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COMMENTARY

Enhancing Addictions Education in Patient Care and Medical Knowledge Competencies for General Psychiatry Residents

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One in seven people in the USA, or 14.3% of the population, develops a substance use disorder at some point in their lifetime [1]. Of the over 20.1 million Americans with substance use disorder, fewer than 7% receive treatment [2]. Despite this high disease prevalence and low treatment rate, general psychiatry training programs are required to provide only 1 month of addiction psychiatry training [3]. As a result, general psychiatry residents may graduate from residency underprepared for treating patients with substance use disorder in the context of a dearth of subspecialty-boarded physicians in addiction psychiatry and addiction medicine.

The COVID-19 pandemic has further exacerbated the substance use and overdose crisis. In a study of US adults, 13.3% reported starting or increasing substance use to cope with pandemic-related stressors [4]. Overdose deaths have risen across the nation; provisional public health data indicates that drug-related overdoses accounted for more than 100,000 deaths in 2020 [5]. The burden of increased substance use and related mortality during the pandemic has disproportionately impacted minority communities, paralleling the impact of COVID-19 in communities of color. These populations also have even more limited access to treatment and recovery services [6]. In this context, the need for broader training in substance use disorders for the general psychiatry workforce is greater than ever.

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This paper aims to provide guidance on content and teaching methods for substance use disorder education in general psychiatry residencies, informed by collaboration with national addictions experts, literature review, feedback from training directors, and review of online content from organizations such as the Substance Abuse and Mental Health Services Administration (SAMHSA). The paper focuses on the Medical Knowledge and Patient Care core competencies as the second of a two-part manuscript; the first focused on the Systems-Based Practice, Practice-Based Learning and Improvement, Professionalism, and Interpersonal and Communication Skills competencies [7]. For each competency, a clinical vignette introduces learning opportunities in commonly encountered situations on clinical rotations in general psychiatry training. Each vignette highlights subcompetencies in addiction psychiatry that all general psychiatry residents should master by the end of training. Given the range of resources in programs across the country, programs' local community resources and online resources can help fill gaps in program resources; the first paper in this two-part series includes a detailed list of existing online resources for teaching addictions for further reference [7].

Teaching and Assessment Methods

Suggestions for teaching and assessment methods for meeting recommended competencies in addiction psychiatry are outlined in Table 1 and mirror effective educational strategies used for teaching other core topics in residency. Resident education about substance use disorders can occur across all 4 years of general training, in both clinical and didactic settings. Clinical teaching can be carried out through faculty role modeling and direct patient care provided by residents with supervision. Programs may also draw upon teaching by qualified interdisciplinary colleagues, such as psychologists, social workers, and peer recovery specialists, according to the

Table 1 Example teaching and assessment methods for Patient Care (PC) and Medical Knowledge (MK) competencies

Competency/Sub-competency	Teaching method	Assessment method
Patient Care • PC 1 Psychiatric evaluation • PC 2 Psychiatric formulation and differential diagnosis • PC 3 Treatment planning and management • PC 4 Psychotherapy • PC 5 Somatic therapies • PC 6 Clinical consultation	• Classroom case-based and problem-focused learning, including literature review and readings • Role-play • Clinical work with direct supervision • Indirect supervision for reflection, deeper understanding • Simulation using videotaped or standardized patients • Video-taped review of pre-recorded clinical sessions during supervision	• Written assessment • Formative oral and written feedback by supervisor/preceptor/peers/team members during the clinical experience • Written summative feedback at end using supervisor or 360 (multi-informant) evaluation form • Patient/family survey • Reflective essay • Observed interviews (e.g., Clinical Skills Verification exam) [10]
Medical Knowledge • MK 1 Development through the life cycle • MK 2 Psychopathology • MK 3 Clinical neuroscience • MK 4 Psychotherapy	• Journal club • Case-based and problem-focused facilitated group discussion • Socratic questioning by clinical supervisors, building off cases seen on rotations	• Psychiatry Resident-In-Training Examination (PRITE) • Demonstration of mastery of DSM-5 categories and criteria in presentation of patient cases to a faculty preceptor • Demonstration of understanding of neurobiology of addiction and appropriate treatment planning in presentation of patient cases to a faculty preceptor • Classroom-based mini-quizzes embedded within didactics • Written or verbal end-of-course assessment for didactics

content being taught. For example, psychologists might teach about cognitive behavioral therapy for addictions as well as for pain, as suggested in Accreditation Council for Graduate Medical Education recommendations [8]. While inpatient settings for medically supervised withdrawal have been common sites for required addictions rotations, programs should also consider alternative clinical venues that offer a longitudinal perspective on substance use disorders and recovery [9].

