Treatment of Opioid Use Disorder for



Guideline Supplement





A Guideline for the Clinical Management of Opioid Use Disorder—Youth Supplement

The BC Centre on Substance Use (BCCSU) is a provincially networked platform mandated to develop, implement, and evaluate evidence-based approaches to substance use and addiction. The BCCSU's focus is on three strategic areas including research and evaluation, education and training, and clinical care guidance. With the support of the province of British Columbia, the BCCSU aims to help establish world leading educational, research and public health, and clinical practices across the spectrum of substance use. Although physically located in Vancouver, the BCCSU is a provincially networked resource for researchers, educators, and care providers as well as people who use substances, family advocates, support groups, and the recovery community.

Suggested citation: British Columbia Centre on Substance Use, B.C. Ministry of Health, & B.C. Ministry of Mental Health and Addictions. A Guideline for the Clinical Management of Opioid Use Disorder—Youth Supplement. Published June 13, 2018. Available at: http://www.bccsu.ca/care-guidance-publications/

AUTHORS AND CONTRIBUTORS

Guideline Development Committee^a

Ramm Hering, MD, CCFP, MSc, Dip ABAM; Physician Lead, Primary Care Substance Use, Island Health; Physician Lead, Victoria Rapid Access Addiction Clinic (RAAC) and Addiction Medicine Consult Service (AMCS), Island Health; Clinical Instructor, University of British Columbia

Kora DeBeck, PhD; Research Scientist, BC Centre on Substance Use; Assistant Professor, School of Public Policy, SFU

Sonia Habibian, MD, CCFP, FASAM, MRO; Canadian Addiction Medicine Research Fellow; Clinical Instructor, University of British Columbia

Cheyenne Johnson, RN, MPH, CCRP; Director, Clinical Activities and Development and Director, Addiction Nursing Fellowship, BC Centre on Substance Use

Vicki Klassen, MD, CCFP, FCFP

Kristen Korol, MD, CCFP, MHSc; Physician, Victoria Youth Clinic

Steve Mathias, MD, FRCPC; Executive Director, Foundry, Providence Health Care; Clinical Assistant Professor, Department of Psychiatry, University of British Columbia

Ministry of Health staff

Ministry of Mental Health and Addictions staff

David Smith, MD, DABAM; Medical Director, Child & Adolescent Psychiatry, Interior Health Authority

Sarah Stone, MD, CCFP, ISAM, (Committee Co-Chair); Physician Lead, Immunodeficiency Clinic, St. Paul's Hospital; Physician Lead, Heartwood Treatment Centre; Clinical Instructor, University of British Columbia

Yasmin Tuff, BSc, MHA; Project Lead, Child Health BC

Carmen Verdicchio; Peer reviewer with lived experience

Sharon Vipler, MD, CCFP, d.ABAM, (Committee Co-Chair); Medical Lead Creekside Withdrawal Management Centre, Addiction Physician Fraser Health, Addiction Physician St. Paul's Hospital, Clinical Instructor, Department of Family Practice, University of British Columbia

^a NOTE: Committee members participated in guideline development activities in their individual capacity and not as institutional representatives.

External Reviewers

Sharon Cirone, MD, FCFPC; Chair, Addiction Medicine Program Committee, College of Family Physicians of Canada

Sarah Bagley, MD, MSc; Assistant Professor of Medicine and Pediatrics, Boston University School of Medicine; Director, CATALYST Program, Boston Medical Center

Nicholas Chadi, MD; Pediatrician Specialized in Adolescent Medicine; Pediatric Addiction Fellow, Adolescent Substance Use and Addiction Program, Boston Children's Hospital, Harvard Medical School

Cynthia Russell, RN, MN; Clinical Nurse Specialist-Mental Health, First Nations Health Authority

Matthew Piercy; Peer Support Worker, Inner City Youth Program, Providence Health Care

