Canadian Psychiatric Association
*Dedicated to quality care*
Association des psychiatres du Canada
*Dévouée aux soins de qualité*

POSITION PAPER

# Training in Substance-Related and Addictive Disorders, Part 1: Overview of Clinical Practice and General Recommendations

**Gilles Fleury, MD, FRCPC[1]; Robert Milin, MD, FRCPC[2]; David Crockford, MD, FRCPC[3]; Leslie Buckley, MD, FRCPC[4]; Dara Charney, MD, FRCPC[5]; Tony P George, MD, FRCPC[6]; Nady el-Guebaly, MD, FRCPC[7]**

*A position paper developed by the Canadian Psychiatric Association's Education Committee and approved by the CPA's Board of Directors on June 22, 2015.*

## Introduction

Substance-related and addictive disorders include the substance use disorders (SUDs) and the behavioural addiction of gambling disorder.[1] Together, they represent some of the most prevalent mental disorders, where it is estimated that 11 to 14 per cent of North Americans will meet lifetime criteria for an SUD[2–6] and a further 0.4 to 1.1 per cent will meet criteria for gambling disorder.[7] The peak age of onset for SUD is in young adulthood (ages 18 to 20), apart from cannabis use disorder, which typically has its peak age of onset in later adolescence (ages 16 to 18), and comorbid mental disorders often being established early, then extending into adulthood.[8–11] In addition to contributing to a wide range of social problems, including abuse, neglect, crime, unemployment, suicide, accidents, and family dysfunction, substance-related and addictive disorders are a major contributor to potentially preventable medical illnesses and premature death, where the estimated cost to Canadian society is $40 billion, annually.[12,13] Psychiatric comorbidity in people with substance-related and addictive disorders are all too common, where between one-quarter and one-half of all patients seeking psychiatric treatment meet criteria

[1] Assistant Professor, Department of Psychiatry, University of Ottawa, Ottawa, Ontario; Education Director, Division of Addiction and Mental Health, Montfort Hospital, Ottawa, Ontario.

[2] Associate Professor, Department of Psychiatry, University of Ottawa, Ottawa, Ontario; Director, Adolescent Day Treatment Unit, Youth Psychiatry Program, Royal Ottawa Mental Health Centre, Ottawa; Head, Division of Addiction and Mental Health, Royal Ottawa Mental Health Centre, Ottawa, Ontario.

[3] Associate Professor, Department of Psychiatry, University of Calgary, Foothills Medical Centre, Calgary, Alberta.

[4] Assistant Professor, Department of Psychiatry, University of Toronto, Toronto, Ontario; Director, Addiction Services, Toronto Western Hospital, Toronto, Ontario.

[5] Associate Chair and Associate Professor, Department of Psychiatry, McGill University, Montreal, Quebec; Director, McGill RUIS Addiction Program, Addictions Unit, McGill University Health Centre, Montreal, Quebec.

[6] Professor and Co-Director, Division of Brain and Therapeutics, Department of Psychiatry, University of Toronto, Toronto, Ontario; Chief, Schizophrenia Division, Medical Director, Complex Mental Illness Program, Centre for Addiction and Mental Health, Toronto, Ontario.

[7] Professor and Head, Addiction Division, Department of Psychiatry, University of Calgary, Calgary, Alberta; Consultant, Addiction Centre, Foothills Medical Centre, Calgary, Alberta.

© Copyright 2015, Canadian Psychiatric Association. This document may not be reproduced without written permission of the CPA. Members' comments are welcome. Please address all comments and feedback to: President, Canadian Psychiatric Association, 141 Laurier Avenue West, Suite 701, Ottawa, ON K1P 5J3; Tel: 613-234-2815; Fax: 613-234-9857; E-mail: president@cpa-apc.org. Reference 2015-59.

Note: It is the policy of the Canadian Psychiatric Association to review each position paper, policy statement and clinical practice guideline every five years after publication or last review. Any such document that has been published more than five years ago and does not explicitly state it has been reviewed and retained as an official document of the CPA, either with revisions or as originally published, should be considered as a historical reference document only.

**Table 1 RCPSC knowledge and skills definitions[81]**

**Introductory Knowledge:** Able to recognize, identify or describe principles.

**Working Knowledge:** Able to demonstrate core aspects of psychiatry, such as basic interviewing, problem formulation and treatment. The resident can understand the scientific literature.

**Proficient:** Able to demonstrate working knowledge enhanced by a developmental, cultural and lifespan perspective, allowing detailed interviewing and biopsychosocial problem formulation, with capacity to teach, consult, assess and manage referrals. The resident can critically review and apply the scientific literature relevant to this competency.

**Advanced:** Detailed and sophisticated understanding that is multimodal and interdisciplinary, leading to advanced teaching and consultation on complex referrals. The resident has a detailed knowledge of, and is able to apply, the scientific literature, adapting and extrapolating as required.