Clinical teaching opportunities include direct supervision, in which immediate feedback can be offered regarding the trainee's clinical skills. Indirect supervision also plays an important role in facilitating an opportunity to reflect on patient care after the fact, including the opportunity to review and discuss stigma towards patients with substance use disorder, process countertransference, and address the feeling of futility trainees may experience when treating patients in settings in which they have less opportunity to observe improvement and recovery. Review of video recordings of resident sessions with patients is a valuable strategy for teaching about interviewing and therapeutic technique, strategies for engaging the patient, provision of psychoeducation, and counseling on treatment recommendations. The rapid increase in the use of telehealth during the COVID-19 pandemic also may offer opportunities to utilize off-site faculty addictions experts more readily, particularly for under-resourced programs, and extend the clinical learning environment into more remote settings.

Didactic teaching remains an important supplement to clinical teaching; effective strategies include case-based learning in the classroom, literature review, and readings to supplement case discussion. Role-plays or simulation of patient care via use of video-recorded or standardized patients can be particularly useful for engaging the learner in active learning. These strategies can be included in a standalone didactic series; they can also be integrated across didactics in other topic areas, e.g., clinical interviewing, psychotherapy, and consultation-liaison psychiatry didactics. Learning from psychiatrists or physicians with lived experience about their struggles with addictions can also help reduce stigma.

Traditional assessment methods such as formal written assessment or observed interviews can provide valuable information about trainees' mastery of the above competencies. Assessment can also be integrated into observed clinical encounters via formative oral and written feedback by a faculty supervisor, peer observer, or interdisciplinary team member; structured observation tools, such as a clinical skills verification form, may be helpful [10]. Written supervisory feedback delivered at the end of an addiction psychiatry rotation, 360-evaluation forms, and patient and family surveys can provide summative feedback on the resident's strengths and weaknesses; the 360 is particularly helpful in assessing residents' ability to function in an interdisciplinary team. Reflective essays or journaling also offers an opportunity for trainees to demonstrate the depth of their understanding and associated attitudes towards care of patients with substance use disorder during a rotation or clinical assignment. Reflection prompts from movies, fiction, poetry, and art may also be used.

Competency-Based Educational Recommendations: Patient Care

Vignette

The morning after a 45-year-old lawyer is admitted for a cholecystectomy, her vital signs are elevated, and she reports

seeing shadows in her room. The PGY2 on the consultation-liaison service is called. She uses the tobacco, alcohol, prescription medication, and other substance use screening tools and learns the patient drinks over a bottle of wine daily in the context of work stressors, including losing a contract and, as the sole woman of color in her firm, experiencing recurrent racist comments from colleagues [11]. She has not told anyone about her alcohol use but notes her father suffered from alcohol use disorder. On further interview, the resident learns that the patient also experiences depression and anxiety and takes an antidepressant. The resident diagnoses the patient with major depressive disorder, recurrent; alcohol use disorder, severe; and acute withdrawal. After review of the case with her attending, she makes recommendations to the medical team for management of withdrawal. She engages the patient in motivational interviewing and reviews evidence-based pharmacotherapy options for alcohol use with the patient, including acamprosate, disulfiram, and naltrexone. The patient is interested in trying naltrexone, and the resident checks the patient's liver function tests and ensures there are no problematic drug-drug interactions between naltrexone and the patient's antidepressant. Upon discharge, the resident refers the patient to an intensive outpatient program for working professionals, which includes cognitive behavioral therapy to treat the patient's underlying depression and anxiety. The resident and patient collaboratively review psychosocial stressors contributing to the patient's use and discuss practical ways of managing work stressors while also mobilizing supports in her church and family.