Kim Corace, PhD, C. Psych; Director, Clinical Programming and Research, Substance Use and Concurrent Disorders Program, The Royal; Associate Professor, University of Ottawa

Erin Smith, MD, FRCPC; Consulting Psychiatrist, Reproductive Mental Health and the Provincial Youth Concurrent Disorders clinic, BC Women's and BC Children's Hospital

George Passmore, MA, RCC; Substance Use Services Program Manager, Sources Community Resources

Carol-Ann Saari, MD, FRCPC, eMBA; Child and Adolescent Psychiatry; Youth EPI, Foundry-Victoria, Discovery Substance Use Services, Island Health; General Child Psychiatry Teaching Clinic, Fraser Health; Clinical Instructor, University of British Columbia

Dean Wilson; Peer Engagement Lead, British Columbia Centre on Substance Use

Nichola Hall, MA; Past President, From Grief to Action: Association of Families and Friends of Drug Users; Member, British Columbia Centre on Substance Use Family Advisory Board

Marshall Smith, CCAC; Recovery Lead, British Columbia Centre on Substance Use

Acknowledgements

The Youth Supplement committee wishes to thank Marshall Smith, Nichola Hall, and Dean Wilson for their thorough review of the document. The Youth Supplement Committee also wishes to thank the following individuals for their contributions to the development and completion of the guidance document: Josey Ross for primary research and writing assistance and Emily Wagner for editorial support. Additionally, we wish to thank Yuko Endo for administrative support, and Kevin Hollett for design and graphic support.

Disclaimer for Health Care Providers

The recommendations in this guideline supplement represent the view of the Youth Supplement Committee, arrived at after careful consideration of the available scientific evidence and external expert peer review. When exercising clinical judgment in the treatment of opioid use disorder in youth, health care professionals are expected to take this guideline supplement, along with A Guideline for the Clinical Management of Opioid Use Disorder, fully into account, alongside the individual needs, preferences and values of patients, their families and other service users, and in light of their duties to adhere to the fundamental principles and values of the Canadian Medical Association Code of Ethics, especially compassion, beneficence, non-maleficence, respect for persons, justice and accountability, as well as the required standards for good clinical practice of the College of Physicians and Surgeons of BC, the College of Registered Nurses of British Columbia, and any other relevant governing bodies. The application of the recommendations in this guideline does not override the responsibility of health care professionals to make decisions appropriate to the circumstances of an individual patient, in consultation with that patient and their guardian(s) or family members, and, when appropriate, external experts (e.g., specialty consultation). Nothing in this guideline should be interpreted in a way that would be inconsistent with compliance with those duties.

Legal Disclaimer

While the individuals and groups involved in the production of this document have made every effort to ensure the accuracy of the information contained in this treatment guideline, please note that the information is provided "as is" and that the Ministry of Health (MoH), Ministry of Mental Health and Addictions (MMHA) and the BCCSU make no representation or warranty of any kind, either expressed or implied, as to the accuracy of the information or the fitness of the information for any particular use. To the fullest extent possible under applicable law, the MoH, MMHA, and the BCCSU disclaim and will not be bound by any express, implied or statutory representation or warranty (including, without limitation, representations or warranties of title or non-infringement).

The Youth Supplement is intended to give an understanding of a clinical problem, and outline one or more preferred approaches to the investigation and management of the problem. The Youth Supplement is not intended as a substitute for the advice or professional judgment of a health care professional, nor is it intended to be the only approach to the management of a clinical problem. We cannot respond to patients or patient advocates requesting advice on issues related to medical conditions. If you need medical advice, please contact a health care professional.