**Expert–Master:** Requires advanced training beyond core residency that leads to enhanced skills that enable management of patients with complex comorbidities, treatment resistance or rare conditions. The expert psychiatrist has the capacity to critically review the literature with enhanced expertise and generate new questions for study.

for a lifetime SUD,[14–17] and for those patients seeking addiction treatment, 40 to 60 per cent are identified to have an independent (nonsubstance-induced) mood disorder.[15]

In the Canadian health care system, mental health and addiction treatment services have been traditionally compartmentalized and have functioned independently with different philosophies. While we have known for some time that people suffering from a serious and persistent mental disorder with a co-occurring addiction tend to respond less well to traditional abstinence-focused addiction services,[18] current fragmented services have impeded the development of a specialized capacity to effectively treat this population. These patients can do well with what has been called integrated treatment, where the treatment of the mental disorder and the addiction illness is provided by the same team of professionals. In fact, more than 50 controlled studies have established the importance of integrating the treatment of patients with co-occurring disorders, which inherently solve the typical problems encountered in the separate systems of care for these individuals.[19] For these reasons, Canadian clinical guidelines recommend that all people seeking help from mental health treatment services be screened for co-occurring SUDs.[20] Health Canada *Best Practices*[20] further recommend an integrated treatment approach at the program level for people suffering from serious and persistent mental disorders with co-occurring addiction.

In 1997, a first position paper was published by the Canadian Psychiatric Association (CPA) in the form of *Curriculum Guidelines for Residency Training of Psychiatrists in Substance-Related Disorders*.[21] Since then, the field of addiction psychiatry has continued to advance, with the emergence of new scientific data regarding neurobiology and psychosocial interventions.

Importantly, clinical guidelines have been published for the treatment of SUDs by the American Psychiatric Association (APA)[22] and the World Federation of Societies of Biological Psychiatry.[23,24] Health Canada also published *Best Practices* recommendations on concurrent mental and SUDs.[20] In addition, in 2007, the Royal College of Physicians and Surgeons of Canada (RCPSC) released the new Specialty Training Requirements (STR) in Psychiatry,[25] outlining more specific expectations in addiction training for psychiatry residents. The Objectives of Training (OTR)–STR, as they apply to training in substance-related and addictive disorders, include the following:

1. Supervised experience in the treatment of patients with substance-related and addictive disorders in various settings. A learning portfolio or log should be maintained and reviewed by the program director. This experience must be undertaken as a discrete rotation of no less than one month or incorporated as a longitudinal experience (at any time during postgraduate year [PGY] 2 to 5) of no less than the equivalent of one month. This must be documented and evaluated separately from other rotations.
2. Availability of a selective rotation in substance-related and addictive disorders of no less than three months, but preferably six months, during senior psychiatric residency training (PGY 4 to 5) to develop advanced knowledge (definition in Table 1) in addiction psychiatry.
3. Proficient (definition in Table 1) clinical knowledge, skills and attitudes appropriate to their practice in substance-related and addictive disorders.
4. Function effectively as consultants, integrating all of the CanMEDS roles to provide optimal, ethical, and patient-centred medical care, by identifying and appropriately responding to patients with addiction comorbidity.

5. Demonstrate introductory knowledge (definition in Table 1) in assessing suitability for prescribing and delivery of motivational interviewing (MI).

To address the changes offered in the RCPSC OTR–STR and to update the previously published CPA curriculum guidelines[21] with current recommendations, a working group with national representation and expertise in addiction psychiatry was sought to prepare a position paper and offer recommendations for training in residency. The objectives of the first part of this position paper are to highlight key concepts relevant to substance-related and addictive disorders in the clinical practice of psychiatry and to offer general recommendations regarding education and training for our profession. More specifically, we aim to discuss important issues relevant to addiction, such as attitudinal skills, the process of screening and diagnosis, its integration within general psychiatry clinical settings, psychosocial interventions and pharmacotherapy. Issues related to special population are also briefly discussed. The second part of this paper[26] will offer updated curriculum guidelines for psychiatric residency training in substance-related and addictive disorders, which review, in detail, what we consider an appropriate preparation for the future psychiatrist in training to work with people suffering from addictive disorders.

## A Review of Key Clinical Concepts in Addiction Psychiatry

### *Attitudinal Skills*

People suffering from SUDs are often the victims of stigmatization in their experience of care, which is associated with poorer outcome.[27] Taking a moral stance toward the addicted patient, considering their condition as a choice or a pure psychosocial problem, is to ignore scientific evidence that supports the medical model of addiction. Addictive disorders are similar to chronic medical illnesses, such as asthma, diabetes and hypertension, when we look at genetic heritability, personal choice and environmental factors.[28] Therefore, clinicians should approach this population with a long-term care perspective and understand relapse as an expected occurrence in the natural course of a chronic disease. Psychiatrists should treat these patients like any others, with compassion, respect and a nonjudgmental attitude. Working with people who use substances requires specific attitudes and skills from the clinician to make the best of the therapeutic encounter. An addicted person often presents with ambivalence in their desire to change problematic behaviour, which could be interpreted as resistance and triggers frustration in the clinician. MI represents a useful technique to help a person resolving that ambivalence and commit to change.[29]