Patient Care Sub-Competencies Discussion

The six sub-competencies falling under the larger umbrella of the patient care competency include patient evaluation, formulation, differential diagnosis, consultation, psychotherapy and somatic therapies. Table 2 outlines recommended knowledge, skills, and attitudes in addiction psychiatry for general psychiatry residents, using the framework of these sub-competencies. The preceding vignette illustrates how these educational recommendations can be learned within commonly encountered clinical environments in general residency training. First, the resident obtains a comprehensive psychiatric evaluation, including screening for substance use disorder. Knowledge of screening tools, including those that identify symptoms of withdrawal such as the Clinical Institute Withdrawal Assessment for Alcohol (CIWA), is important to provide adequate treatment and prevent adverse outcomes [12]. The resident mobilizes a nonjudgmental stance using patient-centered, non-stigmatizing language to ally with the patient and obtain a nuanced, individualized history of substance use disorders, and co-occurring disorders such as anxiety and depression [13]. The resident obtains details regarding substances used, amount, route, family history, age of onset, duration of use, history of treatment, and periods of sobriety. Furthermore, the resident identifies the stressors that drive the patient's use. The resident develops an appropriate diagnosis and biopsychosocial formulation to build a treatment plan, including providing guidance to the primary team on follow-up after discharge.

Both psychotherapy and somatic therapies can be important components of a treatment plan for many patients with substance use disorders. The choice of psychotherapeutic modality depends on both patient factors and substance use disorder diagnosis; for example, psychotherapy is the mainstay of treatment for stimulant-use disorders but is more of an augmentation strategy for opioid use disorders [14, 15]. Motivational interviewing is also a critical skill to learn, and teaching it early in training allows trainees to achieve competency through repeated practice in different settings throughout residency. Psychotherapeutic work with patients with substance use disorders can be integrated both within and outside of core addiction psychiatry rotations and draws upon concepts from broader psychotherapy training, including principles like shared goal setting, maintaining empathy and appropriate boundaries, and identifying psychosocial contributors to and sequelae of substance use disorder. Cognitive behavioral therapy training for specific substance use disorders and co-occurring disorders like pain, depression, and anxiety provides useful tools to address acute symptoms and help prevent relapse while working on longer term therapeutic issues such as relationship difficulties. For example, learning to recognize automatic negative thoughts may interrupt a thought process that was leading towards relapse. The exact details of psychotherapies taught in an individual program may reasonably be determined in part by faculty areas of expertise.

Important evidence-based pharmacotherapies to cover in training include medications for addiction treatment (MAT) for tobacco, including nicotine replacement therapy, bupropion, and varenicline; alcohol, including acamprosate, naltrexone, and disulfiram; and opioid use disorder, including buprenorphine, naltrexone, and methadone [16]. Core skills in somatic therapies also include understanding of appropriate monitoring parameters for pharmacotherapy, including assessment of common drug-drug interactions relevant to the care of individuals with substance use disorder, such as additive QTc prolongation for a patient taking methadone and an antipsychotic.

Of note, with supervision from her attending, the resident in this vignette practices competencies in addiction psychiatry on her consult-liaison service. Patients with substance use disorders frequently receive care in medical settings not specialized for their needs. Psychiatry trainees benefit from providing consultation on the care of patients with substance use disorder, including to interdisciplinary medical colleagues and other mental health professionals, in a bidirectional learning model. The most common opportunities for consultation in general residency training include consultation-liaison, emergency

Table 2 Patient Care (PC) and Medical Knowledge (MK) competencies and sub-competencies for addiction psychiatry curricula

