


Mental health, substance use disorder, and opioid uses disorder: updates and strategies for treatment*

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Objective: to describe the main strategies to deal with gaps in the identification, treatment and training regarding substance use disorder (SUD), and opioid uses disorder (OUD). **Method:** this is a narrative review, based on recent articles and publications on mental health and substance use recognized internationally. **Results:** a prevalence of co-occurring substance use and mental health/psychiatric disorders continue to rise and are considered complex problems, with multifaceted treatment challenges including medical conditions, disabilities, homelessness, medication noncompliance, and high relapse rates. The treatment for SUD and OUD are complex. The co-occurrence of these two disorders require a multifaceted approach for the diagnosis and treatment. **Conclusion:** the prevalence of SUD, OUD and their co-occurrence continue to rise and nurses and other health professionals should be prepared to diagnose, treat and/or refer users to assure their adequate care and long term recovery.

Descriptors: Substance-Related Disorders; Opioid-Related Disorders; Mental Health; Therapeutics.

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Saúde mental, transtorno por uso de substâncias e transtorno por uso de opioides: atualizações e estratégias de tratamento

Objetivo: descrever as principais estratégias para abordar lacunas na identificação, tratamento e treinamento sobre saúde mental, transtorno do uso de substâncias (TUS) e transtorno do uso de opioides (TUO). **Método:** trata-se de uma revisão narrativa, a partir de artigos recentes e de publicações de instituições que abordam a temática da saúde mental e da dependência química reconhecidas internacionalmente. **Resultados:** a prevalência de uso concomitante de substâncias e transtornos psiquiátricos/de saúde mental tem sido elevada e continua crescente, compondo problemas complexos que implicam em desafios de tratamento multifacetados, incluindo condições médicas, deficiências, falta de moradia, abandono de medicamentos e altas taxas de recaída. O tratamento de TUS's e TUO's são questões individualmente complexas. A combinação dos dois transtornos requer uma abordagem de diagnóstico e tratamento dedicada e multifacetada. **Conclusão:** como a prevalência de TUO's, TUS's e COD's continua a aumentar, enfermeiros e profissionais de saúde devem estar preparados para diagnosticar, tratar e/ou encaminhar os usuários para garantir o cuidado adequado e a recuperação a longo prazo dos indivíduos acometidos.

Descritores: Transtornos Relacionados ao Uso de Substâncias; Transtornos Relacionados ao Uso de Opióides; Saúde Mental; Terapêutica.

Salud mental, trastorno por uso de sustancias y trastorno por uso de opioides: actualizaciones y estrategias de tratamiento

Objetivo: describir las principales estrategias para abordar las brechas en la identificación, tratamiento y capacitación en salud mental, trastorno por uso de sustancias (TUS) y trastorno por uso de opioides (TUO). **Método:** se trata de una revisión narrativa, basada en artículos y publicaciones recientes de instituciones reconocidas internacionalmente que abordan el tema de la salud mental y la dependencia química. **Resultados:** la prevalencia del uso concomitante de sustancias y trastornos psiquiátricos/de salud mental ha sido alta y continúa creciente, lo que agrava problemas complejos que implican desafíos de tratamiento multifacéticos, que incluyen afecciones médicas, discapacidades, falta de vivienda, abandono del uso de medicaciones y elevadas tasas de recaída. El tratamiento de los TUS y TUO son problemas individualmente complejo. Una combinación de los dos requiere un enfoque de diagnóstico y tratamiento dedicado y multifacético. **Conclusión:** como la prevalencia de TUO, TUS y COD sigue aumentando, las enfermeras y los profesionales de la salud deben estar preparados para diagnosticar, tratar y / o encaminar para garantizar la atención adecuada y la recuperación a largo plazo de las personas afectadas.

Descriptorios: Trastornos Relacionados con Sustancias; Trastornos Relacionados con Opioides; Salud Mental; Terapéutica.

Introduction

Estimates are that over 50% of individuals with mental health disorders and serious mental illness (SMI) also have a co-occurring substance use disorder (SUD) or opioid use disorder (OUD). Frequently referenced as a dual diagnosis (DD), it is imperative that care provider education, training, identification, and treatment gaps are reduced as substance use and abuse continues to rise. Pre-COVID 19 global pandemic estimates provided by the Substance Abuse and Mental Health Services Administration (SAMHSA), indicate that co-occurring substance use and mental health/psychiatric disorders (CODs), as now more commonly referenced, affected approximately 9.2 million adults, and at least 358,000 adolescents in the United States alone⁽¹⁻²⁾. Globally, SUD prevalence for alcohol, cannabis, and opioids is estimated at around 100.4 million alcohol abusers, 22.1 million for cannabis, and 26.8 million for opioids⁽³⁾. Chances are these numbers are higher when considering potential stigmas associated with disclosing addictions. SUDs, and OUDs, especially when coupled with co-morbidities, require integrated social, medical, and mental health care and support. Mental health/psychiatric disorders, and substance abuse on their own are complex. COD patients can present a plethora of multifaceted treatment challenges including medical conditions, disabilities, homelessness, medication noncompliance, and high relapse rates. Associated societal, familial, and economic burdens can add additional complications⁽⁴⁾.

The present study aims to describe the main strategies for addressing identification, treatment, and training gaps about mental health, substance use disorder (SUD), and opioid uses disorder (OUD).

Method

This is a narrative review, based on recent articles and publications of institutions that address the theme of mental health and chemical dependence recognized internationally such as: Substance Abuse and Mental Health Services Administration (SAMHSA); National Institute on Drug Abuse (NIDA); American Psychiatric Association (APA) e American Medical Association (AMA).