### *Screening and Diagnosis*

The diagnosis of an SUD is based on data collected during the clinical interview with the patient, physical examination, laboratory investigation and collateral information. Screening for substance-related and addictive disorders should be done routinely with people seeking treatment for mental illness.[20] Asking patients about their substance use in a direct and nonjudgmental way is recommended and will most often lead to a truthful answer. Clinicians should consider using empirically validated screening tools for SUD, such as the Cut down, Annoyed, Guilty, Eye-opener (commonly referred to as CAGE) questionnaire,[30] the Alcohol Use Disorders Identification Test (commonly referred to as AUDIT),[31] and the Drug Abuse Screening Test (commonly referred to as DAST)[32] in adults, the Global Appraisal of Individual Needs Short Screener (commonly referred to as GAIN-SS or GSS) in adolescents and adults,[33] and the Screening to Brief Intervention tool[34] for adolescents. Acquiring advanced competence regarding signs and symptoms of intoxication and withdrawal for each substance remains essential to inform the clinical interview and support a diagnosis. Clinicians should develop advanced competence in the diagnostic discrimination between substance-induced disorders (for example, alcohol-induced depression) and co-occurring disorders (for example, alcohol use disorder [AUD] plus a primary major depressive episode). A comprehensive history of substance use, with identification of sustained periods of relative abstinence is important to determine the presence of co-occurring primary psychiatric condition. Psychiatrists should also demonstrate advanced competence in using laboratory investigations pertinent to substance use, such as specific blood work results and urinary drug screens. Importantly, the clinical assessment of an addicted person would not be completed without a careful suicide risk screening, given the well-known association between substance use and self-harm (see Vijayakumar et al for a review[35]). The overall objective during the assessment is to develop a biopsychosocial-spiritual understanding of substance-related and addictive disorders and their overlap with major psychiatric disorders. A psychodynamic perspective is, at times, helpful for diagnostic formulation, with a focus on key psychological disturbances, such as affect dysregulation, self-care deficit or interpersonal conflicts.[36]

### *Integration With General Psychiatric Practice*

Clinical training in substance-related and addictive disorders is ideal within a concurrent psychiatric and addictive disorder centre. Such centres generally offer a structured day program, an in- or outpatient concurrent disorders enhanced program treating mental disorders and addictions in an integrated fashion, with a psychiatrist present and staff with cross-training in addiction and mental health. While access to such specialized centres is limited, psychiatry residency programs should attempt to integrate teaching of addictive disorders with core general psychiatry rotations. General psychiatrists are exposed to people suffering from primary addiction or co-occurring disorders in various clinical settings. Addiction is in the domain of mental disorder and should play an integral part in the psychiatric care of each patient.

#### Emergency

In the emergency department (ED) of an acute care hospital, the clinician will be exposed to conditions ranging from substance intoxication, withdrawal and substance-induced delirium or to a primary psychiatric disorder complicated by substance use. Training must cover adequate diagnosis and treatment planning of these disorders. Clinicians must develop advanced competence in adequately managing acute alcohol withdrawal syndrome with appropriate medication and the use of a standardized scale, such as the Clinical Institute Withdrawal Assessment for Alcohol, Revised (commonly referred to as CIWA-Ar).[37] Importantly, psychiatrists should be able to determine when hospitalization is indicated for a patient with substance-related and addictive disorders; for example, in the case of complicated withdrawal syndrome, or with the presence of serious medical or psychiatric comorbidities.[22] Substance use increases the risk of agitation in patients and should inform the choice of pharmacological agent to use in the ED. For example, benzodiazepines are the drug of choice to use in the case of intoxication syndrome with stimulants.

#### Outpatient–Community

In outpatient and community settings, people with mental illnesses and co-occurring addictive disorders should have access to an evidence-based psychosocial intervention or integrated program[9,20,38–41] Psychiatrists working in these settings should advocate for their patients to receive adequate services and participate in the development and delivery of such treatment program. For people with serious and persistent mental disorder and co-occurring addictions, the treatment should follow a step-wise model with a long-term perspective, and include pharmacotherapy with a psychosocial intervention.[42] An evidence-based approach for this population includes contingency management (CM) and a group therapy approach combining cognitive-behavioural therapy (CBT) with MI.[19] Importantly, it should be recognized that a harm-reduction philosophy is the preferred model for this population.

#### Consultation-Liaison

On the consultation-liaison (C-L) service, psychiatrists are asked to assess patients with various clinical problems associated with substance use, ranging from substance-induced conditions to co-occurring disorders. The psychiatrist must develop advanced competence in diagnosis and management of acute substance withdrawal, and more specifically alcohol withdrawal delirium and other cognitive disorders associated with AUD (such as, alcohol-related dementia, Korsakoff syndrome and Wernicke encephalopathy). The C-L psychiatrist should be able to advise the medical team on the appropriate management of withdrawal syndromes in the medical patient; for example, a patient with compromised liver function. The C-L psychiatry service is at times involved in assessing patients on opioid analgesic in the context of chronic pain, often associated with co-occurring anxiety and depressive disorders. The prevalence of opioid dependence in noncancer chronic pain patients could reach up to 26 per cent.[43] The International Narcotics Control Board[44] reported that Canada is the second-largest per capita consumer of prescription opioids (exceeded only by the United States), and recent data indicate that their increased accessibility is associated with higher mortality.[45] In the case of opioid dependence specifically, clinicians should be aware that although complete abstinence from drug represents an optimal goal, research has demonstrated that this cannot be achieved or sustained by most of this population.[46] C-L psychiatrists should be knowledgeable about opioid-induced depression and be able to recommend appropriate intervention, including opioid substitution with methadone or buprenorphine. By itself, substitution treatment has shown benefits on mood,[47] and has been determined to be more effective than prescribing an antidepressant.

#### Specialized Addiction Centre

Psychiatrists can contribute to the care of patients followed in specialized addiction treatment centres. A classic study demonstrated that the severity of psychiatric symptoms represents the strongest predictor of prognosis in SUD treatment.[18] Identification and treatment of co-occurring psychiatric conditions improve retention in treatment for people suffering from SUD.

Psychiatrists can not only prescribe medication for co-occurring disorders and SUD but also offer support and education to professionals working in specialized addiction treatment centres helping to understand patients and work with them effectively.