Competency/Sub-competency	Specific resident learning objectives for this competency
PC 1 Psychiatric evaluation	• Obtains a comprehensive substance use history, including identification of co-occurring disorders • Demonstrates proficiency in selecting and administering appropriate screening tools for substance-related and addictive disorders • Effectively utilizes results of screening tools to identify at-risk individuals • Provides appropriate referrals to treatment when indicated
PC 2 Psychiatric formulation and differential diagnosis	• Accurately diagnoses substance use disorders and co-occurring disorders, including pain, based on clinical interview and screening tools • Identifies psychoactive substance intoxication and withdrawal • Determines withdrawal severity and appropriate level of care for management of substance-related and addictive disorders • Formulates cases in a biopsychosocial manner, including factors affecting harm reduction and relapse prevention
PC 3 Treatment planning and management	• Utilizes evidence-based treatment modalities for substance-related and addictive disorders, including co-occurring mental health and medical disorders such as pain, and effectively navigates the process of referral within the continuum of care based on appropriate level of care and risk stratification • Develops a biopsychosocial treatment plan for patients with substance use disorders and communicates the plan to patient, caretakers, and team members • Develops, implements, and communicates a substance withdrawal management plan, and advises other providers about such plans
PC 4 Psychotherapy	• Provides evidence-based psychotherapy for patients with substance use disorders • Uses motivational interviewing techniques for substance-related and addictive disorders • Identifies and applies appropriate psychotherapeutic modality for substance-related and addictive disorders, integrates it into comprehensive management, and seeks supervision appropriately
PC 5 Somatic therapies	• Provides evidence-based medication treatment of patients with substance use disorders and co-occurring disorders • Follows monitoring parameters and assesses for drug-drug interactions
PC 6 Clinical consultation	• Provides consultation to other mental health and medical professionals and to community settings
MK 1 Development through the life cycle	• Demonstrates knowledge of stages of development and their associated vulnerabilities to substance-related and addictive disorders
MK 2 Psychopathology	• Describes DSM-based diagnostic categories and criteria for substance-related and addictive disorders
MK 3 Clinical neuroscience	• Describes the neurobiology of addiction and the impact of substances on brain development and functioning
MK 4 Psychotherapy	• Describes evidence-based individual, family, group, and community-based psychosocial treatments and supports

services, and integrated care settings. Integrated care settings may include both primary care and specialty care, such as surgical, obstetric, or medical specialty clinics. Practice providing consultation can also extend to community settings, including university clinics, community service boards, community mental health centers, crisis centers, shelters providing mental health case management, and correctional institutions. Consultation settings also provide valuable opportunities for supervisors to teach residents about systemic barriers to treatment for people with substance use disorders, including stigma, decreased access to specialized treatment for substance use disorder for marginalized populations, and non-psychiatric providers' limited training in substance use disorders.

This vignette also highlights the importance of familiarity with local community-based resources. While specific resources vary by community, gaining an understanding of available resources while in residency will help the resident identify similar resources in any practice setting. Examples of recovery-focused community resources include self-help groups, community recovery meetings, sober housing environments, and other therapeutic communities (including collegiate recovery communities). Incorporating community experiences early in training builds residents' ability to understand and refer to appropriate levels of care.

Competency-Based Educational Recommendations: Medical Knowledge

Vignette

A PGY1 resident working in psychiatric emergency services evaluates a 23-year-old patient with depressed mood, anxiety,

abdominal cramps, and vomiting. The patient reports daily injection heroin use for 6 months; he began taking increasing amounts of prescribed oxycodone after a back injury, ultimately escalating to heroin use. He denies prior problematic substance use other than infrequent use of inhalants in middle school. The resident finds the patient meets criteria for opioid use disorder, severe, and recognizes acute opioid withdrawal using the clinical opiate withdrawal scale (COWS). The resident counsels the patient and family about the expected duration of symptoms and treatment options. The patient's father comments he does not understand why the patient "can't just get it together," noting that he (the father) used alcohol heavily when the patient was a young child, and despite long absences from the family secondary to his use, he ultimately "just quit cold turkey." The resident uses the opportunity to provide psychoeducation to the patient and family about the neurobiology of opiate use disorder and patterns of substance use disorders at different life stages to help the patient understand his own history and family vulnerabilities. The patient expresses concern about exposure to triggers for use in his living environment, and the resident provides psychoeducation on relapse prevention skills as part of a cognitive behavioral therapy approach.

Medical Knowledge Sub-Competencies Discussion

This scenario illustrates how medical knowledge in addiction psychiatry in sub-competencies of development, psychopathology, clinical neuroscience, and psychotherapy may be demonstrated within the context of clinical practice in addition to other teaching and assessment methods already reviewed. Addressing developmental vulnerability to addictive disorders is vital for prevention, early intervention, and longitudinal care. Key developmental periods carrying elevated risk for precipitation or acceleration of substance use disorder include adolescence and young adulthood, the pregnancy/perinatal period, and older adulthood. Transitional-age youth (16–25 years old) who used substances as adolescents are in an important window of risk. In this case, the PGY1 also can demonstrate understanding of the potential impact of parental substance use on attachment; the risk for abuse and neglect of the developing child; the impact of substances on the developing brain; and the potential challenges for parents in recovery trying to maintain sobriety. Involving family as a support if possible and working within the complex family dynamics while maintaining appropriate confidentiality and boundaries are important.

