sedatives) in the past 7 days. They also were asked weekly whether they were around people using drugs when they were not expecting to be (yes or no), to rate their confidence to stay clean and sober on a scale from 1 (not confident at all) to 7 (very confident), and to rate their recovery support meeting attendance on a scale from 1 (no meetings) to 7 (many meetings).

Two HIV outcomes were assessed. First, individuals were asked on how many days in the past week they missed a dose of their HIV medications. Responses were dichotomized as <2 days or ≥ 2 days, as missing 2 or more days in 1 week will likely cause viral rebound [19, 20]. Second, they were asked to rate their confidence to keep their next appointment with their HIV care provider on a scale from 1 (not confident at all) to 7 (very confident).

Statistical Methods

Mixed effects logistic regression models, using cluster-robust standard errors to account for repeated surveys by individuals, were used to determine the odds of using alcohol, marijuana, and other illicit drugs before and during the pandemic, as well as the odds of being around people using drugs when they were not expecting to be and the odds of missing their HIV medication on ≥ 2 days. Incidence rate ratios (IRRs) from mixed-effects Poisson regression, using cluster-robust standard errors, were used to compare individuals' confidence to stay clean and sober, recovery support meeting attendance, and confidence to keep their next HIV appointment. All regression models adjusted for gender, race, age, baseline employment status, whether they have ever been incarcerated, whether they have been diagnosed with a mental health disorder other than SUD, and whether they completed surveys during both study time periods or just one. A visual inspection of line graphs was used to understand trends before and during the pandemic. Chi-square and Fisher's exact tests were conducted to compare baseline characteristics between individuals included in the pre-pandemic sample and those in the later period. To test our directional hypotheses, we used a one-tailed test and $\alpha = 0.05$ to determine statistical significance. All analyses were conducted in Stata/SE 16 [21].

Results

Between January 31 and March 12, 2020, 60 individuals completed 194 weekly surveys, and between March 24 and May 4, 2020, 43 individuals completed 148 weekly surveys. The number of surveys taken by each individual ranged from 1 to 6 in each time period, and 39 individuals completed surveys during both periods. Among the 64 unique individuals included in this analysis, 75% were male, 59% were Black or African American, 9% were Hispanic or Latino, 66% had ever been incarcerated, 39% were employed at baseline, 39% had a spouse or significant other, 70% were ever diagnosed with a mental health disorder other than SUD, 8% were on medication-assisted treatment for addiction, and the mean age was 49 (Table 1). There were no statistically significant differences between those included in each study period.

During the COVID-19 pandemic, there was no difference in the proportion of people using alcohol (41%) or marijuana (32%) compared to before the pandemic (Table 2). However, there was an increase in the proportion of people using other illicit substances (including heroin, prescription opioids, cocaine, methamphetamine, or sedatives), increasing from 10 to 18%. After adjusting for demographics, study participants were 2.09 times more likely to use other illicit substances ($P = 0.181$). During the pandemic, the proportion of people reporting being around people using drugs

Table 1 Baseline demographics of analytical sample (N = 64)

	N (%)
Male	48 (75)
Race	
White	22 (34)
Black or African American	38 (59)
Mixed	1 (2)
Other	3 (5)
Hispanic or Latino	6 (9)
Ever incarcerated	42 (66)
Employed at baseline	25 (39)
Has a spouse/significant other	25 (39)
Receiving medication-assisted treatment[a]	5 (8)
Diagnosed with a mental health disorder other than SUD	45 (70)
Mental health disorders	
Anxiety/social anxiety	19 (30)
Bipolar/manic depression	11 (17)
Depression	33 (52)
Panic disorder	1 (2)
PTSD	5 (8)
Other	7 (11)

[a]One individual was on Methadone, three were on Vivitrol, and one was on Suboxone

Table 2 Number (%) of surveys reporting alcohol/drug use and HIV risks before and during the COVID-19 pandemic

	Before pandemic (N = 194)	During pandemic (N = 148)	Odds ratio	Adjusted[a] *P* value
Alcohol	79 (41%)	60 (41%)	0.974	0.480
Marijuana	62 (32%)	47 (32%)	0.474	0.291
Other illicit drugs[b]	20 (10%)	27 (18%)	2.09	0.181
Around people using drugs	12 (6%)	18 (12%)	2.53	**0.060**
Mean confidence rating for staying clean and sober	5.35	4.77	0.886[c]	**0.007**
Recovery support meeting attendance rating	3.02	2.24	0.727[c]	**0.001**
Missed ART dose on 2 or more days of the week	10 (5%)	18 (12%)	2.81	**0.042**
Mean confidence rating to keep next appointment with HIV care provider	6.89	6.50	0.918[c]	**0.021**

Bold: statistically significant at $\alpha = 0.05$ using a one-tailed test

[a]Adjusted for gender, race, age, baseline employment status, whether they have ever been incarcerated, and whether they have been diagnosed with a mental health disorder other than SUD

[b]Other illicit drugs includes heroin, prescription opioids, cocaine, methamphetamine, and sedatives

[c]Incidence Rate Ratio reported

when they were not expecting to be doubled from 6 to 12% ($P = 0.060$). Likewise, during the pandemic individuals had a rate 0.886 times smaller in their confidence to stay sober ($P = 0.007$), and a rate 0.727 times smaller in recovery support meeting attendance ($P = 0.001$).

During the pandemic, the proportion of participants missing their HIV medications 2 or more days per week significantly increased, from 5 to 12%, compared to before the pandemic ($P = 0.042$). Similarly, there was a statistically significant decrease in individual's confidence to keep their next HIV appointment (IRR: 0.918, $P = 0.021$).

Pre-pandemic, there was no increasing trend visible in the proportion of people using illicit substances, around other people using drugs, or missing HIV medications on 2 or more days (Fig. 1a). Likewise, there was no pre-pandemic decreasing trend visible in the mean confidence ratings for staying sober or keeping their next HIV appointment, nor for recovery support meeting attendance (Fig. 1b).

Discussion

By examining weekly survey data collected through an ongoing mobile-health intervention study, we found that PLWH and SUD in Wisconsin have increased their use of illicit substances during the COVID-19 pandemic. Individuals have also significantly decreased their confidence to stay sober and their recovery support meeting attendance, and they are unexpectedly around people using drugs more often. The significant worsening of these risk factors provides a strong concern that illicit substance use may further increase, and the use of alcohol and marijuana may begin to increase, throughout the course of the ongoing pandemic.

This study also found a significant increase in the proportion of people missing their ART medications 2 or more days per week. Poor ART adherence is the strongest predictor of failed virologic suppression, HIV drug resistance, disease progression, and even death among PLWH [22–24]. Missing 2 days of HIV medication, or adhering to only 71% of doses weekly, is well below the minimum level of adherence necessary to maintain viral suppression, which is often cited as between 80–95% [19, 20]. Furthermore, we found a significant decrease in individual's confidence to attend their next HIV appointment. Due to COVID-19, some providers have pushed back non-urgent medical appointments and/or provided virtual appointment options. We were unable to determine whether individual's confidence to attend a telehealth appointment may differ. However, previous research demonstrates that missing HIV appointments also predicts viral rebound, drug resistance, and mortality [25–27]. Together, these findings signal that novel methods to retain PLWH and SUD in HIV care during pandemics like COVID-19 must be implemented in order to improve the health of this marginalized population and prevent the spread of HIV.