### *Psychosocial Treatments*

The effective treatment of the addicted patient involves necessary interventions that will target key psychosocial aspects affected by the illness. The treating physician should develop proficient-to-advanced competence in MI techniques to help their patients engage in the process of change and take actions for their recovery.[28] A MI stance in dealing with the patient also helps manage challenging counter-transference reactions when facing resistance to change. A behavioural intervention, such as CM, is useful to help initiate and maintain abstinence. This technique has been shown effective, for example, in people with schizophrenia and co-occurring cannabis dependence.[48] During rehabilitation for addiction, CBT for relapse prevention,[49] 12-step facilitation therapy,[50] a behavioural approach, such as cue desensitization therapy[51] and group therapy are recommended by the APA guidelines.[22] To maintain abstinence, patients need to identify their triggers for substance use and develop coping strategies to manage feelings and interpersonal issues. Working with families is also a powerful ingredient for an effective intervention, which could benefit not only the patient but also other family members. Clinicians are encouraged to tailor therapeutic interventions to the patient's individual needs. Some patients benefit from a combination of group and individual therapy. Finally, clinicians should develop proficient to advanced knowledge in community-based, self-help support groups, such as Alcoholic Anonymous, and encourage patients to participate in such activity.[22]

### *Pharmacotherapy*

#### Pharmacological Treatment of SUD

Psychiatrists should demonstrate advanced competence to assist their patients with pharmacological treatment for their substance-related and addictive disorders as well as for co-occurring disorders. For SUD, pharmacological agents are helpful to reduce withdrawal symptoms and to support relapse prevention. In the case of alcohol dependence, acamprosate, disulfiram and naltrexone are currently approved by Health Canada[52] to support patients in their recovery. A wealth of scientific literature now exists on the psychopharmacological treatment of alcoholism that could guide the clinician in choosing treatment for a specific patient.[53] In the treatment of opioid dependence, a substitution treatment with methadone or buprenorphine should be considered rapidly, especially if patients have been dependent for more than one year.[22,54] In these situations, a harm-reduction philosophy is a preferred approach over abstinence-based treatment, to reduce morbidity and mortality. Naltrexone should be considered in relapse prevention of opioid dependence in highly motivated people. For stimulant and cannabis dependence, there is currently no approved medication to assist clinicians in their work with these people. No medication is currently approved for the treatment of pathologic gambling although the naltrexone and selective serotonin reuptake inhibitors (SSRIs) have shown some benefits in randomized controlled trials.[55]

Finally, nicotine dependence is more prevalent in people with mental illness[56] and is among many other factors contributing to the reduced life expectancy of the psychiatric population. Therefore, psychiatrists have a responsibility to offer smoking-cessation counselling to their patients and to prescribe pharmacotherapy when indicated. Clinicians often do not address tobacco use with their patients; however, it should become integrated in psychiatric care.[57] Varenicline and nicotine replacement therapies are the approved medication for the treatment of nicotine dependence by Health Canada[52] (bupropion is also approved by the FDA).

#### Pharmacotherapy for Co-occurring Disorders

Before prescribing an agent to people suffering from co-occurring disorders, clinicians should take into consideration medication with abuse potential. In the case of depressed patients with alcohol dependence, symptoms are often induced by alcohol and will remit within a few weeks of alcohol discontinuation, without pharmacological treatment with an antidepressant.[58] In the treatment of depression with co-occurring SUD, antidepressants demonstrate the same efficacy on the mood disorder than seen in the treatment of depression alone,[59] although the addiction illness will still necessitate an additional intervention. Based on growing clinical research data, clinicians should be cautious about prescribing SSRIs in type B or early-onset alcoholism because of the potential risk of worsening drinking outcome.[53,60–62] Recently, the Canadian Network for Mood and Anxiety Treatments (commonly referred to as CANMAT) reviewed the available evidence for pharmacological management of patients with mood and comorbid SUDs,[63] which provides guidance to clinicians in choosing a specific agent. Finally, research suggests that atypical antipsychotics, and more specifically, clozapine, represent the preferred pharmacological

agents for people with co-occurring psychotic disorders and SUD.

### *Special Populations*

#### Adolescents

Addictive disorders affect the psychiatric population across the lifespan. Substance use often begins during adolescence, with adolescents being at risk for developing SUD. The median age of onset of SUD in adolescents is 15 years of age, with a rapid rise thereafter with drug use disorders (8.9 per cent) being more common than AUD (6.4 per cent).[10] Multiple interactive risk factors across four domains: culture and society, interpersonal, psychobehavioral, biogenetic and protective factors have been identified in the development of adolescent SUD.[64] Neurobiologically, adolescents are prone for risk-taking behaviour, with reduced suppressive and regulatory control on behaviour.[65] Adolescents at risk of developing SUD show more disinhibition and negative affects. Clinicians working with adolescents have a responsibility in the prevention, detection and treatment of SUDs that have negative impact on the achievement of developmental tasks. With the adolescent substance abuser, psychiatrists should pay attention to co-occurring disorders, such as conduct disorder, major depressive disorder, attention-deficit hyperactivity disorder, bipolar disorder and psychotic disorder.[64]

#### Older Population

Alcoholism and prescription drug use disorder are common problems in the elderly. Opioid analgesics and psychotropics, such as tricyclic antidepressants and benzodiazepines, can lead to cognitive impairment and increase the risk of falls. To appraise the prescription to older adults, clinicians should consider using a validated screening tool, such as the Screening Tool of Older Persons' potentially inappropriate Prescriptions (commonly referred to as STOPP).[66] Rates of illicit drug use in older adults has been traditionally low, but this will change, as the baby boom generation is aging and will require adjustment within the health care system to address the problem.[67]