Results and Discussion

COVID-19's Detrimental Impact on Addictions and Mental Health

Social isolation, and additional reinforcements of such, including global pandemic restrictions and fears,

pose a risk for mental illness exacerbations, substance use and abuse, and relapse. Additionally, economic hardship, housing instability, reduced health care access, and access to support and recovery services present additional challenges in these populations⁽¹⁾. With concerning numbers of cooccurring psychiatric, opioid, and substance use disorders, exacerbated by repercussions of the global COVID-19 pandemic, it is imperative that mental health clinicians are aware of an intensifying COD epidemic. Knowledge of diagnoses, treatment, barriers, and referral options, integrating facets of mental and medical health care with substance and opioid abuse recovery, is critical for achieving sustainable results with these growing patient populations⁽⁵⁾. Twenty percent of individuals with a severe mental illness (SMI) will develop an SUD during their lifetime. A challenging, yet opportunistic gap exists when current estimates remain at a mere 7.4% of these SMI-afflicted individuals receiving treatment for both disorders, and an estimated 55% receiving no treatment at all^(1,6). These gaps in care are likely to increase without adequate education, training, research, diagnosis, funding, and coordinated treatment.

Defining and Diagnosing SUDs and OUDs

Globally, alcohol, tobacco, and illicit substance use, both directly and indirectly, claim at least 11.8 million lives annually. This death toll is more than all cancer deaths, which were most recently estimated to be 9.5 million. Over half of those who die from alcohol or drug overdoses are younger than 50 years old⁽⁷⁾. The DSM-5 recognizes SUDs as resulting from the disordered abuse of at least one numerous drug classes including alcohol, cannabis, hallucinogens, inhalants, sedatives, hypnotics or anxiolytics, stimulants, tobacco, caffeine, and other or unknown substances. Further, an SUD is classified as continued, recurrent, use and abuse of drugs (including alcohol, tobacco, and caffeine) resulting in clinically significant impairment, health complications, disability, and inability to meet responsibilities at work, school, or home. OUD is often separated out due to the growing prevalence^(1,8). Diagnosis of a co-occurring psychiatric or mental disorder (COD) with SUD requires at least one disorder of each type in independent existence of the other, not simply a cluster of symptoms resulting from one disorder^(1,8).

The OUD Epidemic, Rising OUD Overdose Rates, and COVID-19

From 1999–2018, approximately 450,000 people in the United States died from an opioid overdose. In the

span of 15 years, 2002 to 2017, deaths involving fentanyl and other synthetic opioids (not including methadone) increased 22-fold, for heroin death, the increase was more 7-fold. Suspected opioid overdoses resulted in a 30 percent increase in U.S. emergency department visits from July 2016 to Sept. 2017. The opioid crisis was acknowledged as a national Public Health Emergency on Oct. 27, 2017. The continuing OUD crisis highlights the challenges and complexities in responding to a substance abuse-related Public Health Emergency⁽⁹⁾. In OUDs, SUDs, and CODs, numerous multifactorial components need to be addressed simultaneously. Neurobiology, availability of, and access to, effective treatments, prevention strategies, and the sociocultural context, are all relative to epidemiology. Compared to the general population, people with OUDs, SUDs, and CODs are more likely to have a higher burden of medical comorbidities, including medical implications of a dampened immune system response, respiratory suppression, infections and pulmonary disease outcomes, cardiovascular comorbidities, and related complications⁽³⁾.

Opioids, now in the category of epidemic, result in considerable mental and physical health burdens, claiming the life of an estimated 150 Americans each day. Alarming, since the start of the COVID-19 pandemic, increased relapses and opioid-related deaths have been reported in over 40 U.S. states. OUD is also costly. For example, average medical costs of \$60B from just 2 million Americans diagnosed with the disorder make OUD one of the single most expensive disorders in the U.S.⁽¹⁰⁾. Integrated care issues have been further exacerbated by limited access repercussions of the global Covid-19 pandemic⁽¹¹⁾. In the last three decades, CODs and SUDs have been consistently replicated in several large epidemiological studies⁽¹²⁾. With over 150 million (and rising) comorbidity individuals worldwide, these complex conditions remains a major global and public health concern. Additionally, as previously mentioned, more than half of those with a dual diagnosis do not receive treatment, or they receive fractured care for one illness and not the other⁽¹³⁾. Despite its clinical prevalence, SUDs, CODs, and OUDs, remain underrepresented in neuroimaging and psychiatric research. Studies that have been done show that the combined operation of self-medication mechanisms, common etiological factors, and mutually causative influences most likely account for most comorbidity⁽¹²⁾.

Effective, Integrative Treatment, Access to Care, Reimbursement Issues

The gold standard for effective treatment begins with an accurate and comprehensive assessment,

diagnosis, and early intervention^(8,13). Diagnostic criteria for establishment of SUDs and OUDs are delineated in the DSM-5. Applying these criteria often requires training and supervision. Learning tool kits, online courses, and evolving, efficient screening tools are available to assist the clinician with mastering this process. The construction of a comprehensive patient-centered treatment plan relies on the clinician's ability to establish an accurate patient history. The topic of substance and opioid use and abuse can be sensitive and stigmatizing for many. Questions must be carefully worded to elicit accurate responses. It is imperative that practitioners remain non-judgmental throughout the process. Building a good rapport from the start also ensures that the patient will stay on track with the treatment plan.

Improving access to mental health, addiction screening, and treatment in primary care settings is a critical component of care integration for these at-risk groups. In the U.S., federally qualified health centers, particularly in underserved neighborhoods, offer vital access to addiction screening and treatment services. However, studies have shown that if health centers are not receiving Medicaid funding and targeted grants, they are less likely to be staffed with trained addiction specialists. Patients are also five times less likely to receive addiction screening and medication-assisted treatment (MAT). Health centers receiving targeted Health Resources and Services Administration (HRSA) funding for addiction services are 20 times more likely to provide MAT and more than three times as likely to employ psychiatrists. Privacy protections on addiction treatment data was also identified as a barrier to building addiction treatment capacity⁽¹⁴⁾.

