Psychiatry Update 2
Series Editor: Michelle B. Riba

Jonathan D. Avery
David Hankins *Editors*

Addiction Medicine

A Case and Evidence-Based Guide

Springer

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Introduction by Series Editor

It is an honor to welcome this edited book by Drs. Avery, Hankins, et al. on addiction medicine to this series.

Substance use disorders and other mental health conditions are a growing problem, especially during the recent COVID pandemic. We are learning more and more about the interrelationship between the neurobiology of addiction, behavioral manifestations, co-occurrence with other psychiatric problems, and associated social, economic, and intergenerational issues.

Training in this specific field is a complicated but necessary part of mental health care, with growing numbers of healthcare professionals recognizing the need to equip students, residents, and fellows with the necessary tools for maintaining competence in addiction medicine treatment.

In this edited book, we are delighted to present, along with seasoned authors, residents and fellows who validate the interest and trajectory of trainees who want to specialize in this area. This book contributes to the shared goals of clinicians who wish to attain improved clinical knowledge and proficiency on various topics in addiction medicine.

As we see more states in the USA legalize or allow the use of substances for medicinal or recreational purposes, it is incumbent upon health-care providers to better understand how to prevent, educate, recognize, evaluate, and treat substance use problems in a timely manner; this is a public health matter and mandate.

We thank the many authors who have contributed to this volume and Dr. Avery and Dr. Hankins for their leadership in organizing such a clinically valuable and comprehensive text.

Introduction

Medical providers regardless of specialty encounter the effects of substance use and other addictive disorders on a daily basis. These effects of addictive behaviors, both direct and indirect, are responsible for vast morbidity and mortality globally as well as significant economic costs. Attitudes about substance use are rapidly shifting, leading to massive public policy and legal changes at the local, state, and national levels. These broader consequences make the value of discussing addiction with individual patients clear, but those conversations can be challenging for many reasons. Patients may feel hesitant to discuss their substance use related to shame and pervasive stigma. Providers may not be confident in their knowledge and skill level with assessing these disorders and so may do so incompletely or not at all. And both provider and patient may feel uneasy in navigating treatment options once a substance use disorder diagnosis has been made.

Luckily, this book has been written at a time when treatment options for substance use disorders continue to expand. Novel pharmacologic approaches are emerging for a variety of disorders, and there continue to be many well-studied, evidence-based medications available for some substance use disorders that remain underutilized. Options for psychotherapy, group treatment, and other psychosocial interventions are expanding as the treatment of addiction becomes a higher priority for the medical system and policymakers. There are excellent treatment options available for substance use disorders, and a physician may be the first person a patient turns to for help in these cases.

This book attempts to counter some of the potential pitfalls in the clinical encounter by the use of clinical cases in addiction. It primarily follows the structure of the *Diagnostic and Statistical Manual of Mental Disorders, 5th Edition* (DSM 5), with each substance use disorder featured in one chapter which centers on a clinical vignette (or vignettes) and provides helpful background on the etiology and treatment options for each disorder. If you are looking for help with a specific patient or a specific kind of addiction, you can jump immediately to the chapter about that disorder. We have also included chapters on the assessment of substance use disorders, their neurobiology, behavioral addictions, and the management of co-occurring psychiatric and substance use disorders, to provide additional context to those who would like to explore these topics at greater depth.

The cases presented in the book are not the stories of individual, real patients. They are intended to be "typical" cases, however, so may share similarities with

patients the authors and readers have encountered. The cases are a mixture of some elements of the histories of patients treated by the authors as well as fictionalized elements included to facilitate broader discussion of each disorder. The names chosen by the authors are unrelated to any real patients treated by them.

All of the chapter authors wish you much success as you broach these at times difficult – but often lifesaving – discussions with your patients.

Contents

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Assessment of Substance Use Disorders

1

Anil Abraham Thomas and Keriann Shalvoy

Substance use disorders are complex, chronic, relapsing and remitting diseases resulting in significant morbidity and mortality. The assessment of a possible substance use disorder or disorders is a fluid process that is the continuation of a positive triage screen. The assessment should clarify the diagnosis, type and extent of the disorder and should help determine the appropriate level of care. The assessment should also identify comorbid medical and psychiatric issues and help determine appropriate treatments [1]. Substance use assessment should use multiple avenues to collect the necessary clinical information, including clinical records, self-assessment instruments, structured clinical interviews, and collateral information whenever possible [2, 3].

Gathering the History

Patients should be assessed along three domains: the medical domain, the psychiatric domain, and the substance use domain. Objective assessment includes the initial screening, mental status exam, physical exam, and diagnostic tools including ordering necessary laboratory and imaging studies. The mental status and physical exams can indicate whether the patient is currently intoxicated or in withdrawal. Pertinent positives and negatives differ depending on the substance being used by the patient and are discussed in more detail in later chapters of this book. Similarly, screening and diagnostic scales as well as laboratory and imaging studies can also be tailored to the differential diagnosis.