#### Women

There are significant male–female differences in the course of addictive illnesses and in treatment needs. When compared with men, women appear prone to an accelerated progression from initiation to substance use, to development of addiction disorder and admission to treatment.[68,69] This phenomenon, described as telescoping, might be a consequence of biological, cultural, psychological and socioeconomical factors.[70] In terms of co-occurring psychiatric disorders, the lifetime rates of mood and anxiety disorders among people with SUDs are higher among women than men.[71,72] Treatment-seeking women with SUDs report high rates of physical or sexual abuse, domestic violence and revictimization.[70] Gender-specific and -sensitive programs could offer benefits, compared with mixed treatment approaches, to address women's specific needs. Substance use in pregnancy can lead to complex biopsychosocial problems, both in the mother and in the newborn, better addressed with a multidisciplinary team.[73]

#### Aboriginals

A survey by Health Canada within First Nations communities between 2008 and 2010[74] reported that alcohol and drug abuse were the number one challenge for community wellness faced by on-reserve communities, followed by housing and employment. The use of alcohol and solvents are specifically problematic in these communities that are also more vulnerable to suicide and violence. Psychiatrists can contribute significantly to the care of these populations with interventions that remain sensitive and tailored to cultural difference.

## Challenges and Solutions for Education

With a limited number of psychiatrists with additional training and expertise in addiction, residency programs in Canada and the psychiatry profession should encourage collaboration with other addiction medicine specialists to promote knowledge development. In addition to lectures and clinical rotations, psychiatry residency programs should consider using new technologies to help learners develop the necessary knowledge and attitudes in addictions, such as well-designed e-learning modules.[75] It is the responsibility of the psychiatrist to develop and maintain their knowledge in substance-related and addictive disorders through participation in continuing medical education activities. Professional organizations, such as the American Academy of Addiction Psychiatry, the Canadian Society of Addiction Medicine and the International Society of Addiction Medicine offer various training and educational opportunities. The Substance Abuse and Mental Health Services Administration (SAMSHA) and its website[76] represent a useful resource of information for professionals. The Treatment Improvement Protocol series published by SAMSHA covers a wide range of topics pertinent for clinicians interested in learning further on mental health and addictions.

## Recommendations

Addiction psychiatry has evolved considerably over the years, leading to important scientific knowledge that should guide our clinical practice. To ensure the delivery of adequate services to our population, psychiatry residency programs across Canada are responsible for preparing future psychiatrists to manage, with compassion and competence, people suffering from mental illnesses, including addictive disorders. Training in addiction should become integrated to learning the practice of psychiatry in the treatment of people across the lifespan in all the common settings, such as C-L, ED, and in- and outpatient psychiatry. An adequate learning experience must include the development of necessary attitudes, skills and competences in the assessment and diagnosis of addictive disorders, application of appropriate psychotherapeutic interventions and knowledge of neurobiological principles inherent to substance use and pharmacotherapy.

Despite the prevalence and consequences of addiction, as well as their frequency of presentation for potential intervention, most people with addiction alone, or a comorbid addiction and mental disorder, do not receive any treatment at all,[13,77–79] or, if they do, often report unmet needs.[80] Psychiatrists play a crucial role in the clinical care of people suffering from SUD and co-occurring disorders. The psychiatric profession, through the CPA and the RCPSC, must ensure that new graduates possess the necessary knowledge, skills and attitudes to effectively manage patients with addictions. As a field, psychiatry should increase its efforts in providing training for assessment and treatment of addictive disorders, until the needs of this population become appropriately addressed.

## Summary of Recommendations

1. Each psychiatry residency program requires a formal curriculum to support learners in acquiring proficiency in the necessary attitudes, knowledge and skills to work effectively with the addicted population.
2. Clinicians need to develop appropriate optimism and attitudes toward treating the addicted populations with compassion, respect and with a nonjudgmental attitude.
3. Psychiatrists require proficient skills in the assessment, diagnosis and management of substance-related and addictive disorders, with and without co-occurring disorders.
4. Beyond a discrete one-month rotation, training in substance-related and addictive disorders requires programs to integrate training with core clinical rotations, such as C-L psychiatry, ED psychiatry, inpatient psychiatry and outpatient–community services to be meaningful to future clinical practice.
5. While specialty training requirements suggest working knowledge of MI, psychiatrists require proficiency in MI and a broader range of evidence-based psychosocial interventions for SUD, including MI and CBT–relapse prevention.
6. Psychiatrists require proficient knowledge and skills in the appropriate use of pharmacotherapeutic agents for the treatment of alcohol and nicotine use disorder. In addition, they require working knowledge of the treatment of opioid use disorder with buprenorphine or methadone.