Topics for Establishing SUD and OUD Provider/Patient Connections

Suggested, ordered topics may be a good starting point for establishing patient connection. For each topic, inquiry into the amount used is the goal. This is particularly useful for tobacco and alcohol, being mindful that alcohol servings vary widely among cultures. For example, in Irish or Scots cultures, it may be common to drink whiskey, and one serving for a patient might be the size of a beer bottle. Mixed drinks should be identified by name for alcohol content comparison. Identify amounts of socially accepted substances (nicotine and caffeine), total use (beer, wine and spirits, or hard liquor), over-the-counter substances such as herbal preparations, pseudoephedrine, dextromethorphan, NSAIDs with diphenhydramine, and caffeine-containing products, including those used for weight loss and strength training. Move into marijuana use, whether medicinal or recreational, and pattern of use,

and abuse of prescription medications, including sedatives, stimulants, and opioid analgesics. Lastly, identify use of illicit drugs such as heroin, cocaine, various hallucinogens, and inhalants

If at any point a provider does not understand any unofficial drug terms used, the patient should be encouraged to explain. Frequency of substance use, length of substance use, and the last time used, as well as where, when, and with whom the drug is used, are necessary inquiries. The daily/weekly/monthly amount of money spent on drugs might be useful in estimating drug usage. Familiarization with street prices is useful in that prices vary widely among dealers. For illicit drugs, determine the route of administration, which can be helpful in determining whether the patient might have any complications and the need for hepatitis B and C and HIV tests.

Inquire about the positive and negative aspects of the drug use.

Negative effects include problems in relationships, work or legal and financial issues, elevated risk for illness, traumatic accidents, fractures, burns, and increased risk for co-occurring psychiatric issues, including anxiety, depression, and psychosis. Often, social relationships are affected first because the user constricts social contacts to have more time to spend using the drug or with other users.

If the patient has an SUD or OUD, inquire whether the patient has tried to quit and how, participation in support groups, periods of abstinence, prior detoxification and addiction treatment, and the longest time the user remained substance free. It is also useful to inquire about a family history of SUDs because it is a risk factor for development and relapse. Inquire whether the person's partner also has an SUD because it can increase the risk of the SUD. With the patient's permission, family members may also be interviewed to confirm and check the effects of the substance use on the family. Signs and symptoms of localized or systemic infections may be seen because of impaired host immunity, poor hygiene, "laced" drugs, contaminated drug paraphernalia, and inadequate preparation before injection. Risky sexual behavior is also common among substance users. Signs and symptoms of withdrawal and intoxication for each substance have been discussed previously^(8,15).

Physical assessment characteristics will help clinicians and trainees with identification and subsequent care planning. Needle marks and "tracks" on veins are seen on the skin of injection drug users. Thorough examination is necessary because some patients inject in hidden places

like dorsal side of the penis, under the breast or tongue, or the axillar area. Skin and soft tissue abscesses in injection drug users are usually due to methicillin-resistant *Staphylococcus aureus*. New murmur, splenomegaly, and petechia of conjunctiva, oral mucosa, or arms indicate infectious endocarditis. A productive cough, hemoptysis, dyspnea, and changes in breath sounds may point to tuberculosis or community-acquired pneumonia, especially in homeless patients or those living in close communal spaces. Shrunken or enlarged liver is associated with alcoholic or infectious hepatitis. Oral thrush can be a sign of HIV. Respiratory problems, nasal mucosa atrophy, and perforation of nasal septum are the common consequences of smoking and snorting cocaine⁽¹⁶⁾. Findings of genital warts, ulcers, syphilitic chancre, vaginal candidiasis, HIV, and unwanted pregnancies suggest risky sexual behavior and are commonly seen in substance users or abused women who also use drugs.

Sleep disturbance and weight loss are common general problems. Unexplained sudden exacerbations of previously regulated hypertension, diabetes mellitus, and other chronic diseases may suggest SUD.

Testing Options

Labs

While consent is required before some testing, many patients may not be able to consent. Testing can be done without consent in certain scenarios, including inability to consent, if the clinician is acting in good faith for the benefit of the patient or a legal warrant is issued⁽¹⁷⁾.

Breath Test

This noninvasive test is commonly used by police officers to assess a person's blood alcohol content on the scene. Special "breathalyzer" devices are now available to stop cell phones and cars from turning on depending on an individual's blood alcohol content. Breath testing is also effective in suspected marijuana, amphetamine, methamphetamine, tramadol, cocaine, and diazepam use⁽¹⁸⁾. Substances can be detected within 1 to 2 hours after use.

Urine Testing

Urine is easy to obtain, noninvasive, and capable of detecting many drugs, making urine testing the most widely used assay. It does not measure impairment. Alcohol, marijuana, amphetamines, opioids, cocaine, and PCP are the most screened substances. This test is most

often based on immunoassay technique because of its speed and low cost. Positive tests should be confirmed by mass spectroscopy and gas chromatography. False positives can have heavy social and medical consequence. A positive urine drug screen is an indication of recent drug use and does not provide evidence of earlier use. False-positive drug screens can be associated with the use of nonsteroidal anti-inflammatory drugs (cannabinoids or barbiturates), Vicks inhalers (amphetamines), poppy seed rolls (opiates), and fluoroquinolones (opiates)⁽¹⁹⁻²⁰⁾. Tampering with a urine sample compromises test validity and reliability. This is a relatively common issue, and steps must be taken to prevent it. Direct supervision of urine sample collection by a same-sex nurse or officer reduces the opportunity to swap urine samples. Dilution of urine and addition of additives can also be avoided this way. Common ways to cheat urine tests include ingestion of large quantities of liquids, use of diuretics, and addition of water or household bleach to the urine sample.

Sweat Testing

Rapid and sensitive illicit drug detection is imperative for monitoring drug use and treatment compliance. Sweat-based drug analysis is advantageous as a non-invasive detection test. Field application is often hindered as most of the collection methods developed to date are qualitative, slow, or costly. Recent studies have confirmed rapid, sensitive, quantitative detection of drugs including four common drugs of abuse, methadone, methamphetamine, amphetamine, and tetrahydrocannabinol⁽²¹⁾.

Oral Fluid Testing

Oral fluid (saliva) sampling is another noninvasive method of collection for drug testing. Saliva tests detect drugs within 1 to 24 hours. Collection is usually performed in a laboratory setting; however, some rapid point-of-collection tests are also available. Drugs that inhibit salivary secretions, such as 3, 4-methylenedioxy-methamphetamine (ecstasy) or caffeine, or conditions in which production of saliva is reduced, such as Sjögren's syndrome, make collection difficult. Accuracy, reliability, and cutoff points are not clearly established⁽²²⁾.