The lack of any trends in these outcomes before the COVID-19 pandemic provides evidence that the worsening outcomes detected in this study are likely a result of the pandemic and not any pre-existing trends. However, our study had a small sample size, with the number of surveys taken per week ranging from 22 to 35. Another limitation of this study is that we cannot assess the effect of the COVID-19 pandemic on drug use behaviors and HIV care among PLWH and SUD who do not have access to A-CHESS. Considering the goals of A-CHESS are to prevent substance misuse and lapses in HIV care, it is likely that this study underestimates the effect the pandemic has

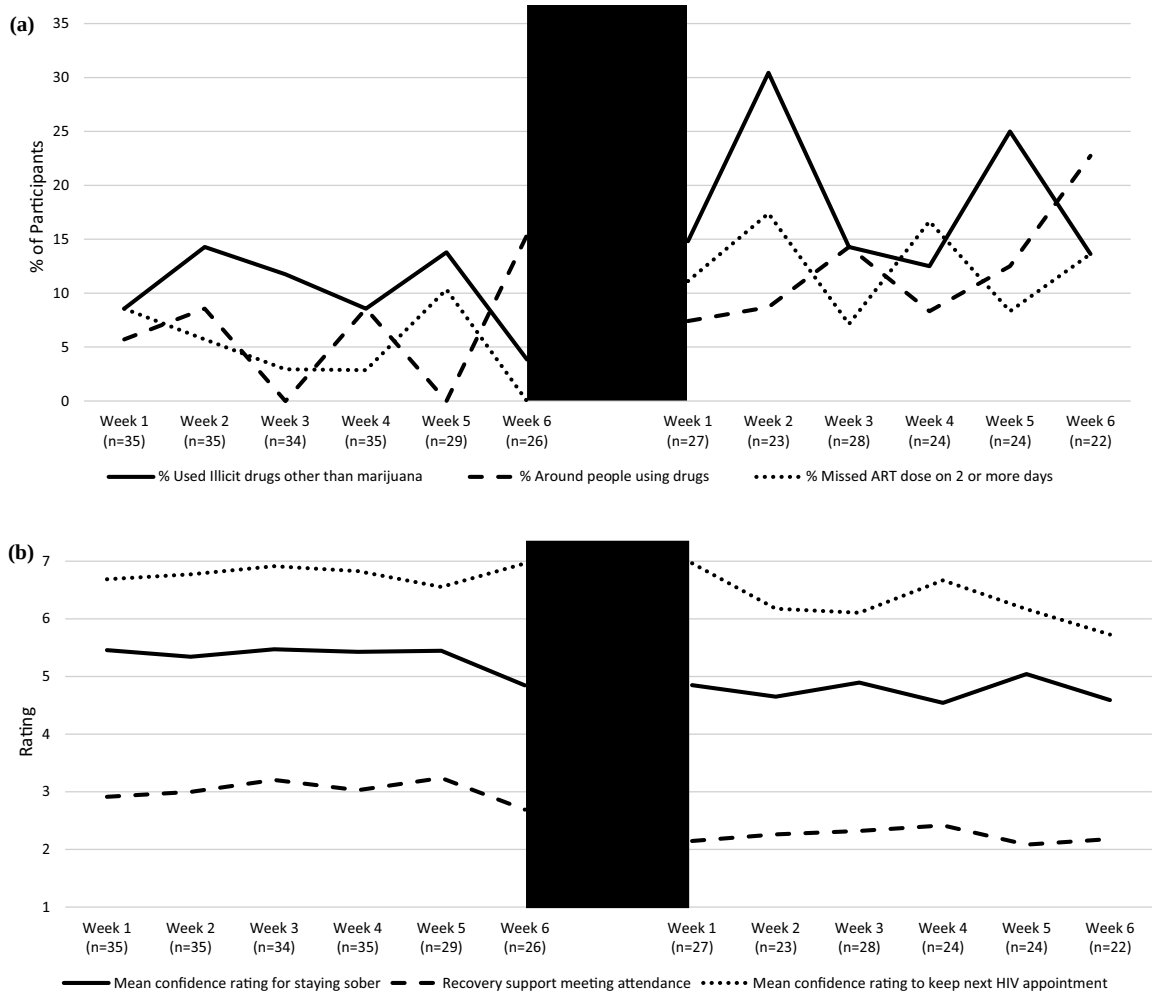

Fig. 1 Line graphs of trends in **a** the proportion of people using illicit drugs, around other people using drugs, and missing HIV ART medication on 2 or more days, and **b** mean rating for confidence to stay sober, recovery support meeting attendance, and confidence to attend next HIV appointment 6 weeks before the pandemic (January 31 to March 12, 2020) and 6 weeks during the pandemic (March 24 to May 4, 2020)

on substance use and HIV care. More research is needed to understand how the pandemic has impacted drug use and HIV care among PWLH and SUD, as well as the general population, who do not have access to support tools like A-CHESS.

Further research is needed to understand mediating factors in the relationship between this social, emotional, and economical public health crisis and substance use and HIV care. We found a decrease in recovery support meeting attendance during the COVID-19 pandemic. Although social-distancing orders prevented many recovery meetings from being held in person, most programs were offering virtual meetings. We were unable to assess whether meeting attendance decreased because individuals were not offered virtual meeting options, they refused virtual options due to personal preference and recovery needs, or they lacked access to the necessary technology. Additionally, subjects reported unexpectedly being around people using drugs more often. We were unable to describe factors mediating this relationship using data. We do know, however, that self-quarantine and social-distancing measures have disrupted access to recovery meetings, employment, and other activities that take people outside their homes. Furthermore, people who use drugs are often housed with other drug-using individuals, either family/friends in their social networks or in sober living homes with others vulnerable to relapse. Therefore, contact with these individuals is likely increasing as the pandemic restricts people to their own living environments.

Optimal support for PLWH and SUD is critical during this pandemic, as drug-related and ART non-adherence risks such as overdose, unsafe sexual behaviors, and HIV

transmission, may unfold. Exacerbating this crisis is that many harm reduction programs, such as syringe service programs, are operating at reduced hours or closed altogether. As face-to-face visits with medical and public health providers become less available, mobile-health interventions may provide a useful tool to remain connected, collect data, and deliver care to PLWH and SUD during pandemics like COVID-19. More research is needed to understand the long-term effects of COVID-19 on this population and to develop effective interventions that mitigate these effects and retain this population in care during pandemics.

Acknowledgements The authors want to particularly thank the individuals who participated in this study. This study was funded by the National Institutes of Health: NIDA (Grant DP2DA042424). Dr. Hochstatter is supported by the National Institutes of Health: NIDA (Grant T32DA037801).

Compliance with Ethical Standards

Conflict of interest The authors declare that they have no conflict of interest.

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Innovation in Aging
cite as: *Innovation in Aging*, 2020, Vol. 4, No. 6, 1–9
doi:10.1093/geroni/igaa051
Advance Access publication October 26, 2020

OXFORD

Original Research Article

Racial Disparities in Substance Use Treatment Completion Among Older Adults

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Received: August 3, 2020; Editorial Decision Date: October 13, 2020

Decision Editor: Steven M. Albert, PhD, FGSA

Abstract

Background and Objectives: Racial disparities in substance use among young adults have been well documented in the substance use literature, but little attention has been paid to older adults. While being an older adult is positively associated with substance use treatment completion, racial disparities in treatment completion have yet to be examined. The purpose of this study was to determine to what extent racial disparities exist in substance use treatment completion among older adults (65 and older).