## References


1. American Psychiatric Association (APA). Diagnostic and statistical manual of mental disorders. 5th ed. Arlington (VA): APA; 2013.
2. Grant BF. Prevalence and correlates of drug use and DSM-IV drug dependence in the United States: results of the National Longitudinal Alcohol Epidemiologic Survey. J Subst Abuse. 1996;8(2):195–210.
3. Grant BF. Prevalence and correlates of alcohol use and DSM-IV alcohol dependence in the United States: results of the National Longitudinal Alcohol Epidemiologic Survey. J Stud Alcohol. 1997;58(5):464–473.
4. Grant BF, Dawson DA, Stinson FS, et al. The 12-month prevalence and trends in DSM-IV alcohol abuse and dependence: United States, 1991–1992 and 2001–2002. Drug Alcohol Depend. 2004;74(3):223–234.
5. Kessler RC, McGonagle KA, Zhao S, et al. Lifetime and 12-month prevalence of DSM-III-R psychiatric disorders in the United States. Results from the National Comorbidity Survey. Arch Gen Psychiatry. 1994;51(1):8–19.
6. Veldhuizen S, Urbanoski K, Cairney J. Geographical variation in the prevalence of problematic substance use in Canada. Can J Psychiatry. 2007;52(7):426–433.
7. Hodgins DC, Stea JN, Grant JE. Gambling disorders. Lancet. 2011;378(9806):1874–1884.
8. Behrendt S, Wittchen H-U, Höfler M, et al. Transitions from first substance use to substance use disorders in adolescence: is early onset associated with a rapid escalation? Drug Alcohol Depend. 2009;99(1–3):68–78.
9. Compton WM, Thomas YF, Stinson FS, et al. Prevalence, correlates, disability, and comorbidity of DSM-IV drug abuse and dependence in the United States: results from the National Epidemiologic Survey on Alcohol and Related Conditions. Arch Gen Psychiatry. 2007;64(5):566–576.
10. Merikangas KR, He J-P, Burstein M, et al. Lifetime prevalence of mental disorders in US adolescents: results from the National Comorbidity Survey Replication—Adolescent Supplement (NCS-A). J Am Acad Child Adolesc Psychiatry. 2010;49(10):980–989.
11. Wu L-T, Brady KT, Mannelli P, et al. Cannabis use disorders are comparatively prevalent among nonwhite racial/ethnic groups and adolescents: a national study. J Psychiatr Res. 2014;50:26–35.
12. Rehm J, Gnam W, Popova S, et al. The costs of alcohol, illegal drugs, and tobacco in Canada, 2002. J Stud Alcohol Drugs. 2007;68(6):886–895.