Blood Testing

Invasive blood tests are the most accurate way to determine current intoxication, and collection procedures follow standard blood collection procedure. Drugs can be detected within 1 to 2 hours after usage and remain in the blood for several days.

Hair Testing

Hair testing is a noninvasive method for long-term detection of drug use. Hair grows 0.5 inches *per* month, and follicle screens happen for 30 to 90 days. For the test, a sample of 80 to 120 strands of hair is cut at the scalp, although body hair may also be used. Because body hair grows slower than scalp hair, the collection procedure takes longer. Collected samples are sent to a laboratory for chromatographic analysis. Drugs and their metabolites are detectable starting 7 to 10 days after use.

Harm Reduction Strategies

Harm reduction interventions, frequently associated with substance abuse, are interventions aimed at reducing problematic behaviors. Harm reduction can be applied to any decision associated with negative consequences. For example, clean needle exchange programs for IV drug users, and reducing alcohol poisoning risks for underage college drinkers by prioritizing less risky drinking habits. Harm reduction strategies also provide additional tools for clinicians working with patients who are not yet be ready, willing, or able to completely abstain from risky behaviors. During the Covid-19 pandemic, many homeless individuals with SUDs sought care and protection from Covid-19 transmission, causing an initial uptick in shelter volume. However, since drug use is officially prohibited in these facilities, these people would leave isolation temporarily or prematurely, winding up back on the streets. Ensuring the safety and well-being of those with SUDs, as well as the communities they live in, studies have shown that harm reduction access expansion will be critical for subsequent Covid-19 waves, pandemics, and epidemics⁽²³⁾. A relatively new, promising, harm reduction strategy involves hospital addiction medicine consultation teams (AMCTs). AMCTs have been shown to improve hospital care for SUD patients with substance use disorders, difficulty accessing follow-up care, and residual conflicts between the AMT harm reduction approach and the abstinence-only emphasis given some hospital staff⁽²⁴⁾.

It has been shown that significant improvements are made in addressing a public health crisis when the condition is publicized and destigmatized. Healthcare professionals, including all stakeholders across the health care system, including insurers, must be ethically and morally obligated to treat people with SUDs with the same dignity and respect as any other patient group. Progress against the current opioid crisis, and related substances of abuse, depends on an attitudinal shift away from blame, shame, and stigma and toward respect and compassion⁽²⁵⁾.

Establishing Level of Care/Plan of Care

As with other chronic illnesses (as hypertension and asthma), OUD and SUD treatment and relapse prevention requires adherence to an ongoing, focused plan of care. Without appropriate treatment interventions, approximately 40 to 60% of people with SUDs, after initial diagnosis and treatment, will relapse. OUD/SUD relapses often have fatal consequences. Drug overdose is now the leading cause of death for Americans under 50 years old. Opioid, alcohol, and cocaine-related death rates continue to rapidly increase while also contributing to average life expectancy declines for the last two years⁽²⁶⁻²⁷⁾. Countering high relapse rates requires a continuing care model with routine assessments and treatment customized to the individual. Monitoring of clinical status and relapse is key. Intensity of care is based on the severity of the SUD, risk of relapse, and willingness to engage in treatment⁽²⁸⁾.

Outpatient Treatment

Treatment options that do not require hospital admission include individual and/or group counseling, peer support groups, pharmacotherapy, toxicological screening, and medical and psychiatric consultation.

Intensive Outpatient Programs (IOPs)

IOPs provide a level of care that is more intense than outpatient programs: The planned format involves a minimum of 9 hours of therapy *per* week and is located in outpatient, partial hospital, or hospital settings. Clinical services provided include individual and group counseling, peer support groups, pharmacotherapy, toxicology services, and medical and psychiatric consultation. Family therapy, vocational services, and recreational therapy may also be available. Vocational training and employment services assist individuals in making an easier return to daily function⁽¹⁾. Treatment is geared toward helping patients attain or maintain sobriety, improve functioning, and reside in the community.

Partial Hospitalization Programs (PHPs)

These programs are like IOPs, except patients attend more frequently—at least 20 hours *per* week, up to seven days a week. Treatments are tailored to individual needs, and may include group therapy, support groups, individual therapy, and skill building. These programs may lessen the necessity of implementing full hospitalization.

Residential Services

These programs offer a 24-hour alcohol- and drug-free environment and peer and professional support and are best for those living in environments not conducive to sobriety: surrounded by users, homeless, and so forth. Programs integrate behavioral therapy, proper diet, and exercise, leading to a general state of well-being. They require commitment to maintaining abstinence and active participation in therapy⁽²⁹⁾.

Clinically Managed, Low-Intensity Residential Services

These are short-term programs designed to provide transitional support. They vary widely in treatment, staffing, and underlying philosophy. This program is best for those who need structure and integration to recovery and coping. Community residential treatment facilities are an example of these resources. Cost is often the responsibility of the patient, which limits access to certain groups of people.

Clinically Managed, High-Intensity Residential Services

These support programs are for individuals who require 24-hour care in a treatment and rehabilitative environment. Typically, this option is used for individuals with significant cognitive difficulties resulting from substance use or in conjunction with mental health problems that cannot be managed without some type of rehabilitative services. Components are medication, life skills, and motivational strategies, including motivational interviewing, laboratory testing, social network formation, and coping skills⁽³⁰⁾.

Medically Managed Intensive Inpatient Services

This type of care involves 24-hour, daily physician visits from several days or weeks, often for detoxification and stabilization. Close monitoring of behaviors and treatment of withdrawal symptoms with a medication protocol is frequently needed to diminish withdrawal severity and ease detoxification.

Low Intensity

For patients with mild SUDs, monitoring should continue for the first year, after which they can be offered additional treatment if they relapse. Typically, these patients do not need continuing care, and they are able to function in their homes, communities, and workplaces.

Moderate Intensity

For patients with a moderate SUD and one or more co-occurring problems, such as insomnia or lack of social support, continuing care consists of intensive outpatient treatment for 1 to 2 months followed by weekly counseling for 4 to 6 months followed by monthly check-ins for 6 months, after which check-ins can occur less often.