Research Design and Methods: This cross-sectional study utilized data from the most recent Treatment Episode Data from the Substance Abuse and Mental Health Services Administration, which documents discharges from a publicly funded substance use treatment program in the United States. A total of 17,942 older adults reported to a substance use treatment program in 2017 and 6,653 met the criteria for the study. Chi-squared tests were used to analyze group differences and a binary logistic regression was used to predict substance use treatment completion.

Results: Results show that Black older adults were 37% less likely to complete a substance use treatment program than Whites (OR = 0.630) while Hispanic older adults were 26% more likely to complete a substance use treatment program than Whites (OR = 1.26).

Discussion and Implications: These results support the findings from similar studies with younger adults and support the theory that racial disparities are prevalent across the life span. Although Hispanics had a higher treatment completion rate than Whites, this is likely a reflection of *familismo*, where decisions about health treatments is a group process and a steady network of family members are available to provide advice and encouragement. The significant disparity observed between Black and White older adults suggest a need to consider cultural, historical, and systemic factors that affect voluntary termination of substance use treatment among Black older adults.

Translational Significance: The results of this study indicate a significant disparity in substance use treatment completion between White and Black older adults, which has also been observed among younger adults. In practice, this suggests a need to conduct psychosocial assessments at treatment entry to determine barriers to completion specific to older adults who are minorities and attempt to address those barriers in conjunction with substance use treatment to ensure completion.

Keywords: Alcohol use disorder, Black, Hispanic, Treatment adherence

Substance use is a burgeoning public health issue among older adults. Due to the variation in symptomology among this population compared to younger adults, substance use disorders among older adults have been termed an invisible epidemic (Alpert, 2014). In spite of the fact that substance use research has primarily targeted young adults, older adults are an overlooked group that are at great risk of substance use dependency due to the multitude of afflictions that come with aging (Briggs et al., 2011). While substance use has been found to decrease with age (Mattson et al., 2017), factors such as pain associated with chronic illnesses, social isolation, depression, and other psychosocial issues that older adults face create a need for coping mechanisms that often involve drugs and alcohol (Heron, 2019; Reid et al., 2015). With the aging baby boomer cohort's increasing exposure to and usage of drugs (Mattson et al., 2017), the number of older adults in need of substance use treatment is on the rise.

Between 2002 and 2012, the proportion of older adults admitted to a substance use treatment program increased from 3.4% to 7.0% (Chhatre et al., 2017). In addition to the increase in proportion, the usage of illicit substances such as cocaine and heroin also increased during that time period, though alcohol remained the primary substance of use among older adults (Chhatre et al., 2017). Gfroerer and colleagues (2003) predicted that the number of older adults who will need substance use treatment will see an upsurge from 1.7 million in 2001 to 4.4 million in 2020. While these projections of substance use among older adults are evident, studies assessing racial differences in the prevalence of substance use and treatment completion among older adults is limited.

In the general population, significant racial disparities in substance use prevalence and treatment completion have been noted. Minorities have been found to have higher cases of substance use and are also less likely to complete a substance use treatment program (Mennis & Stahler, 2016). Among adolescents, Black and Hispanic teenagers reported having less specialty and informal care for their substance use disorder than their White peers (Alegria et al., 2011) and in studies comparing the likelihood of completing an alcohol treatment program, African Americans and Hispanics were found to be significantly less likely to complete than Whites (Bluthenthal et al., 2007).

These disparities are also marked by systemic levels of racial injustice that moderate the prevalence of substance use disorders among minorities and the lower treatment completion rates. Minorities represent a staggering percentage of the homeless population in the United States and are influenced by racist redlining policies that contribute to housing inequity to date (Rutan & Glass, 2018). Minorities have also been found to have higher rates of chronic illnesses, lower educational attainment, and have almost twice the proportion of households below the poverty line compared to Whites (Cunningham et al., 2017; Price et al., 2013). These systemic issues of social justice undoubtedly influence the outcomes of addiction treatment as higher socioeconomic status is a protective factor for treatment completion. For example, one study found that African Americans had a 17.5% substance use treatment completion rate while Whites had a 26.7% completion rate, and this disparity was attributed to differences in socioeconomic factors such as homelessness, employment, and health insurance (Jacobson et al., 2007). Black/African American adults have also reported delays in substance use treatment entry as compared to Whites in a study assessing racial and socioeconomic disparities in substance use treatment (Lewis et al., 2018).

Other systemic disparities also exist in terms of health insurance and geographic access to a substance use treatment facility. A study by Cummings and colleagues found that only 60% of U.S. counties have an outpatient substance abuse treatment facility that accepts Medicaid and counties with a higher percentage of black, rural, and underinsured residents are less likely to have a substance use treatment facility (Cummings et al., 2014). These geographic inequities particularly alienate minorities who are more likely to use Medicaid (Kaiser Family Foundation, 2019).

Although these disparities have been noted among younger adults, studies addressing differences among older adults are scarce. While there are few studies targeting older adults specifically, Vasilenko and colleagues (2017) have found higher prevalence of alcohol use disorder and tobacco use disorder among Black older adults compared to Whites and Hispanics, while Gurnack and Johnson (2002) found higher usage of illicit drugs among African American older adults. Chhatre and colleagues have also found that between 2002 and 2012, the percentage of African American older adults admitted to substance use treatment programs increased from 21% to 28% while the proportion of non-Hispanic Whites decreased by 3% (2017). While these studies have found notable differences in the prevalence of substance use among older adults, there are no studies that examine racial disparities substance use treatment completion rates among older adults. The increasing trend in older adults seeking substance use treatment and the racial disparities found in younger adults posits a need to evaluate the extent of these differences across the life span. The purpose of this study is to address this gap in literature and examine racial differences in substance use treatment completion among older adults by comparing treatment completers with those who voluntarily terminate treatment. For the purpose of this study, treatment completion refers to the successful conclusion of a treatment plan as determined by the substance use treatment facility (SAMHSA, 2019b).

Conceptual Framework

A number of factors have been proposed to explain the racial disparities in substance use treatment utilization and completion. These include socioeconomic status, criminal history, co-occurring mental health conditions, geographic availability of substance use treatment programs,

and so forth (Choi et al., 2014; Cummings et al., 2014; Maremmani et al., 2017). To conceptualize the existence of other explanatory variables within this study, Andersen's Healthcare Utilization Model provides a comprehensive guide that includes the factors that have been proposed in previous studies. The Andersen model was developed in the late 1960s by Ronald M. Andersen and has been widely used to address health disparities among underserved populations (Bonomi et al., 2009; Lee et al., 2017). The Andersen model suggests that a person's use of health services is attributed to their predisposition to use services, enabling or impeding factors and the need for the health care service (Andersen, 1995). Predisposing factors include demographic measures such as age and gender, enabling or impeding factors include social capital such as family and community, and need factors include individual perception of health or official medical diagnosis (Andersen, 1995).

Objectives and Research Question

Although substance use among older adults is still understudied, a number of studies have found disproportionately higher rates of substance use prevalence among minorities. While most studies have focused on identifying the rates of use, no studies have been identified that address the utilization and completion of substance use treatment programs among this population. Furthermore, racial differences in completion rates have been neglected, and research with younger adults suggests that there may be significant differences in the completion rates between racial groups. In this context, the purpose of this study is to fill the gap in literature by answering the following research question: To what extent do racial disparities exist in substance use treatment completion among older adults? In line with the research question, this study aims to determine if previously identified racial disparities in substance use treatment completion are consistent through older adulthood. We hypothesize that there will be a difference in the treatment completion rates between minorities and Whites.