Table of contents

Executive Summary	
Summary of Recommendations	10
<u>Introduction</u>	11
Principles of Youth Substance Use Disorder Treatment	12
Developmentally Appropriate Consideration	
Principles of Youth OUD Treatment	12
Clinical Recommendations	16
Withdrawal Management	16
Safety Warning	16
Medically-Assisted Withdrawal Management	16
Pharmacological Treatment for Opioid Use Disorder	16
Important Risk-Benefit Considerations	
Criteria to Consider for Opioid Agonist Treatment in Youth	17
Opioid Agonist Treatment	19
Naltrexone	22
Non-Pharmacological Treatment	23
Age-Appropriate Psychosocial Treatment Interventions and Supports	23
Contingency Management	23
Family Involvement in Care	23
Residential Treatment	24
Special Considerations	24
Capacity to Consent	24
Youth-Centered Environment and Approach	25
Co-Occurring Disorders	25
Spectrum of Substance Use and Overdose Crisis	26
Screening	26
Confidentiality	28
Harm Reduction Strategies	28
Prevention	29
Pregnancy	29
LGBT2Q+ Youth	29
Specialist Consultation	30
Future Directions and Evidence Gaps	31
Appendix 1—DSM-5 Clinical Diagnostic Criteria for Opioid Use Disorder	32
Appendix 2—CRAFFT Screening Interview	
Appendix 3—Adverse Childhood Experiences (ACES) Questionnaire	34
Appendix 4—Contingency Management Example	35
Appendix 5—HEEADSSS	36
Appendix 6—GAD-7	37
Appendix 7—Patient Health Questionnaire (PHQ-9)	38
References	39

Executive Summary

This document is intended to supplement the BCCSU's A Guideline for the Clinical Management of Opioid Use Disorder with an overview of care principles and recommended treatment options for youth with an opioid use disorder (OUD). Recognizing that OUD treatment for adolescents (age 12-17) has traditionally been limited to psychosocial treatment interventions and short-term in-patient detoxification (withdrawal management) programs, despite the extensive literature supporting the safety and effectiveness of opioid agonist treatment (OAT) for adults and an increasing number of medical associations, such as the American Academy of Pediatrics, endorsing medically assisted treatment for adolescents with OUD,1 this guideline supplement recommends that the full range of available treatments be considered for youth with OUD, including OAT, with the recognition that effective treatment plans for youth with moderate to severe OUD are long-term and include a combination of psychosocial interventions, supports, and pharmacological treatments. In alignment with the BCCSU's A Guideline for the Clinical Management of Opioid Use Disorder, this supplement recommends buprenorphine/naloxone as first line treatment of moderate/severe OUD. This document also recognizes the importance of tailoring treatment plans to each individual; youthcentered environments for both adolescents and young adults (age 18-25); screening and (when appropriate) offer of treatment for co-occurring disorders; and continuity of care. This document recommends that youth transition into adult-oriented services gradually, rather than abruptly "aging out." A summary of the clinical care recommendations in this supplement is provided below.

This document uses the following age-group definitions:

Adolescents=12-17 years; Young Adult=18-25b

^b Maximum age should be checked before a referral is made, as service providers' age ranges vary.

Summary of Recommendations

Table 1- Summary of recommendations

- 1. The full range of available treatments should be considered for youth with OUD,^c including OAT, other pharmacological treatments, non-pharmacological interventions, and recovery-oriented services, with buprenorphine/naloxone recommended as first line treatment for moderate/severe OUD. (See *Clinical Recommendations*.)
- 2. Treatment approaches/plans for youth with OUD should be developmentally-appropriate, youth centered, trauma-informed, culturally appropriate, confidential, promote recovery, and include family involvement when appropriate.
 - (See <u>Principles of Youth Substance Use Disorder Treatment.</u>)
- 3. When pharmacological treatment is indicated, buprenorphine/naloxone is recommended as first line treatment due to safety advantages and improved flexibility (e.g., take-home doses). (See Buprenorphine/naloxone.)
- 4. Transitioning to methadone should be considered in youth who do not respond to adequately dosed buprenorphine/naloxone.
 (See <u>Methadone</u>.)
- 5. Withdrawal management alone is not recommended, as this approach has been associated with elevated rates of relapse, HIV infection and overdose death. If it is the chosen course of action, a discharge plan should be in place for referral to ongoing addiction treatment (i.e., intensive outpatient treatment, residential treatment, access to long-term OAT, or antagonist treatment). (See Withdrawal Management.)
- 6. Psychosocial treatment interventions and support should be routinely offered to all youth with OUD but should not be a barrier into accessing care.