High Intensity

High intensity is aimed at patients with a severe SUD, SUD with active co-occurring psychiatric disorder, or a physical dependence on alcohol or drugs, continuing care consists of an inpatient or residential treatment for withdrawal and achievement of initial abstinence, followed by intensive outpatient treatment for 1 to 2 months followed by outpatient treatment one to two times *per week* for 4 to 6 months, followed by monthly check-ins for 6 months, after which check-ins can occur less often, preferably randomly. The effectiveness of these programs varies with the drug of abuse, and the strength of effect after 2 years diminishes.

Continuing Care

Addiction Counseling

This option involves group counseling based on a 12-step approach oriented to abstinence, including peer support groups such as Alcoholics Anonymous (AA) and Narcotics Anonymous (NA). AA and NA suggest daily meeting attendance every day for the first ninety days of clean and sober time, then a minimum maintenance program of at least three times *per week*. These are suggestions based on the success rates of persons in recovery.

Psychotherapy

Individual psychotherapy, such as cognitive behavioral therapy (CBT), can be used in combination with or complimentary to a 12-step approach, particularly for those who have difficulty attending group meetings. Difficulty in attendance could be related to transportation issues, times when meetings are available, problems discussing their addiction in front of others, and the social stigma often associated with SUD.

Subsequent Continuing Care

Routine clinical monitoring of status and substance use is recommended. As time passes and the patient

remains abstinent, these contacts can be more infrequent. If the patient exhibits warning signs or signs of early relapse, more intensive care should be provided.

Treatment Resistant Patients

Contingency Management

Various incentives, including money, may be offered to encourage abstinence. However, the effects of incentives are not sustained over the long term.

Negative Consequences

More motivation may be seen in patients who are not motivated to attend continuing care sessions or if failure to do so brought about unwanted consequences such as re-hospitalization or return to prison.

Intensive Referral to Peer Support Groups

A substance abuse counselor delivers this three-session intervention to encourage attendance at peer support groups. This intervention includes lists of local self-help meetings; directions to, and descriptions of, these meetings; addressing questions and concerns; and meeting with a member of the group to encourage him or her to attend.

Stepped Care

This treatment emphasizes adaptation and customization based on the patient's clinical status and risk of relapse. Standardized monitoring of the patient's clinical status, algorithms to specify standing, and guidance to the physician on what changes to treatment modalities should be made are components of this care.

Social Reinforcement

This intervention consists of contracts, prompts, and social reinforcements with the goal of increasing attendance in a continuing care program. In the contracts, patients are provided research data on success rates depending on attendance in continuing care programs and are asked to commit to such a program. In social reinforcements, the patient receives acknowledgment for attending the discussed sessions, personal letters from counselors, certificates for completing treatment milestones, and medallions for attending specified numbers of sessions. Medallions and certificates are presented in front of other patients, providing additional positive reinforcement.

Network Support

This treatment is geared to help patients change their social networks to environments more conducive of abstinence and to identify other social supports in the community. This can be very labor intensive because although the distance between a drug-using neighborhood and a nondrug-using neighborhood might be small, people in those neighborhoods have very little communication with one another.

Technological Innovations

The growth of technology has brought about ease of access and a larger support community. There are a plethora of apps, programs, and platforms available via the patient's cell phone, laptop, or other device.

Primary Care Settings

Primary care physicians, behavioral health clinicians, or nurse practitioners provide this treatment. Some patients prefer to receive treatment in a primary care setting because of the stigma associated with specialty settings or because they do not like traditional programs and the relative openness needed to participate. Geographic availability can be an issue. As previously noted, primary care settings are a critical point of access and screening for SUD, OUD, and additional mental health issues.

Vulnerable Populations

Examined separately, many special populations with OUDs, SUDs and/or CODs are more vulnerable to treatment challenges and poorer outcomes. These populations may include military personnel, homeless, criminal justice system populations, women, minorities, people from diverse racial/ethnic backgrounds, adolescents, elderly, and healthcare workers⁽¹⁾.

Military Personnel

Active military personnel and veterans are a complex population at risk for SUDs, OUDs, CODs, trauma, posttraumatic stress disorder (PTSD), and suicidal ideation. They often lack access to sufficient mental health and addiction services. Recognizing and preparing to address the complexities inherent in military culture is imperative. Providers should have an in-depth understanding of military culture and competence to provide culturally and linguistically appropriate care.

Meeting the needs of diverse military populations (especially surrounding stigma toward mental illness that varies for different ethnic groups) requires familiarity with a variety of circumstances and stressors such as deployments and family commitments.

Homeless

Homelessness is on the rise, and prevalence of substance misuse and mental illness among people experiencing homelessness is high. Solari and colleagues⁽³¹⁾ found that about 37% of adults in permanent supportive housing programs had a mental disorder; 10%, substance abuse; and 29%, CODs. Risk of homelessness was associated with a history of mental illness, including SMIs, lifetime tobacco use, and lifetime suicide attempt, among other demographic and social variables⁽³²⁾.

Criminal Justice Populations

Estimated rates of mental disorders and SUDs in prison populations vary but are consistently high, often exceeding general population rates⁽³³⁾. In a sample of more than 8,000 U.S. inmates⁽³⁴⁾, nearly 48% had a history of mental illness, 29% had an SMI, and 26% had an SUD. About 48% of those with a mental illness also misused substances.

Women

Women are often faced with treatment barriers and socioeconomic burdens rendering them susceptible to OUDs, SUDs or mental illness alone are both. Women with both conditions, leads to substantial challenges making recovery more difficult and relapse more likely. Women with SUDs frequently have comorbid mental disorders including SMI⁽³⁵⁾. This leads to more severe symptoms, worse functioning, lower quality of life, and more complex treatment needs than for women who only have SUDs. Women with CODs (particularly involving SMI, like bipolar disorder or psychosis) are more likely than women with only SUDs to experience homelessness, be single, especially challenging with single motherhood, have a past history of physical or sexual abuse, receive public assistance, have a longer substance use history, have more severe alcohol use-related conditions⁽³⁵⁾.