13. The National Center on Addiction and Substance Abuse (CASA) at Columbia University. Addiction medicine: closing the gap between science and practice. New York (NY): CASA Columbia; 2012. 586 p.
14. Farrell M, Howes S, Bebbington P, et al. Nicotine, alcohol and drug dependence, and psychiatric comorbidity—results of a national household survey. Int Rev Psychiatry. 2003;15(1–2):50–56.
15. Grant BF, Stinson FS, Dawson DA, et al. Prevalence and co-occurrence of substance use disorders and independent mood and anxiety disorders: results from the National Epidemiologic Survey on Alcohol and Related Conditions. Arch Gen Psychiatry. 2004;61(8):807–816.
16. Kessler RC, Crum RM, Warner LA, et al. Lifetime co-occurrence of DSM-III-R alcohol abuse and dependence with other psychiatric disorders in the National Comorbidity Survey. Arch Gen Psychiatry. 1997a;54:313–321.
17. Regier DA, Farmer ME, Rae DS, et al. Comorbidity of mental disorders with alcohol and other drug abuse. Results from the Epidemiologic Catchment Area (ECA) Study. JAMA. 1990;264:2511–2518.
18. McLellan AT, Luborsky L, Woody GE, et al. Predicting response to alcohol and drug abuse treatments. Role of psychiatric severity. Arch Gen Psychiatry. 1983;40:620–625.
19. Drake RE, O'Neal EL, Wallach M.A. A systematic review of psychosocial research on psychosocial interventions for people with co-occurring severe mental and substance use disorders. J Subst Abuse Treat. 2008;34:123–138.
20. Health Canada. Best practices: concurrent mental health and substance use disorders. Ottawa (ON): Health Canada; 2002.
21. el-Guebaly N, Garneau, Y. Curriculum guidelines for residency training of psychiatrists in substance-related disorders [position paper]. CPA Bulletin. 1997;29(5 Insert):1–6.
22. Kleber HD, Weiss RD, Anton RF Jr, et al; Work Group on Substance Use Disorders; American Psychiatric Association; Steering Committee on Practice Guidelines. Practice guidelines for the treatment of patients with substances use disorders, second edition. American Psychiatric Association. Am J Psychiatry. 2007;164(4 Suppl):5–123.
23. Soyka M, Kranzler HR, Berglund M, et al. World Federation of Societies of Biological Psychiatry (WFSBP) guidelines for biological treatment of substance use and related disorders, part 1: alcoholism. World J Biol Psychiatry. 2008;9:6–23.
24. Soyka M, Kranzler HR, van den Brink W, et al. The World Federation of Societies of Biological Psychiatry (WFSBP) guidelines for the biological treatment of substance use and related disorders. Part 2: opioid dependence. World J Biol Psychiatry. 2011;12:160–187.
25. Royal College of Physicians and Surgeons of Canada (RCPSC) [Internet]. Ottawa (ON): RCPSC; [year of publication unknown] [date cited unknown]. Available from: http://www.royalcollege.ca/rc/faces/oracle/webcenter/portalapp/pages/ibd.jspx?_afrLoop=17998106498490405#!%40%40%3F_afrLoop%3D17998106498490405%26_adf.ctrl-state%3Dg57c6a6vr_145.
26. Crockford D, Fleury G, Milin R. Training in substance-related and addictive disorders, part 2: updated curriculum guidelines [position paper]. 2015;60(12 Online).
27. Luoma JB, Hayes SC, Twohig MP, et al. Augmenting continuing education with psychologically focused group consultation: effects on adoption of group drug counseling. Psychotherapy (Chic). 2007;44:463–469.
28. McLellan AT, Lewis DC, O'Brien CP, et al. Drug dependence, a chronic medical illness: implications for treatment, insurance, and outcomes evaluation. JAMA. 2000;284:1689–1695.
29. Miller WR, Rollnick S. Motivational interviewing: helping people change. New York (NY): Guilford Press; 2013.
30. Ewing JA. Detecting alcoholism. The CAGE questionnaire. JAMA. 1984;252:1905–1907.
31. Babor TF, Grant M. From clinical research to secondary prevention: international collaboration in the development of the Alcohol Use Disorders Identification Test (AUDIT). Alcohol Health Res World. 1989;13:371–374.
32. Gavin DR, Ross HE, Skinner HA. Diagnostic validity of the Drug Abuse Screening Test in the assessment of DSM-III drug disorders. Br J Addict. 1989;84:301–307.
33. Dennis ML, Chan YF, Funk RR. Development and validation of the GAIN Short Screener (GSS) for internalizing, externalizing and substance use disorders and crime/violence problems among adolescents and adults. Am J Addict. 2006;15(Suppl 1):80–91.
34. Levy S, Weiss R, Sherritt L, et al. An electronic screen for triaging adolescent substance use by risk levels. JAMA Pediatr. 2014;168(9):822–828.
35. Vijayakumar L, Kumar MS, Vijayakumar V. Substance use and suicide. Curr Opin Psychiatry. 2011;24(3):197–202.
36. Khantzian EJ. The self-medication hypothesis of substance use disorders: a reconsideration and recent applications. Harv Rev Psychiatry. 1997;4:231–244.
37. Sullivan JT, Sykora K, Schneiderman J, et al. Assessment of alcohol withdrawal: the revised Clinical Institute Withdrawal Assessment for Alcohol scale (CIWA-Ar). Br J Addict. 1989;84(11):1353–1357.
38. Drake RE, Mercer-McFadden C, Mueser KT, et al. Review of integrated mental health and substance abuse treatment for patients with dual disorders. Schizophr Bull. 1998;24:589–608.
39. Drake RE, Mueser KT, Brunette MF, et al. A review of treatments for people with severe mental illnesses and co-occurring substance use disorders. Psychiatr Rehabil J. 2004;27:360–374.
40. Drake RE, Mueser KT. Psychosocial approaches to dual diagnosis. Schizophr Bull. 2000;26:105–118.
41. Weiss RD, Griffin ML, Kolodziej ME, et al. A randomized trial of integrated group therapy versus group drug counseling for patients with bipolar disorder and substance dependence. Am J Psychiatry. 2007;164:100–107.
42. Green AI, Drake RE, Brunette MF, et al. Schizophrenia and co-occurring substance use disorder. Am J Psychiatry. 2007;164;402–408.
43. Boscarino JA, Rukstalis M, Hoffman SN, et al. Risk factors for drug dependence among out-patients on opioid therapy in a large US health-care system. Addiction. 2010;105:1776–1182.
44. International Narcotics Control Board–United Nations. Narcotic drugs: estimated world requirements for 2013—statistics for 2011. New York (NY): United Nations Publications; 2013.
45. Dhalla IA, Mamdani MM, Sivilotti ML, et al. Prescribing of opioid analgesics and related mortality before and after the introduction of long-acting oxycodone. CMAJ. 2009;181:891–896.
46. National Consensus Development Panel on Effective Medical Treatment of Opiate Addiction. Effective medical treatment of opiate addiction. JAMA. 1998;280:1936–1943.
47. Rounsaville BJ, Weissman MM, Crits-Christoph K, et al. Diagnosis and symptoms of depression in opiate addicts. Arch Gen Psychiatry. 2001;39:151–156.
48. Hjorthøj C, Fohlmann A, Nordentoft M. Treatment of cannabis use disorders in people with schizophrenia spectrum disorders—a systematic review. Addict Behav. 2009;34(6–7):520–525.
49. Witkiewitz K, Marlatt GA. Relapse prevention for alcohol and drug problems: that was Zen, this is Tao. Am Psychol. 2004;59:224–235.
50. Nowinski J, Baker S, Carroll KM. Twelve-step facilitation therapy manual: a clinical research guide for therapists treating individuals with alcohol abuse and dependence. Rockville (MD): National Institute on Alcohol Abuse and Alcoholism; 1992.
51. O'Brien CP, Childress AR, McLellan T, et al. Integrating systemic cue exposure with standard treatment in recovering drug dependent patients. Addict Behav. 1990;15(4), 355–365.
52. Health Canada. Drug product database [Internet]. Ottawa (ON): Health Canada; [year of publication unknown] [date cited