While outside the scope of this vignette, medical knowledge of the intersection between human development and substance use disorders should also include an understanding of substance use disorders in geriatric populations. Risk factors for escalation of substance use in geriatric patients include increasing isolation, physical limitations, and loss of occupation. Geriatric patients are at higher risk of medical complications secondary to substance use, including during periods of withdrawal. Opportunities to learn about the intersection between development and addictions also include child and adolescent and geriatric psychiatry rotations and didactics.

In this scenario, the resident also demonstrates knowledge of Diagnostic and Statistical Manual (DSM) criteria for substance use disorder diagnoses, symptoms of intoxication and withdrawal, and severity qualifiers. An understanding of the neuroscience underlying addiction allows for appropriate treatment, psychoeducation, and prevention of further morbidity and mortality. Key knowledge of the neuroscience of substance use disorders includes reward pathways and also interactions between neurotransmitter systems and brain regions for specific substances.

Psychotherapy knowledge that residents can demonstrate on clinical rotations includes awareness of the role of psychotherapy in substance use disorder treatment, including the impact of substance use disorder diagnosis, psychosocial supports, and treatment setting on the choice of psychotherapeutic modality. A resident's supervisor can ensure knowledge of a wider range of psychotherapeutic approaches for substance use disorders, including group and individual treatment, 12-step facilitation, motivational enhancement therapy, cognitive behavioral therapy, contingency management, and community-based models such as peer recovery specialists. Skill building in relapse prevention, communication skills, and functional analysis to identify external and internal triggers to substance use may also be helpful and can be taught in clinical and didactic settings.

Discussion

Applying the core competencies and sub-competencies model to addiction psychiatry helps define essential educational content for general psychiatry training programs. As the vignettes illustrate, medical knowledge and patient care in addiction psychiatry can be taught in a variety of clinical settings across the spectrum of resident training years. Learning can be reinforced by teaching about substance use disorders in multiple clinical contexts to augment formally identified addictions treatment settings and by providing additional didactic opportunities. Importantly, teaching and supervision does not need to be restricted to faculty who have completed subspecialty fellowships in addictions. Given the limited number of faculty with subspecialty certification even within well-resourced programs, programs may wisely use their addictions-boarded faculty in "teach the teacher" capacities, helping develop the competence and confidence of general psychiatry faculty in teaching addictions competencies across outpatient, inpatient, consultation-liaison, and emergency services.

Education in medical knowledge and patient care for substance use disorders is an area open for innovation in the

current context in which COVID-19 has closed some treatment and teaching opportunities and opened others. With increased use of virtual clinical care and remote training, residents and faculty can work together to find new ways to optimize teaching and training across residency training sites. Programs may also utilize self-directed learning via online learning modules, and the table of resources highlighted in the first half of this two-part article includes a wide range of online resources to support this [7].

Given increased substance use during the pandemic, the wide range of clinical venues in which patients are seen, and the dearth of in-person formal addictions treatment settings, an innovative approach is critical. Shifting practice patterns necessitate increased attention to both new opportunities and longstanding challenges, such as systemic barriers to adequate recognition and treatment of substance use disorders. By adopting a flexible mindset and the competencies and resources outlined in this and our previous companion paper, programs can ensure a robust educational experience in addiction psychiatry for all residents even within a continually changing healthcare delivery system.

Declarations

Ethics Approval N/A. Commentary

Disclosures Dr. Frank is Chair of the American Association of Directors of Psychiatric Residency Training (AADPRT) Addictions Committee and received an honorarium for co-leading the Strengthening Addictions Training for Residency Program Directors – State Targeted Response Virtual Learning Collaborative for the American Psychiatric Association in 2019. Dr. Schwartz is a member of the Academic Psychiatry Editorial Board. Dr. Welsh has received consulting fees from Analgesic Solutions and previously served as a consultant to the AADPRT Addictions Taskforce. Dr. Ruble received an honorarium from the American Association for the Treatment of Opioid Dependence for the AATOD 2021 Conference Clinicians' Course. Dr. DeJong is Secretary of the American Psychiatric Association (APA) and Chair of the PRITE Commission for the American College of Psychiatrists (ACP), and has received support for meetings and/or travel from the APA and ACP. She has received payment or honoraria from Cambridge Health Alliance and Duke University, receives book royalties from Elsevier, and has received support from AADPRT.

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