People of Diverse Racial and Ethnic Backgrounds

Ethnic and racially diverse populations compared with Caucasian populations lag in rates of treatment access, utilization, and completion of treatment for mental

illnesses, SUDs, or CODs⁽³⁶⁾. This inequity may result from underassessment, underdiagnosis, under referral, and lack of culturally competent services⁽⁶⁾.

Native Americans

Native Americans bear a substantial burden of heavy substance use. Much of this burden is associated with poverty, a lack of employment, and under resourced communities, including health and social services that are needed to help assure healthy communities. Native Americans are a small population of original Americans that are frequently neglected by substance abuse treatment programs because of cultural differences. Native Americans are more likely to use drugs, engage in underage drug use, and have drug-related disorders and accompanying mortality and morbidity. Use of stimulants is the highest among Native Americans with increasing incidence rates. Prevalence in this population is associated with less income and education and an earlier age at first use. Intravenous stimulant use adds additional risk for stimulant dependence, non-remission, and psychosis. Substance abuse clinics in Native American communities are underfunded, and access is limited. Native American adolescents are at a higher risk for drug use than their non-Native American counterparts

Standard U.S. therapies, such as 12-step programs and evidence-based treatments, are potentially in conflict with some traditional Native American treatments of talking circles, tobacco/pipe ceremony, cultural mentors, cleansing, and herbal medicine. Cultural adaptation of the standard treatments has had improving success, with recent studies showing encouraging evidence that culture-based interventions used in addictions treatment for Indigenous people are beneficial to help improve client functioning in all areas of wellness.

Adolescents

Although there are fewer studies on comorbidity among youth, research suggests that adolescents with substance use disorders also have high rates of co-occurring mental illness; over 60 percent of adolescents in community-based substance use disorder treatment programs also meet diagnostic criteria for a mental illness. Alcohol use, smoking, and drug use often begin in adolescence. Teenagers should be advised about genetic predispositions for addiction, and the potential dangers of experimenting with any substances. When questioning adolescents about the use of substances, the parents should be advised to excuse themselves from the room. Asking about close friends who are using drugs (people),

access to drugs (places), availability of illicit drugs (things), are critical questions for the initial screening.

Older Adults

As a result of medical breakthroughs in patient care, the world's population is living longer. Aging produces various changes in the body, including decreasing hepatic and renal function, leading to a higher potential for overdose, particularly with BZDs and barbiturates⁽³⁷⁾. The middle-aged and elderly use these substances to cope with various life issues⁽³⁷⁾.

Healthcare Workers

About 4.4% of people working in healthcare have a problem with heavy alcohol consumption. Research has shown about 69% of physicians misused prescription drugs at least once during their career. Reasons identified were high stress levels as well as emotional and physical pain relief. In his book titled *Free Refills*, Dr. Peter Grinspoon wrote about how common opioid use is among doctors. He estimated the rate of use among these medical workers "start at 10% and rise up to 15%". His main reasoning for the growth rate is the easy access many physicians and nurses have to opioids like fentanyl, oxycodone, and others. Although hard to imagine, illegal substance abuse impacts about 5.5% of medical professionals struggling with illicit drug abuse⁽³⁸⁾. Estimates are that one out of every 10 of the 9.3 million nurses worldwide practices nursing while struggling with an untreated SUD, and additional studies have found over 20% of nurses binge drink⁽³⁹⁻⁴⁰⁾.

Notably, rates of prescription drugs, opioids, and benzodiazepines are higher among this demographic than in the general population. Risk factors are the levels of ease of access, high levels of work stress, and high ambition. Health care workers in anesthesia, emergency medicine, psychiatry, and family medicine are at a particularly increased risk for development of SUDs. Approximately 20% of all nurses struggle with an addiction to drugs or alcohol, and 1 in 10 physicians will fall into drug or alcohol abuse at some point in their lives. A recent study of 7,288 physicians asserts that 15.3% of the profession may meet DSM criteria for alcohol abuse or dependence. Physicians who receive treatment and participate in ongoing monitoring have a far lower rate of relapse, with 71% still sober, licensed and employed after 5 years⁽⁴¹⁾.

Health care worker colleagues have a responsibility to report suspected substance use to the respective professional licensing board medical board depending

on state reporting requirements. Failure to do so puts patients at harm, which has professional and legal sanctions and delays treatment. Determination of the ability to return to work depends on completion of substance use treatment, documentation of sustained abstinence, level of judgment and cognition, risk of relapse, and ongoing monitoring.

Conclusion

As OUDs, SUDs and CODs continue to increase, gaps and silos between treatments, service, and care received continues to grow. Screening at all patient encounter points, be it medical or psychiatric, must be thoroughly conducted to assess and diagnose as well as refer to appropriate, and ideally, integrated, levels of care. Failure to do so, dampens a person's chances of long-term recovery. While recovery is possible, facilitation requires clinical knowledge, understanding, and referral options for a dually diagnosed patient. The theoretical underpinning associated with this chapter suggests that any drug or substance taken in excess has the capacity to activate the brain reward system. This, in turn, reinforces behaviors that are the inducement of memories often producing profound and deep activations of the reward system. The outcome is often associated with neglect of normal activities and responsibilities coupled with increasing usage patterns to satiate the reward system. Drugs and substances of abuse can become substitutes for more adaptive and healthier behaviors.

Development of a reliable and relevant diagnosis during a clinical encounter is the cornerstone of psychiatric care and involves obtaining an accurate and relevant history of substance use and abuse while establishing a trusting and open rapport with the patient. Proper diagnosis provides essential elements for guiding treatment recommendations, determining prevalence rates for mental health services research and planning, and accurately identifying groups of individuals for clinical and basic science research, documenting, and tracking public health trends, including morbidity and mortality rates across the lifespan. Over time, DSM criteria have helped to shape a common language and platform to unify clinicians, researchers, policy experts, patients, and loved ones. Treatment of SUDs and CODs are complex individually. A combination of the two requires a dedicated, multi-pronged diagnosis and treatment approach. As prevalence of OUDs, SUDs and CODs continue to rise, nurses and health professionals must be prepared to diagnose, treat, and/or refer to ensure proper care and long-term recovery.