Method

Data Source

Data on discharges from publicly funded substance use treatment programs were derived from the most recently available Treatment Episode Data Set—Discharges (TEDS-D) from the Substance Abuse and Mental Health Services Administration (SAMHSA), a national collection of annual discharges from substance use treatment programs in 2017. Data include demographic and substance use characteristics of individuals age 12 and older in substance use treatment facilities that report to state administrative data systems (SAMHSA, 2019b). TEDS-D only includes admissions to facilities that are licensed or certified by state agencies to provide substance use treatment services. Facilities reporting to TEDS-D are mostly those funded by state or drug agency funds, so the TEDS-D does not represent all substance use treatment facilities in the United States but is considered a nationally representative sample (SAMHSA, 2019b). The types of treatment programs in the data set include certified opioid treatment programs, community-based correctional programs, hospitals/Veterans Affairs hospitals/state hospitals, state-licensed/certified solo practitioners, state/correctional DUI/DWI providers, state divisional service centers, and private facilities (SAMHSA, 2019a).

Because this study is focused on racial disparities among older adults, only discharges of individuals aged 65 and older were included (N = 6,653). Older adult age range has been defined in a number of ways across the gerontology literature, but 65 and older was chosen as defined by the American Psychological Association (American Psychological Association, n.d.).

Procedures

Each individual state is responsible for the aggregation of discharge data in any given year. Combined data from all agencies are then converted to meet TEDS standards by modifying the state data crosswalk. Once data are validated, all state reports are combined in the national TEDS database and available for data analysis (SAMHSA, 2019a).

Variables

All variables used for the study were coded as one (1) to represent the presence of a characteristic and zero (0) to represent the absence of the characteristic. The code zero (0) represents the reference category and any number above zero are comparison categories.

Dependent variable

The main outcome variable of substance use treatment completion was coded as 1 for treatment completed and 0 for treatment voluntarily terminated. Other reasons for discharge included "terminated by facility," "transferred to another facility," "incarcerated," "death," and "other" but were excluded because these other options do not reflect a necessarily voluntary termination of substance use treatment by the individual. The purpose of this study is to determine racial differences in individuals who are completing the program or voluntarily terminating so these other options were not included as they could skew the causal mechanism of treatment completion as noted in a similar study by Mennis and Stahler (2016). It is important to note that "voluntary" termination of treatment may also reflect a number of external factors such as a need to return to employment, a family emergency, or financial/insurance reasons.

Independent variables

Guided by the Andersen model of health care utilization, explanatory variables to represent predisposing factors, enabling or impeding factors, and need factors were chosen. The main independent variable of race was coded to represent mutually exclusive and exhaustive categories. Non-Hispanic Black/African Americans were coded as Black, non-Hispanic Whites were coded as White, and all older adults who identified as Hispanic were coded as Hispanic, regardless of race or ethnicity. Blacks/African Americans were chosen because they have been identified as having the greatest disparity compared to Whites in other studies with younger adults, and Hispanics were included even though other studies did not find practically significant differences in treatment completion compared to Whites (Acevedo et al., 2015; Archibald, 2007; Mennis & Stahler, 2016; Saloner & Cook, 2013). The three included races represent the top three racial groups in the United States (Kaiser Family Foundation, 2020). Other races were not included because they represented a very small percent of substance use treatment admissions for older adults in 2017. Hereafter, non-Hispanic Blacks will be referred to as Black/African American and non-Hispanic Whites will be referred to as Whites. All Hispanics regardless of race or ethnicity will be referred to as Hispanics.

Because participants were only described as 65 and older, age could not be used as a part of the analysis as a predisposing factor so gender was selected as a predisposing factor along with race and because females have been found to have better treatment outcomes than males (Marsh et al., 2004). Gender was coded as 1 = male and 0 = female. Marital status, education, and employment were chosen as enabling factors because being married, having higher educational level, and having employment have been identified as protective factors for substance use (Heinz et al., 2009; Mutter et al., 2015). Marital status was coded as 0 = married, 1 = not married, and 2 = separated/divorced/widowed. Education was coded as 0 = has postsecondary education, 1 = completed high school, and 2 = did not complete high school. Employment was coded as 0 = employed, 1 = unemployed, and 2 = not in labor force. Participants that reported either having full-time or part-time employment were considered employed. Those who reported "not in labor force" were either retired, a student, disabled, a homemaker, or a resident of an institution such as hospitals, jails or prisons (SAMHSA, 2019b). These reasons for "not in labor force" were not examined as variables in the analysis.

The need factors chosen were the type of primary substance used and frequency of use, both of which could influence perceived need for substance use treatment. Those with alcohol as their primary substance have been found to have higher treatment completion rates compared to illicit drug users and frequency of use affects substance use treatment outcomes (Mennis & Stahler, 2016; Proctor & Herschman, 2014). Primary substance was coded as 1 = alcohol and 0 = other. Frequency of use was coded as 0 = some use or no use in the last month and 1 = daily use.

Analytic Plan

Chi-squared tests were used to analyze differences in substance use treatment completion across all independent variables. To predict the likelihood of substance use treatment completion, a binary logistic regression was performed, while controlling for the predisposing, enabling, and need factors identified through the Andersen model. To assess multicollinearity among the variables, a test of tolerance and variance inflation factor (VIF) was performed. All tolerance values were less than 1 and all VIF values were less than 10, so the assumptions for a logistic regression were met. For all levels of analysis, alpha level was set at .05.

Results

Univariate Results

Descriptive statistics displaying the sample size, percent within sample, and treatment completion percent for each variable are provided in Table 1. A total of 17,942 older adults reported to a substance use treatment program in 2017 and 6,653 reported on all the variables for the study. Of the 6,653, 73.7% completed substance use treatment and 26.3% voluntarily terminated. The majority of the sample were White (65.1%) and male (76.5%). Most of the older adults were divorced, separated, or widowed (44.2%), were not in the labor force (69.7%), and had postsecondary education (41.2%). The most prevalent primary substance of use was alcohol (73.2%) and most of the sample reported using their primary substance only sometimes or not at all in the past month (57.6%).

Bivariate Results

For treatment completion, significant differences were found across all the groups except marital status and employment. Whites were more likely to complete treatment (76.7%) than Black/African Americans (62.6%). Hispanics had a higher treatment completion rate than Whites and Black/African Americans (80.2%). Males were more likely to complete treatment (74.8%) than females (70.2%).

Married older adults had a higher treatment completion rate (75.2%) than never married (72.8%) and separated/divorced/widowed older adults (73.2%), but this difference was not statistically significant. Older adults who were employed had higher treatment completion (78.6%) than those who were not employed (76.1%) and those who were not in the labor force (69.7%). Older adults who completed at least high school had a higher completion rate (74.9%) than those who had postsecondary education (73.2%) and those that did not complete high school (72.5%), but these differences were not statistically significant.

Those with alcohol as their primary substance had significantly higher completion rates (79.3%) than those who used other substances (58.4%) and finally, those who used their primary substance only sometimes or not at all in the past month had higher completion rates (76.4%) than

Table 1. Univariate and Bivariate Results

Variable	Values	Sample size (*N*)	% Within sample	% With treatment complete	Pearson χ^2	Significance ($p < .05$)
Treatment completion	Treatment completed	4,903	73.7	N/A	N/A	N/A
	Voluntarily terminated	1,750	26.3	N/A	N/A	N/A
Race	Non-Hispanic white	4,330	65.1	76.7	137.688	.000
	Non-Hispanic black	1,599	24.0	62.6		
	Hispanic	724	10.9	80.2		
Gender	Male	5,092	76.5	74.8	12.776	.000
	Female	1,561	23.5	70.2		
Marital status	Married	1,975	29.7	75.2	3.346	.188
	Never married	1,738	26.1	72.8		
	Separated/divorced/widowed	2,940	44.2	73.2		
Employment	Employed	807	12.1	78.6	18.729	.000
	Unemployed	1,206	18.1	76.1		
	Not in labor force	4,640	69.7	72.2		
Education	Has postsecondary education	2,740	41.2	73.2	3.311	.191
	Completed high school	2,565	38.6	74.9		
	Did not complete high school	1,348	20.3	72.5		
Primary substance	Alcohol	4,872	73.2	79.3	293.766	.000
	Other	1,781	26.8	58.4		
Frequency of use	Daily use	2,820	42.4	70.1	33.183	.000
	Some use or no use in the last month	3,833	57.6	76.4		

Note: N/A = not applicable.