 (See <u>Age-Appropriate Psychosocial Treatment Interventions and Supports.</u>)
- 7. All youth should be screened for substance use disorders, including co-occurring mental health disorders. (See *Screening*.)
- 8. Information and referral to take-home naloxone programs and other harm reduction services should be routinely offered to patients and, when appropriate, friends and family members as part of standard care for OUD.
 - (See *Harm Reduction Strategies*.)
- 9. Prescribers should consult the Rapid Access to Consultative Expertise (RACE) line and/or refer to addiction physicians with experience treating youth with OUD and refer to specialty care targeted at youth as available and appropriate.

 (See <u>Specialist Consultation</u>.)

^c See Appendix 1 for DSM-5 diagnostic criteria for opioid use disorder

Introduction

Opioid use disorder in adolescents and young adults (collectively referred to as youth in this document), when compared to other substance use disorders (SUD), is associated with increased risks of both morbidity and mortality.² Opioid use in youth populations is also associated with severe polysubstance use disorders, risk of blood-borne infections (HIV and hepatitis C), and significant social and legal problems.³ Although current estimates of OUD prevalence among youth in Canada are lacking, the 2017 Ontario Student Drug Use and Health Survey found 10.6% of students in grades 7-12 had used non-prescribed prescription opioids in the past year, with 0.9% of grade 9-12 students having used fentanyl in the past year.⁴ Additionally, the proportion of youth overdose deaths in British Columbia offer some sense of the scope of the issue. Youth aged 10-24 accounted for almost 21% of all illicit opioid overdose deaths in British Columbia from January 1, 2015 to December 31, 2016.5 More recently, young people aged 13-29 accounted for 20.4% of all illicit opioid overdose deaths in BC from January 1 to October 31, 2017.⁶

OUD treatment for adolescents (age 12-17) has traditionally been limited to psychosocial treatment interventions and short-term in-patient withdrawal management ("detox") programs, despite the extensive literature supporting the safety and effectiveness of OAT for adults. Due to ethical and practical considerations, few randomized controlled trials have been conducted examining OUD treatments in adolescents. The limited evidence available suggests that buprenorphine/naloxone is effective in reducing opioid use in young adults aged 18-25, although reported retention rates are significantly lower than those observed in older adults. Due to this limited research there is similarly a lack of evidence-based guidelines to guide practice for treating youth with OUD. There are studies, however, that show that effective treatment plans for youth with moderate to severe OUD are long-term and include a combination of psychosocial interventions, supports, and pharmacological treatments along with psychiatric medication management (as clinically appropriate). This combination of treatments requires an interdisciplinary team-based approach, which has shown to be useful in treating and promoting recovery in youth with OUD.

Treating youth with OUD can be challenging, due to the lack of evidence-based guidelines,¹³ scarcity of youth-focused treatment resources, prevalence of co-occurring disorders and polysubstance use,¹⁵ and often fewer negative consequences related to drug use (due to a shorter history of opioid use), which might serve as motivation for treatment.¹⁴

This supplement to A Guideline for the Clinical Management of Opioid Use Disorder offers clinical guidance for the treatment of youth aged 12-25. In this document, youth may be understood to include two age groups, adolescents (12-17 years) and young adults (18-25 years). It is recommended that young adults continue to receive youth-oriented care rather than "aging out" at age 19 (or younger) and into adult-oriented care. This ensures continuity of care and maintains the relationships built with staff and trusted services. This guidance is based on the existing literature on youth OUD treatment and the clinical experience of the Youth Supplement Guidance Committee.