References

1. Substance Abuse and Mental Health Services Administration (US). Key substance use and mental health indicators in the United States: Results from the 2019 National Survey on Drug Use and Health (HHS Publication No. PEP20-07-01-001, NSDUH Series H-55) [Internet]. Rockville, MD: Center for Behavioral Health Statistics and Quality, Substance Abuse and Mental Health Services Administration; 2020. [cited 2021 June 10]. Available from: <https://www.samhsa.gov/data/>
2. Gordon S. About a Revolution: Toward Integrated Treatment in Drug and Mental Health Courts [Internet]. 2019 [cited 2021 June 10]. Available from: <https://scholars.law.unlv.edu/facpub/1179>
3. Mota P. Avoiding a new epidemic during a pandemic: The importance of assessing the risk of substance use disorders in the COVID-19 era. *Psychiatry Res.* 2020;290:113142. doi: <https://doi.org/10.1016/j.psychres.2020.113142>
4. Milano G, Vergani HM, Cattedra S, Carrozzino R, Mattioli F, Robbiano L, et al. Co-Occurring Psychiatric and Substance Use Disorders: Clinical Survey Among a Rural Cohort of Italian Patients. *Neuropsychiatr Dis Treat.* 2019;15:3453-9. doi: <https://doi.org/10.2147/NDT.S222567>
5. American Medical Association (US). Drug overdose epidemic worsened during COVID pandemic [Internet]. Maryland: AMA; 2020. [cited 2021 June 10]. Available from: <https://www.ama-assn.org/system/files/2020-11/issue-brief-increases-in-opioid-related-overdose.pdf>
6. Priester MA, Browne T, Iachini A, Clone S, DeHart D, Seay KD. Treatment Access Barriers and Disparities Among Individuals with Co-Occurring Mental Health and Substance Use Disorders: An Integrative Literature Review. *J Subst Abuse Treat.* 2016;61:47-59. doi: <https://doi.org/10.1016/j.jsat.2015.09.006>
7. Ritchie H, Roser M. Drug use [Internet]. 2019 [cited 2021 June 10]. Available from: <https://ourworldindata.org/drug-use>
8. American Psychiatric Association (APA). Diagnostic and statistical manual of mental disorders. 5th ed. Washington, DC: APA; 2013.
9. Centers for Disease Control and Prevention (US). Opioid Overdose. Washington, D.C.: CDC; 2020 [cited 2021 June 18]. Available from: <https://www.cdc.gov/drugoverdose/epidemic/index.html#:~:text=The%20first%20wave%20began%20with,increasing%20since%20at%20least%201999.&text=The%20second%20wave%20began%20in,in%20overdose%20deaths%20involving%20heroin>
10. Velez FF, Luderer HF, Gerwien R, Parcher B, Mezzio D, Malone DC. Evaluation of the cost-utility of a prescription digital therapeutic for the treatment of opioid use disorder.

- Postgrad Med. 2021;133(4):421-7. doi: <https://doi.org/10.1080/00325481.2021.1884471>
11. Schulte M, Boumparis N, Huizink AC, Riper H. Technological Interventions for the Treatment of Substance Use Disorders. *Ref Mod Neurosci Biobehav Psychol*. 2020. doi: <https://doi.org/10.1016/B978-0-12-818697-8.00010-8>
12. Stoychev KR. Neuroimaging Studies in Patients With Mental Disorder and Co-occurring Substance Use Disorder: Summary of Findings. *Front Psychiatry*. 2019;10:702. doi: <https://doi.org/10.3389/fpsy.2019.00702>
13. Substance Abuse and Mental Health Services Administration (US). Women in the mirror: Addressing co-occurring mental health issues and trauma in women with substance use disorders [Internet]. Rockville, MD: SAMHSA; 2015 [cited 2021 June 13]. Available from: https://www.samhsa.gov/sites/default/files/programs_campaigns/women_children_families/women-in-mirror.pdf
14. Substance Abuse and Mental Health Services Administration; Office of the Surgeon General (US). Early Intervention, Treatment, and Management of Substance Use Disorders. In: Substance Abuse and Mental Health Services Administration; Office of the Surgeon General (US). Facing addiction in America: The Surgeon General's Report on Alcohol, Drugs, and Health [Internet]. Washington, D.C.: US Department of Health and Human Services; 2016 [cited 2021 June 13]. Chap. 4. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK424859/>
15. Hadjiko A, Pavlopoulou ID, Pantavou K, Georgiou A, Williams LD, Christaki E, et al. Drug Injection-Related Norms and High-Risk Behaviors of People Who Inject Drugs in Athens, Greece. *AIDS Res Hum Retroviruses*. 2021;37(2):130-8. doi: <http://doi.org/10.1089/aid.2020.0050>
16. Guerrieri M, Giacomini PG, Flora B, Silvani L, Di Girolamo S. Drug-Induced Atrophic Rhinitis. In: Di Girolamo S, editor. Atrophic Rhinitis. Cham: Springer; 2020. doi: https://doi.org/10.1007/978-3-030-51705-2_4
17. Mukherji P, Azhar Y, Sharma S. Toxicology Screening [Internet]. In: StatPearls. Treasure Island, FL: StatPearls Publishing; 2020 [cited 2021 June 13]. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK499901/>
18. Beck O. Exhaled breath for drugs of abuse testing: evaluation in criminal justice settings. *Sci Justice*. 2014;54(1):57-60. doi: <http://doi.org/10.1016/j.scijus.2013.09.007>
19. Moeller KE, Kissack JC, Atayee RS, Lee KC. Clinical Interpretation of Urine Drug Tests: What Clinicians Need to Know About Urine Drug Screens. *Mayo Clin Proc*. 2017;92(5):774-96. doi: <https://doi.org/10.1016/j.mayocp.2016.12.007>
20. Yang YK, Johnson-Davis KL, Kelly BN, McMillin GA. Demand for Interpretation of a Urine Drug Testing Panel Reflects the Changing Landscape of Clinical Needs; Opportunities for the Laboratory to Provide Added Clinical Value. *J Appl Lab Med*. 2020;5(5):858-68. doi: <https://doi.org/10.1093/jalm/jfaa119>
21. Xue W, Tan X, Khaing Oo MK, Kulkarni G, Ilgen MA, Fan X. Rapid and sensitive detection of drugs of abuse in sweat by multiplexed capillary based immunobiosensors. *Analyst*. 2020;145(4):1346-54. doi: <https://doi.org/10.1039/c9an02498k>
22. OraSure. Oral fluid test [Internet]. 2015. [cited 2021 June 17]. Available from: <http://www.orasure.com/products-substance/products-substance-abuse-intercept-FAQ.asp>
23. Kimmel SD, Bazzi AR, Barocas JA. Integrating harm reduction and clinical care: Lessons from Covid-19 respite and recuperation facilities. *J Subst Abuse Treat*. 2020;118:108103. doi: <https://doi.org/10.1016/j.jsat.2020.108103>
24. Hyshka E, Morris H, Anderson-Baron J, Nixon L, Dong K, Salvalaggio G. Patient perspectives on a harm reduction-oriented addiction medicine consultation team implemented in a large acute care hospital. *Drug Alcohol Depend*. 2019;204:107523. doi: <https://doi.org/10.1016/j.drugalcdep.2019.06.025>
25. Adams JM, Volkow ND. Ethical Imperatives to Overcome Stigma Against People With Substance Use Disorders. *AMA J Ethics*. 2020;22(1):E702-8. doi: <https://doi.org/10.1001/amajethics.2020.702>
26. National Institute of Drug Abuse (NIDA) (US). Why is there comorbidity between substance use disorders and mental illnesses? [Internet]. 2020 [cited 2021 June 13]. Available from: <https://www.drugabuse.gov/publications/research-reports/common-comorbidities-substance-use-disorders/why-there-comorbidity-between-substance-use-disorders-mental-illnesses>
27. Wakeman SE. Facing Addiction. *Psychiatr Ann*. 2019;49(2):47-54. doi: <https://doi.org/10.3928/00485713-20190108-01>
28. Substance Abuse and Mental Health Services Administration, Center for Behavioral Health Statistics and Quality (US). Treatment Episode Data Set (TEDS): 2017. Admissions to and discharges from publicly funded substance use treatment. Rockville, MD: Substance Abuse and Mental Health Services Administration; 2019.
29. Kelly PJ, Baker AL, Deane FP, Callister R, Collins CE, Oldmeadow C, et al. Study protocol: A stepped wedge cluster randomised controlled trial of a healthy lifestyle intervention for people attending residential substance abuse treatment. *BMC Public Health*. 2015;465(2015). doi: <https://doi.org/10.1186/s12889-015-1729-y>