Table 2. Multivariate Results

Variable	Odds ratio	Confidence intervals	Significance $p < .05$
Black/African American compared to Whites	0.630	0.548–0.725	.003
Hispanics compared to Whites	1.263	1.024–1.557	.029
Males compared to females	1.288	1.129–1.471	.000
Never married compared to married	1.102	0.938–1.294	.239
Separated/divorced/widowed compared to married	0.998	0.871–1.143	.974
Unemployed compared to employed	1.013	0.809–1.269	.909
Not in labor force compared to employed	0.799	0.663–0.962	.018
Completed high school compared to postsecondary education	1.225	1.076–1.396	.002
Did not complete high school compared to postsecondary education	1.115	0.948–1.312	.188
Primary substance is alcohol compared to other	2.407	2.120–2.733	.000
Primary substance is used sometimes or not at all in the past month compared to daily use	1.224	1.092–1.372	.045

those who used their primary substance daily (70.1%). The biggest group differences in completion rates were found within primary substance, with a 20.9% difference in completion rates between alcohol users and other substance users. There was also a significant difference in completion rates within race with 17.6% difference between Hispanics and Black/African Americans and a 14.1% difference between Black/African Americans and Whites.

Multivariate Results

The result of the binary logistic regression is depicted in Table 2. Consistent with the bivariate results, when predisposing, enabling, and need factors were controlled for, race was still a significant predictor of substance use treatment completion. Black/African American older adults were less likely to complete a substance use treatment than Whites (odds ratio [OR] = 0.630), supporting the study hypothesis. This means that White older adults are about 60% more likely to complete a substance use treatment program than Black older adults when the OR is inverted (1/0.630 = 1.6). Hispanics were 26% more likely to complete a substance use treatment program than Whites (OR = 1.263). Males were 29% more likely to complete treatment than females (OR = 1.288).

Marital status was not significant; there was no notable difference in the completion rates between those who were married and those who were either never married or separated/divorced/widowed. There was also no statistically significant difference between those who were employed and those who were unemployed, but there was a significant difference between those who were employed and those who were not in the labor force. Those who were not in the labor force were less likely to complete substance use treatment than those who were employed (OR = 0.799). This means that employed older adults are 25% more likely to complete substance use treatment than older adults who are not in the labor force (1/0.799). Older adults who completed only high school were more likely to complete treatment than older adults who had postsecondary education (OR = 1.225). There was no statistically significant difference in the treatment completion rates between older adults who never finished high school compared to older adults who had postsecondary education.

Older adults with alcohol as their primary substance were over twice as likely to complete a substance use treatment program than those with other substances (OR = 2.407) and older adults who used their primary substance sometimes or not at all in the past month were 22% more likely to complete treatment than those who used it daily (OR = 1.224).

Discussion

Substance use as an issue among older adults is slowly gaining momentum in the substance use literature. With studies showing significant racial disparities in substance use treatment completion rates in the general population (Chhatre & Jayadevappa, 2018; Gurnack & Johnson, 2002; Mennis & Stahler, 2016; Vasilenko et al., 2017), the increasing trend of older adults reporting to a substance use treatment program warranted an assessment of these disparities across the life span (Chhatre et al., 2017; Gfroerer et al., 2003; Mattson et al., 2017).

For substance use treatment completion rates between Hispanics and Whites, the results of this study show that Hispanic older adults have a higher completion rate both in the bivariate and multivariate analyses compared to White older adults. Previous studies have found varying treatment completion rates for Hispanics compared to Whites, with some studies identifying minor differences (Niv et al., 2009; Perron et al., 2009) and others finding great disparities (Saloner et al., 2014; Stahler & Mennis, 2018). For example, Mennis and Stahler observed that Hispanics had a lower treatment completion rate than Whites, but it was only an 8% difference and was not found to be statistically significant (Mennis & Stahler, 2016). Furthermore, the same study found that the substance of use moderated treatment completion rates, with Hispanics having a higher completion rate than Whites for alcohol but a much lower completion rate for heroin (Mennis & Stahler, 2016). Considering that the majority of the sample used alcohol as their primary substance, the higher completion rates among Hispanics compared to Whites might be a reflection of the moderating effect from type of substance used.

Another possible factor that was not accounted for in the study is the role of social support and the family bond. While marital status was accounted for, the influence of a social network in terms of nonspousal support was not considered. Hispanics have been found to have a cultural preference for family closeness and extended family living arrangements, which results a greater number of people within their social network (Campos et al., 2014). Loyalty to the extended family is extremely important through a concept known as *familismo*, where decisions about health treatments is a group process and a steady network of family members are available to provide advice and encouragement (Calzada et al., 2013). While being married is often viewed as protective factor, children and extended family members may also be a great source of support. With the unique cultural trait of *familismo*, Hispanics may have a higher treatment completion rate because of a greater support system.

In terms of substance use treatment completion rates between Blacks and Whites, Blacks were found to be 34% less likely to complete treatment than Whites. This means that for every 10 White older adults that complete substance use treatment, only six Black older adults complete treatment. These results show a great disparity in substance use treatment completion that have been observed in other similar studies assessing the general population, with Black/African American older adults having a significantly lower treatment completion rates than Whites (Arndt et al., 2011; Jacobson et al., 2007; Mennis & Stahler, 2016).

While the treatment completion rates between Hispanics and Whites is inconsistent across multiple studies, there is a strong consensus when it comes to the disparity between Blacks and Whites, which is often attributed to differences in socioeconomic status (Saloner & Cook, 2013). However, this study shows that even when predisposing, enabling, and need factors are accounted for, there are significant differences in substance use treatment completion between Black and White older adults. This suggests the need to look at race theories to better explain underlying causes of this prevalent disparity.

One possible approach is to use the critical race theory framework to examine the historical, cultural, and systemic context of the health care experiences of Black/African Americans (Ortiz & Jani, 2010; Pulliam, 2017). From the critical race theory perspective, Black/African American older adults may have less substance use treatment completion for several reasons. Dovidio and colleagues (2008), for example, have found that experiences of racial bias and aversive racism have resulted in a distrust of the health care system among Black older adults. On a systemic level, this can be seen in terms of the geographic placement of health care facilities, the cost of services, the availability of

insurance coverage, and the quality of the service relative to its location (Dovidio et al., 2008).

Another barrier for Black/African older adults might be stigma, both internalized and public. Negative public view towards mental health prevents older adults from seeking treatment, despite having the intention to do so (Conner et al., 2010a) and African American older adults may feel the need to adhere to culturally acceptable coping strategies, of which seeking external intervention from a professional is not often positively viewed (Conner et al., 2010b). African American older adults from traditional backgrounds may also feel a responsibility to be an "exemplary elder" and have feelings of shame associated with any deviation from that expectation (Lichtenstein, 2008) as in the case of substance use disorders.