Assessing a patient along a medical domain is important particularly since a number of medical conditions can mimic various stages of a substance use disorder from intoxication, to withdrawal, to chronic use. For example, essential tremor in a

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social alcohol user can be mistaken for acute alcohol withdrawal, or a gait abnormality attributed to substance abuse and not a neurological issue, if a detailed assessment is not completed. Table 1.1 highlights a selection of medical issues that might present similarly to a substance use disorder; keep in mind that this table is not exhaustive and that contributions from medical and psychiatric issues, as well as substance use, often remain on the differential diagnosis without it being possible to firmly eliminate one. Medical assessment enables one to quantify the comorbid issues that can influence treatment; it also helps to determine the extent of any medical complications as a result of the substance use disorder [4, 5]. The reverse is also true—substance use disorders can also mimic or precipitate common medical conditions. Common examples include nasal ulcers or perforated septum, skin track marks, skin abscesses, alcohol on breath, ascites, enlarged liver, obesity, uncontrolled hypertension, chronic pain, blackouts, accidental overdose, withdrawal symptoms, premature labor, and vague somatic complaints [6].

Assessing along the psychiatric domain is equally important; here again there are psychiatric conditions that can mimic substance use disorders. For example, untreated anxiety might be mistaken for alcohol withdrawal or cocaine intoxication if the patient endorses any recent use of one of these substances, leading to a missed diagnosis of generalized anxiety disorder or panic disorder. As with medical issues, substance use disorders can also mimic common psychiatric conditions. Common symptoms that can be associated with a wide range of substance intoxication and withdrawal syndromes include depression, anxiety, paranoia, hallucinations, irritability, insomnia, flashbacks, suicidal ideations, vagueness, memory and concentration issues, and defensiveness when questioned about substance use. Brain imaging

Table 1.1 Examples of medical "mimics" of substance use disorders and their complications

Head, eyes, ears, nose, and throat (HEENT)	Rhinorrhea seen in patients with upper respiratory infections (similar to that seen in opioid withdrawal)
Cardiovascular	Palpitations seen in patients with atrial fibrillation with rapid ventricular response (similar to that seen with stimulant intoxication or alcohol withdrawal)
Respiratory	Shortness of breath seen in patients with coronavirus disease 2019 (COVID-19) (similar to that seen with chronic cigarette smoking)
Gastrointestinal	Vomiting seen in patients with acute appendicitis (similar to that seen with alcohol intoxication)
Genitourinary	Dysuria seen in patients with acute urinary tract infections (similar to that seen with chronic ketamine use)
Dermatologic	Facial and oral lesions seen in patients with fixed drug eruption (similar to those seen with inhalant abuse)
Neurologic	Gait disturbance and dysarthria seen in patients with posterior circulation stroke (similar to that seen with alcohol intoxication)
Endocrine	Diarrhea seen in patients with hyperthyroidism (similar to that seen in opioid withdrawal)
Hematologic	Paranoia seen in patients with acute intermittent porphyria (similar to that seen with methamphetamine intoxication)
Allergy/immunology	Conjunctival injection from allergic rhinitis (similar to that seen with cannabis use)

of people who have substance use disorders has shown changes in areas responsible for decision-making, learning, memory, judgment, behavioral control, and overall body functioning, any one of which could also be attributed to a primary psychiatric issue in a certain context [7]. Screening for suicidal ideation and depression should be included in all substance-related disorder assessments, e.g., the Columbia Suicide Severity Rating Scale (C-SSRS) and the Patient Health Questionnaire-9 (PHQ-9) [8].

Fully considering medical and psychiatric issues potentially at play can help prevent premature closure and false attribution of symptoms to substance use alone, which can have serious consequences. However, a comprehensive assessment of substance use is always essential along with the other two domains. The substance use history should begin with open-ended questioning ("Have you ever used any substances, regularly or socially, including using prescription drugs that you don't get from a doctor or use differently or for longer periods than they are prescribed?") and move toward a systematic approach to specifically address each substance individually. Assessment of the substance use domain should determine all the substances the person uses, the extent or quantity of use for each substance (whether in money spent or other kinds of quantity data such as cigarettes smoked or bags of heroin used), the length of time of use for each substance including the timing of first lifetime use of the substance and last time the substance was used, the pattern of use (daily, binging, occasional, social, etc.), and the route of administration: oral, intranasal, smoking, intraocular, or intravenous. These questions and others can be thought of on a spectrum of urgency as illustrated in Table 1.2. Certain questions must be asked immediately to prevent life-threatening consequences, while other questions may be part of a more comprehensive assessment or longer-term treatment and can help assess the patient's relationship to substances and willingness to change.

It is helpful to discuss the social situations that might have predisposed, precipitated, and perpetuated the patient's substance use, given the link between psychosocial stressors (divorce, loss of employment, housing instability) and worsening substance abuse [4]. As much as possible, the assessment should also determine the patient's level of interest in engaging in treatment and any particular barriers (whether practical or psychological) that might interfere. This can include

Table 1.2 Question domains for the substance use history sorted by urgency

Facts needed immediately	Facts to gather during the assessment	Facts and feelings to gather eventually
• Substances used • Frequency and amount used most recently • Route of administration • Exact time of last use • Any history of complicated alcohol or benzodiazepine withdrawal	• Age of first use • Changes in pattern of use • Longest period of abstinence • Treatment history • Family history with substances • History of overdoses	• Does patient see substance use as a problem • Likes/dislikes about substance use • Reasons to change • Financial consequences • Triggers for use/relapse and adaptive strategies that have worked in the past