30. DiClemente CC, Corno CM, Graydon MM, Wiprovnick AE, Knoblach DJ. Motivational interviewing, enhancement, and brief interventions over the last decade: A review of reviews of efficacy and effectiveness. *Psychol Addict Behav.* 2017;31(8):862-87. doi: <https://doi.org/10.1037/adb0000318>
31. Solari CD, Shivji A, de Sousa T, Watt R, Silverbush M, Khadduri J, et al. The 2016 annual homeless assessment report (AHAR) to Congress. Part 2: Estimates of homelessness in the United States [Internet]. Washington, D.C.: United States Department of Housing and Urban Development; 2017. [cited 2021 June 13]. Available from: http://works.bepress.com/dennis_culhane/214/
32. Tsai J, Cao X. Association between suicide attempts and homelessness in a population-based sample of US veterans and non-veterans. *J Epidemiol Community Health.* 2019;73(4):346-52. doi: <https://doi.org/10.1136/jech-2018-211065>
33. Fazel S, Yoon IA, Hayes AJ. Substance use disorders in prisoners: an updated systematic review and meta-regression analysis in recently incarcerated men and women. *Addiction.* 2017;112(10):1725-39. doi: <https://doi.org/10.1111/add.13877>
34. Al-Rousan T, Rubenstein L, Sieleni B, Deol H, Wallace RB. Inside the nation's largest mental health institution: a prevalence study in a state prison system. *BMC Public Health.* 2017;17(1):342. doi: <https://doi.org/10.1186/s12889-017-4257-0>
35. Evans E, Padwa H, Li L, Lin V, Hser YI. Heterogeneity of Mental Health Service Utilization and High Mental Health Service Use Among Women Eight Years After Initiating Substance Use Disorder Treatment. *J Subst Abuse Treat.* 2015;59:10-9. doi: <https://doi.org/10.1016/j.jsat.2015.06.021>
36. Maura J, Weisman de Mamani A. Mental Health Disparities, Treatment Engagement, and Attrition Among Racial/Ethnic Minorities with Severe Mental Illness: A Review. *J Clin Psychol Med Settings.* 2017;24(3-4):187-210. doi: <https://doi.org/10.1007/s10880-017-9510-2>
37. Mauro PM, Canham SL, Martins SS, Spira AP. Substance-use coping and self-rated health among US middle-aged and older adults. *Addict Behav.* 2015;42:96-100. doi: <https://doi.org/10.1016/j.addbeh.2014.10.03>
38. Bush DM, Lipari RN. Substance Use and Substance Use Disorder by Industry [Internet]. In: The CBHSQ Report. Rockville, MD; Substance Abuse and Mental Health Services Administration; 2013. [cited 2021 June 13]. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK343542/>
39. Jordan TR, Khubchandani J, Wiblishauser M. The Impact of Perceived Stress and Coping Adequacy on the Health of Nurses: A Pilot Investigation. *Nurs Res Pract.* 2016;2016:5843256. doi: <https://doi.org/10.1155/2016/5843256>
40. Kunyk D. Substance use disorders among registered nurses: prevalence, risks and perceptions in a disciplinary jurisdiction. *J Nurs Manag.* 2015;23(1):54-64. doi: <https://doi.org/10.1111/jonm.12081>
41. Winkler A. Treating Physicians for Addiction. *Am J Psychiatry Res J.* 2017;12(4):6-7. doi: <https://doi.org/10.1176/appi.ajp-rj.2017.1204037.120403>

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