In practice, this calls for a culturally sensitive approach to treatment retention for Black/African American older adults in substance use treatment programs, and on a grand political scheme, it calls for a total overhaul of systems that have negatively influenced Black/African American perception of the health care system. On a public level, the need to destigmatize substance use in general is critical, and the expectations of older adults to be model citizens without fault must be diminished. Older adults, like many younger adults, have risk factors that make them susceptible to substance use dependency including chronic pain, social isolation, depression, suicidal ideation, and despair (Arndt et al., 2011; Assari et al., 2019; Cleary et al., 2017; Thandi & Browne, 2019; Millar et al., 2017), and Black/African American adults in particular have "double jeopardy" as a result of their membership in two vulnerable groups (Ferraro, 1987).

Limitations

Although this study utilized the most comprehensive and recent account of substance use program outcomes available from the SAMHSA, only state-funded treatment program outcomes are reported (SAMHSA, 2019b), which may exclude older adults in private treatment programs, private correctional facilities, and programs like Alcoholics Anonymous. This study only evaluated older adults aged 65 and older, which excludes a significant amount of people in older adulthood, and the inclusion of adults aged 50–65, for example, might yield different results. Similarly, only 37% of the total sample was included in the final sample of the study, which may result in attrition bias. Those who were not included in the study, for example, may have unique characteristics relevant to the study that may have yielded different results. The nature of "voluntary" treatment completion is also ambiguous as older adults may voluntary terminate treatment for reasons such as the death of a loved one, health reasons, family emergencies, and other factors that do not delineate a willingness to quit substance use treatment. Furthermore, the study did not employ a full range of possible predictors that have in the past been found to be relevant when examining racial disparities in substance use treatment, such as the role of social network, type of treatment program, insurance/payment methods, referral source, and geographic residence.

Conclusion

Substance use among older adults has been largely overlooked due to the inconspicuous nature of this vulnerable population. Several factors associated with aging put older adults at risk of substance use dependency, and this risk is increased for Black/African American older adults who are members of two vulnerable groups. This study contributed to the substance use literature by showing the prevalence of racial disparities in substance use treatment completion across the life span, with results that support previous studies involving younger adults. Despite the consideration of predisposing, enabling, and need factors that are typically proposed as causes of racial disparities in health care utilization, the disparity between Black and White older adults remained. This calls for a consideration of cultural factors in practice, an overhaul of systems that create distrust of the health care system in Black/African Americans, and a need to destigmatize substance use disorders, especially for older adults who are facing an invisible epidemic.

Funding

None declared.

Conflict of Interest

None declared.

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Cancer

HIV is an independent risk factor for smoking-related cancers, especially in women

Michael Carter | 17 November 2020

Image: fotografierende/Pexels

New research provides compelling evidence that infection with HIV is an independent risk factor for developing smoking-related cancers. Published in *AIDS*, the study's findings are especially important because they compared cancer-risk between closely matched individuals with and without HIV who were enrolled in long-standing cohort studies. Women with HIV appeared to have an especially high risk of developing a smoking-related cancer.

"There is a substantial burden of smoking-related cancers among people living with HIV and unless the high prevalence of smoking is reduced, this will likely increase over time due to the longevity among people living with HIV on ART," comment the authors. "In addition to smoking related cancers, preventing the initiation of smoking and smoking cessation lessens the burden for all smoking-related diseases. For people living with HIV this is especially important given the elevated risk for several other diseases that can be exacerbated by smoking, including cardiovascular disease, pulmonary infections, chronic obstructive pulmonary disease and pneumonia."

The research was undertaken by a team of investigators led by Professor Nancy Hessol of the University of California, San Francisco.

Cancer is an increasingly important cause of death among people living with HIV. It's been estimated that in the US, people with HIV are about twice as likely to smoke compared to individuals in the general population and elevated rates of many smoking-related cancers have been observed among people with HIV. But Dr Hessol and her co-researchers were concerned that previous studies may not give an accurate picture as people with HIV were not being compared with individuals with very closely matched risk profiles.

They realised a way of overcoming this limitation was to look at cancer incidence among people with and without HIV recruited to the Women's Interagency HIV Study (WIHS) and the Multicenter AIDS Cohort Study (MACS). HIV-positive and HIV-negative participants in these long-running studies have very similar demographic and lifestyle profiles, including risk factors for smoking-related cancers. As well as smoking, these risk factors include alcohol consumption, illicit drug use, body mass index and co-infection with human *papillomavirus* or hepatitis C virus.

The investigators set themselves three aims: to see if incidence of smoking-related cancer differed according to HIV status; to determine if cancer rates differed by sex; and to see what proportion of cancers could be directly attributed to smoking.

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Smoking-related cancers were defined as cancers of the lung, bronchus, larynx, liver, colon, rectum, small intestine, kidneys, oral cavity, nose and middle ear, cervix, vagina, vulva, penis, anus, pancreas, oesophagus, bladder and stomach, as well as acute myeloid leukemia.

The final study population included 4423 women enrolled in WIHS between 1994 and 2018 and 6789 men who have sex men who were recruited to MACS between 1984 and 2018.

Approximately three-quarters of WIHS participants and 44% of those enrolled in MACS were HIV positive. Smoking was highly prevalent, documented for 65% of WIHS and 60% of MACS participants.

A total of 406 smoking-related cancers were diagnosed, including cancers of the lung/bronchus (117), colon/rectum (52), anal (52) and liver (39).

Incident rates were higher in women than in men, and higher in those living with HIV:

- HIV-negative men: 138 per 100,000 person years.
- HIV-positive men: 279 per 100,000 person years.
- HIV-negative women: 276 per 100,000 person years.
- HIV-positive women: 434 per 100,000 person years.

Incidence rates remained significantly higher among people with HIV even after the investigators took into account other established risk factors for smoking-related cancers, including duration and intensity of smoking ($p < 0.01$). Moreover, incidence was still higher among people with HIV when analysis was restricted to the period of modern antiretroviral therapy (50% increase in risk, IRR = 1.5; 95% CI, 1.0-2.2). Cancer risk among people with HIV was associated with a CD4 cell count below 200 or a viral load above 500.

"This is one of the largest cohort studies to examine the contribution of smoking to cancer burden among people living with HIV relative to highly similar people without HIV."

Approximately a third (31%) of smoking-related cancers observed in people with HIV were directly attributed to smoking. The proportion was higher for women than men (39% vs 28%, p = 0.05).

"This is one of the largest cohort studies to examine the contribution of smoking to cancer burden among people living with HIV relative to highly similar people without HIV," write Dr Hessol and colleagues. "Among those with a history of smoking, the observed incidence of smoking-related cancers was significantly higher among people living with HIV."

The investigators were unclear about the causes of the higher cancer incidence seen in women. Female participants tended to have smoked less than male participants, but prior studies have shown women to be more susceptible to lung cancer than men.

"These data lend strong support for integrating smoking cessation interventions into ongoing HIV programs and educating people living with HIV, especially women, about the harm of smoking and the benefits of quitting," recommend the authors.

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doi: 10.1097/QAD.0000000000002717

Very few people with HIV stop smoking after brief advice from clinicians

Roger Pebody *February 2020*

Two recent reports highlight the low rates of smoking cessation achieved using recommended brief interventions during routine appointments at HIV clinics.

Smoking is responsible for the loss of more life-years in people with HIV than HIV itself. People living with HIV are more likely to smoke than the general population and may be at greater risk of smoking-related illnesses, including heart disease, lung disease and some cancers. Effective smoking cessation interventions are therefore a priority, but it is unclear whether those developed for the general population have sufficient impact.