unknown]. Available from: http://www.hc-sc.gc.ca/dhp-mps/prodpharma/databasdon/index-eng.php.
53. Johnson BA. Update on neuropharmacological treatments for alcoholism: scientific basis and clinical findings. Biochem Pharmacol. 2008;75:34–56.
54. Fiellin DA, Schottenfeld RS, Cutter CJ, et al. Primary care-based buprenorphine taper vs maintenance therapy for prescription opioid dependence: a randomized clinical trial. JAMA Intern Med. 2014;174(12):1947–1954.
55. Potenza M. Pathologic gambling. In: Ruiz P, Strain E, editors. Lowinson and Ruiz's substance abuse: a comprehensive textbook. 5th ed. Philadelphia (PA): Lippincott Williams & Wilkins; 2011.
56. Lasser K, Boyd JW, Woolhandler S, et al. Smoking and mental illness: a population-based prevalence study. JAMA. 2000;284(20):2606–2610.
57. Hitsman B, Moss TG, Montoya ID, et al. Treatment of tobacco dependence in mental health and addictive disorders. Can J Psychiatry. 2009;54(6):368–378.
58. Schuckit MA. Drug and alcohol abuse: a clinical guide to diagnosis and treatment. New York (NY): Springer; 2006.
59. Nunes EV, Levin FR. Treatment of depression in patients with alcohol or other drug dependence: a meta-analysis. JAMA. 2004;291:1887–1896.
60. Chick J, Aschauer H, Hornik K. Efficacy of fluvoxamine in preventing relapse in alcohol dependence: a one-year, double-blind, placebo-controlled multicentre study with analysis by typology. Drug Alcohol Depend. 2004;74:61–70.
61. Johnson BA. Serotonergic agents and alcoholism treatment: rebirth of the subtype concept—an hypothesis. Alcohol Clin Exp Res. 2000;24:1597–1601.
62. Kranzler HR, Burleson JA, Brown J, et al. Fluoxetine treatment seems to reduce the beneficial effects of cognitive-behavioral therapy in type B alcoholics. Alcohol Clin Exp Res. 1996;20:1534–1541.
63. Beaulieu S, Saury S., Sareen J, et al. The Canadian Network for Mood and Anxiety Treatments (CANMAT) task force recommendations for the management of patients with mood disorders and comorbid substance use disorders. Ann Clin Psychiatry. 2012;24(1):38–55.
64. Milin R, Walker S. Adolescent substance use disorders. In: el-Guebaly N, Carrà, G, Galanter, M, editors. Textbook of addiction treatment: international perspectives. Berlin (DE): Springer-Verlag; 2015.
65. Schepis TS, Adinoff B, Rao U. Neurobiological processes in adolescent addictive disorders. Am J Addict. 2008;17(1):6–23.
66. Gallagher P, O'Mahony D. STOPP (Screening Tool of Older Persons' potentially inappropriate Prescriptions): application to acutely ill elderly patients and comparison with Beers' criteria. Age Ageing. 2008;37(6):673–679.
67. Fletcher BW, Compton WM. The older drug abuser. In: Ruiz P, Strain E, editors. Lowinson and Ruiz's substance abuse: a comprehensive textbook. 5th ed. Philadelphia (PA): Lippincott Williams & Wilkins; 2011.
68. Brady KT, Randall CL. Gender differences in substance use disorders. Psychiatr Clin North Am. 1999;22(2):241–252.
69. Hernandez-Avila CA, Rounsaville BJ, Kranzler HR. Opioid-, cannabis-and alcohol-dependent women show more rapid progression to substance abuse treatment. Drug Alcohol Depend. 2004;74(3):265–272.
70. Greenfield SF, Back SE, Lawson K, et al. Women and addiction. In: Ruiz P, Strain E, editors. Lowinson and Ruiz's substance abuse: a comprehensive textbook. 5th ed. Philadelphia (PA): Lippincott Williams & Wilkins; 2011.
71. Conway KP, Compton W, Stinson FS, et al. Lifetime comorbidity of DSM-IV mood and anxiety disorders and specific drug use disorders: results from the National Epidemiologic Survey on Alcohol and Related Conditions. J Clin Psychiatry. 2006;67(2):247–257.
72. Kessler RC., Crum RM, Warner LA, et al. Lifetime co-occurrence of DSM-III-R alcohol abuse and dependence with other psychiatric disorders in the National Comorbidity Survey. Arch Gen Psychiatry. 1997b;54:313–321.
73. Day E, George S. Management of drug misuse in pregnancy. In: Day E, editor. Clinical topics in addiction. London (GB): RCPsych Publications; 2007. p 259–274.
74. First Nations Information Governance Centre. First Nations Regional Longitudinal Health Survey (RHS) Phase 2 (2008/2010): preliminary results on adults, children and youth living in First Nations communities. Ottawa (ON): First Nations Information Governance Centre; 2011.
75. Chan CH, Robbins LI. E-Learning systems: promises and pitfalls. Acad Psychiatry. 2006;30:491–497.
76. Substance Abuse and Mental Health Services Administration (SAMSHA). SAMSHA [Internet]. [place of publication unknown]: SAMSHA; [date of publication unknown] [date cited unknown]. Available from: www.samsha.gov.
77. Harris KM, Edlund MJ. Use of mental health care and substance abuse treatment among adults with co-occurring disorders. Psychiatr Serv. 2005;56(8):954–959.
78. Regier DA, Narrow WE, Ra DS, et al. The de facto US mental and addictive disorders service system. Epidemiologic catchment area prospective 1-year prevalence rates of disorders and services. Arch Gen Psychiatry. 1993;50(2):85–94.
79. Urbanoski KA, Rush BR, Wild TC, et al. Use of mental health care services by Canadians with co-occurring substance dependence and mental disorders. Psychiatr Serv. 2007;58(7):962–969.
80. Urbanoski KA, Cairney J, Bassani DG, et al. Perceived unmet need for mental health care for Canadians with co-occurring mental and substance use disorders. Psychiatr Serv. 2008;59:283–289.
81. Royal College of Physicians and Surgeons of Canada (RCPSC) Objectives in Training Requirements (OTR) in the Specialty of Psychiatry [Internet]. Ottawa (ON): RCPSC; [year of publication unknown] [date cited unknown]. Available from: http://www.royalcollege.ca/cs/groups/public/documents/document/mdaw/mdg4/~edisp/088003.pdf. Available from: http://www.royalcollege.ca/cs/groups/public/documents/document/mdaw/mdg4/~edisp/088025.pdf.

# Notes

# Notes

# Notes