In Italy, smoking cessation experts trained HIV doctors at ten hospitals in Italy to deliver the 5A's intervention, which involves clinicians asking about smoking, advising smokers of the benefit of stopping, assessing motivation to quit (using the stages of change model), assisting smokers in their quit attempt and arranging follow-up with stop smoking services. They were encouraged to offer this support at multiple clinic visits and outcomes were assessed after two years.

Of 1087 patients seen, 561 were smokers. Two years later, 41 of the 561 (7.3%) had successfully quit smoking for at least six months.

Quit rates were higher amongst patients who were assessed as being more ready for behaviour change (in the 'preparation' or 'contemplation' stages) than others. They were also higher (10.8%) in people attending the four clinics which said they *did* repeat discussions about smoking at multiple appointments. The intervention was only partially implemented by the other six clinics, because of time constraints and a perceived lack of interest from patients.

Of note, only 22 patients were given nicotine replacement therapy, medications such as varenicline *(Champix)* or e-cigarettes. This means the results mostly reflect the impact of counselling on its own, without pharmacological support. Also, three clinics were unable to refer patients to a specialist stop smoking service. Four could refer to a service in their hospital and three to a service in the same city, but none had this available within their own clinic.

In London, smoking cessation experts trained three healthcare assistants (nursing assistants) at the HIV clinic of the Royal Free Hospital to provide brief advice, as

recommended by UK guidelines. The approach is broadly similar to the 5As, but with a greater emphasis on referral to a stop smoking service in the patient's local area. As well as information and advice, these services can prescribe nicotine replacement therapy and other medications.

"4% of all identified smokers quit."

Of 1548 patients who were asked about smoking, 385 were smokers. Almost all were offered a referral to a stop smoking service, but only 154 accepted the referral. Follow-up with the stop smoking services three months later showed that 36 patients did attend the service, 78 did not and attendance was unknown for 40 patients. Of the 36 who did attend, 16 were recorded as having quit smoking (the duration of the quit was not reported). This means that 4% of all identified smokers quit.

Nonetheless, an economic analysis was more encouraging. Costs were modest due to the low pay grade of the staff involved and the brevity of the intervention. The estimated costs were £5.22 (GBP) for each smoker identified and £55.77 for each individual who attended stop smoking services.

The authors suggest that having a stop smoking service within the HIV clinic might remove a barrier. “If the risk of smoking-related morbidity among people living with HIV is to be reduced, more sustainable referral pathways and ways of improving uptake of smoking cessation services must be developed,” they say.

HRSA
Ryan White & Global HIV/AIDS Programs

HRSA's Ryan White HIV/AIDS Program

The Intersection of HRSA's Ryan White HIV/AIDS Program and the Opioid Epidemic

A recent study has shown that the overall number of deaths in people with HIV in the United States is declining (12.7% decline from 2011 to 2015), yet the number of opioid overdose deaths in people with HIV is on the rise (47% increase from 2011 to 2015).[1] The Health Resources and Services Administration's (HRSA) Ryan White HIV/AIDS Program (RWHAP) recipients have spent decades building systems of care to meet the needs of people with HIV, including providing services to address individuals' medical and social needs. In consideration of the opioid crisis, RWHAP recipients are facing the need to redouble their efforts to provide services to the most vulnerable populations, meeting clients where they are and working to improve individual-level and overall public health.

[1] Bosh KA, Crepaz N, Dong X, et al. Opioid overdose deaths among persons with HIV infection, United States, 2011–2015. [Abstract number 147]. Abstract presented at the 2019 Conference on Retroviruses and Opportunistic Infections; March 7, 2019; Seattle, Washington.

To better understand the current impact of the opioid epidemic on the RWHAP, HRSA HIV/AIDS Bureau (HAB) hosted a Technical Expert Panel (TEP) on the "RWHAP Response to the Opioid Epidemic" in summer 2018. The TEP convened RWHAP recipients and other experts to discuss the intersection of the RWHAP and the opioid epidemic and how services for people with HIV who have substance use disorder could be bolstered to improve health outcomes. This technical assistance document provides examples from the TEP and follow-up phone interviews with TEP participants of activities RWHAP recipients are currently implementing for people with HIV who have substance use disorders; it also highlights how HRSA RWHAP providers can provide services to address clients' behavioral health needs, including those related to substance use.

> *"Like in the early years of HIV/AIDS, when homophobia led to responses of blame and fear, addiction is seen as a social problem rather than a defined disease. At the crux of another public health crisis, we need to take responsibility as a community, as providers, as human beings, for those who are living with addiction … This epidemic is a crisis that knows no geographic or economic boundaries. And the impact of it is felt across racial and ethnic minorities, and especially in disadvantaged populations. Like the HIV/AIDS epidemic, addiction touches just about every family in the U.S."*
>
> RADM Sylvia Trent-Adams, Ph.D., R.N. F.A.A.N., Principal Deputy Assistant Secretary for Health

CONSIDERATIONS FROM RWHAP PROVIDERS ON IMPLEMENTING SERVICES

RWHAP recipients are already engaging in work related to the intersection of HIV and the opioid epidemic, identifying the need in their jurisdiction and ways to implement work in what can be a challenging environment. The following overarching practices are important to consider when working to address the concomitant HIV and opioid epidemics in your jurisdiction.

- **Conduct training and provide technical assistance in all settings.** Consider a broad response to the opioid epidemic, with collaboration and program initiation from prevention, care, and treatment programs.
- **Explore opportunities to diversify funding.** Identify if funding is available from multiple sources (HIV prevention, RWHAP, Substance Abuse and Mental Health Services Administration [SAMHSA], etc.) to ensure that comprehensive services can be offered to clients. Within the evolving healthcare landscape, RWHAP funds can make it possible for "out-of-the-box thinking."

> *"When I asked them to come to the table, I asked as a partner. 'Let's do this together' instead of 'I'm doing this.' We need to collaborate and pull from our collective strengths."*
>
> Shannon Stephenson, Chief Executive Officer, Cempa Community Care

- **Use data to understand the needs of your client population.** Assess the data trends of clients accessing services at your site. Are there increases in the number of **new** clients who report injection drug use as a risk factor? Have the demographics of these clients changed or remained the same? What are the clinical outcomes of people with HIV who also have substance use needs? Understanding these questions can support program-planning activities.

- **Engage all providers.** Coordinate with local organizations to ensure that where a person initiates service does not define or limit the types of services they receive. Co-locate services when possible; for example, work to increase the co-location of medication-assisted treatment (MAT) and HIV treatment. Socioeconomic circumstances are at the core of linkage. Poverty, risk of HIV and other diseases, lack of jobs, and homelessness can be pervasive, ongoing, and unresolvable. Integrating services helps to treat the whole person.

- **Ensure warm hand-offs.** When possible, have a direct (i.e., in person) "hand-off" of a client from one service provider to another, helping to ensure the client successfully engages with the next provider.

> *"We need to better coordinate with local organizations to ensure that wherever patients land, we can ensure they get care."*
>
> Pamposh Kaul, Clinical Director, Ohio Regional AIDS Education and Training Centers

- **Encourage mainstreaming behavioral health services.** Work to incorporate behavioral health assessment and treatment into all RWHAP services. When all RWHAP clients are engaged in behavioral health, the engagement is destigmatized, and mental health and substance use risk factors can be assessed in a more consistent manner.

- **Assess and address emergent issues.** Inventory service systems to identify existing or emerging needs and issues. Consider if providers could establish and support mobile services to intensify efforts.

- **Understand the opioid epidemic and engage the community in which you are working.** Understand the type(s) of opioid epidemic in your jurisdiction (i.e., injection drug use, prescription drug use). There are different approaches to addressing the opioid epidemic, depending on the type of overuse experienced in a jurisdiction. Mobilize the broader community in which you are doing work to unify the effort. Develop a community action plan with a broad range of partners (e.g., military, tribal groups, homeless shelters, faith centers, emergency departments, barber shops/salons, police and other first responders, health department, etc.).

- **Ensure a client-centered approach to services.** Stigma toward substance users remains, even among some RWHAP recipients and subrecipients. RWHAP recipients have an opportunity to serve as leaders in implementing programs that meet substance users "where they are" without judgment, maintaining client rights, and ensuring that access to MAT and other interventions is not contingent on abstinence. The RWHAP has demonstrated high acuity in achieving viral suppression among people with HIV in general; however, reengagement and retention remain at the forefront of challenges when working with complex clients. Focusing on meeting clients where they are and embracing the challenges of individual circumstances could help increase access to and retention in the RWHAP systems of care for people with HIV who have substance use disorder.

> *"Many clients seem to be ready to be engaged—we will always offer resources and allow clients to know when they want to engage."*
>
> Tammy Miller, RWHAP Part C Clinic Manager

IMPLEMENTATION ACTIVITIES

RWHAP recipients have experienced successes in working with people with HIV who have substance use disorder. TEP participants are implementing the following strategies:

Community Engagement

- **Develop a community-level action plan.** The process of developing an action plan includes analysis of what exists within the community, what does not exist in the community, and where people are falling through service gaps. Implementation of the action plan helps to improve workflow.

- **Focus on relationships to gain trust.** Gather broad representation of community leadership and members to create a consortium to tackle the opioid problem in individual communities. This emboldens people to continue and further the work on their own.

- **Collaborate with health centers to establish an HIV, HCV, and substance use disease management portfolio.** Health centers have a wide range of services, eliminating the need for clients to be referred out to additional providers. Invest RWHAP funds in existing resources, like health centers, and work to bolster them. Coordinate with local providers and provide them with training and resources to assist them in furthering the services they are able to provide.
- Address and work to reduce **stigma.**

Development of Comprehensive and Integrated Services

- **Support syringe services programs (SSP).** RWHAP funds can be used to support SSPs, with the exception of needles/syringes and related equipment. The most effective SSP model is multi-tiered: for example, a full SSP that is open five days a week for 40 hours a week, with mobile clinics that go to various locations two hours a week.

"I would say that stigma and transportation are the biggest obstacles to any kind of care in rural communities—addiction, HIV, mental health. There is tremendous stigma around any of these topics. What that turns out to mean in the field is the work is slower than you would like, painstaking. You have to spend a lot of time gaining people's trust, and even then, they may not agree, but at least they would listen to you."

Judith Feinberg, Professor, Behavioral Medicine & Psychiatry, West Virginia University

- Establish **local treatment and prevention** for people who have substance use disorder.
- **Develop and support programs that distribute naloxone** at saturation levels directly to people in communities at high risk.
- Streamline **immediate access to medical care** to ensure that people with HIV do not have to wait for care.
- Investigate the ability of **MAT providers** to prescribe and/or administer HIV medications.

"Stigma is crosscutting, regardless of health care policy and financing landscapes."

Daniel Raymond, Deputy Director, Planning & Policy, Harm Reduction Coalition

- Develop a **case management model for people who have substance use disorder,** combining lessons learned from medical and nonmedical case management implementation. Establish and share coordinated care plans across RWHAP and behavioral health.

Systems Changes

- Explore opportunities to enact **policy changes** to make buprenorphine available in more settings, including SSPs, jails, emergency departments, and homeless shelters.

"Medicaid expansion has been critical because it opens up opportunity. [It] opens up people to a range of services beyond what Part A would fund. [It] opens up PrEP [pre-exposure prophylaxis]. It has been critical for people accessing services."

Coleman Terrell, Director, Philadelphia Part A

- **Educate** all team and support system members (RWHAP case managers, primary care providers, family, etc.) on addiction disease and management in an effort to enact change.
- **Provide training** on pain management, including dealing with both the pain people have and the reasons why people might be misusing substances. Give options for people who might be ready for harm reduction, not elimination.
- **Support frontline staff** who are directly impacted by trauma on a regular basis.

Although RWHAP recipients have implemented work related to the opioid crisis into their service structures, TEP participants noted that those efforts are just beginning to meet the needs. They indicated that much more effort is needed to fully address the HIV and opioid epidemics. HRSA HAB encourages recipients to consider ways to further their efforts to address the opioid epidemic in their existing and future service structures.

HOW HRSA'S RWHAP CAN SUPPORT PEOPLE WITH HIV WHO HAVE SUBSTANCE USE DISORDER

RWHAP recipients are funded to provide a range of services to support the HIV-related needs of eligible individuals. HRSA HAB Policy Clarification Notice (PCN) 16-02 details the allowable uses of RWHAP funds to provide services to both people with HIV and, in some instances, people who are affected by HIV. To be an allowable cost under the HRSA RWHAP, all services must—

- Relate to HIV diagnosis, care, and support,
- Adhere to established HIV clinical practice standards consistent with U.S. Department of Health and Human Services (HHS) Clinical Guidelines for the treatment of HIV and other related or pertinent clinical guidelines, and
- Comply with state and local regulations and be provided by licensed or authorized providers, as applicable.

Although PCN 16-02 specifically outlines the allowable activities under the Substance Abuse Outpatient Care and Substance Abuse Services (residential) service categories, all core medical and support services can be leveraged to assist RWHAP clients who have substance use disorder (refer to HRSA HAB PCN 16-02 for the complete service category definitions).

In March 2016, HHS released guidance on the use of federal funding to support SSPs. The guidance maintains the prohibition of the use of federal funds to purchase sterile needles or syringes for the purpose of injection of any illegal drug; however, it includes funding SSPs as an allowable use of federal funds. In April 2016, HRSA issued guidance specific to the use of HRSA funds (including RWHAP funds) to support certain components of SSPs. RWHAP recipients should coordinate with their project officers when considering implementation of SSP components as part of their RWHAP-funded work.

RESOURCES

The following resources are available for RWHAP recipients to explore how they can further implement behavioral health services for people with HIV who have substance use disorder.

amfAR. 2019. "Opioid Epidemic/Drug Policy." www.amfar.org/opioid-drug-policy.

Centers for Disease Control and Prevention. 2019. "Opioids Portal." www.cdc.gov/opioids.

Dawson, L., and J. Kates. 2018. "HIV and the Opioid Epidemic: 5 Key Points." Kaiser Family Foundation. www.kff.org/hivaids/issue-brief/hiv-and-the-opioid-epidemic-5-key-points.

U.S. Department of Health and Human Services. August 2012. *Training Manual: Integration of Buprenorphine into HIV Primary Care Settings*. Available at www.targethiv.org/sites/default/files/file-upload/resources/HRSA.%20SPNS.%20IHIP%20buprenorphine%20training%20manual.%20508%20compliant.pdf.

U.S. Department of Health and Human Services. 2018. "Substance Use and HIV Risk." www.hiv.gov/hiv-basics/hiv-prevention/reducing-risk-from-alcohol-and-drug-use/substance-use-and-hiv-risk.

U.S. Department of Health and Human Services. 2019. "Help, Resources and Information: National Opioids Crisis." www.hhs.gov/opioids.