This guideline supplement recommends that the full range of available treatments and services should be considered applicable to this population of OUD patients, with buprenorphine/naloxone recommended as the first line option for moderate or severe OUD. Each case should be considered individually, with expert consultation advised where needed. Additionally, patients with OUD benefit from the integration of harm reduction interventions, including education about sterile supplies and safer injection practices to reduce the risk of blood-borne pathogens (e.g., HIV, hepatitis C) and soft tissue infections, as well as promoting access to take-home naloxone, syringe distribution programs, and supervised consumption services to reduce risk of blood-borne infection and fatal overdose among high-risk patients or patients with ongoing opioid use. 16,17

Principles of Youth Substance Use Disorder Treatment

Youth with OUD face multiple challenges, and patient engagement for health care providers can be challenging as well. Treatment for youth with OUD should be flexible, low-barrier, developmentally-appropriate, youth-centered, and include family involvement when appropriate. Several youth-specific factors have been identified to improve treatment engagement and retention. These include ensuring that services are youth-oriented; relevant; interesting; accessible; confidential; family inclusive; offer a combination of pharmacological treatments and psychosocial treatment interventions, supports, and long-term recovery planning; offer the opportunity to develop close relationships with staff; and have no pre-determined treatment end date.

Developmentally Appropriate Considerations

Several clinical differences exist between adolescents and adults, which must be attended to when treating adolescents for OUD. These include a higher rate of polysubstance use in adolescents, a tendency to not disclose withdrawal symptoms, and a reduced tendency to seek treatment.²⁰ Adolescents' lower likelihood of seeking treatment is thought to be related to a variety of factors including facing fewer (perceived) consequences related to drug use, often due to a shorter history of using drugs; drug use among their peers; the normalization of drug use; and a lowered ability to recognize their substance use as a problem, owing to lower levels of maturity than adults.²⁰ Although the implications for substance use and other behavioural regulation are unclear, literature on brain development shows that the prefrontal cortex continues to develop into young adulthood,²¹ and adolescence represents a significant period of neural development with development continuing into the mid-to-late twenties.²² Substance use in adolescence has been found to affect brain structure and function as well as behaviour negatively, although it should be noted that the impacts of particular substances is unclear.²²

Principles of Youth OUD Treatment

The following principles of youth OUD treatment should be followed.

1. Multiple Approaches of Varying Intensities

Similar to other chronic conditions, youth with OUD may need to try multiple approaches of varying intensities along the care continuum (see Table 1 in A Guideline for the Clinical Management of Opioid Use Disorder). These approaches may include outpatient, inpatient, and residential treatment programs; recovery-oriented services including peer-support programs; supportive recovery housing; psychosocial treatment interventions and supports; mental health and psychiatric care; chronic pain management; primary care; addiction medicine specialist consultation; trauma therapy; and specialized services for Indigenous youth (which may include community involvement). Beyond addiction care needs (including treatment for comorbid SUDs, for example, stimulant use disorders), OUD care should also integrate mechanisms to support appropriate and timely movement along the continuum of care and promote recovery. This document supports movement within and between treatment options and recommends the use of a stepped and integrated continuum of care model for treatment of OUD. Treatment intensity should be continually adjusted to match individual patient needs and circumstances over time with the recognition that many individuals may benefit from the ability to move between treatments.

2. Recovery-oriented Care

The continuum of care for OUD should be understood as inclusive of recovery, with an understanding that recovery looks different for each person, with many different possible paths. It should be understood that relapse is frequent among youth in treatment for OUD and that it is often part of the path to recovery. This

^d Note: the definition of recovery used in this document may be updated in order to provide consistency across all BCCSU guidelines, supplements, and supporting documents.

guideline supplement uses the Substance Abuse & Mental Health Services Administration definition of recovery,^d which is:

A process of change through which individuals improve their health and wellness, live a self-directed life, and strive to reach their full potential.²³

Those seeking recovery require understanding, support, and referral to appropriate services to achieve their goals. OUD care providers are encouraged to incorporate and use language that promotes recovery in their practice. Recovery-oriented care includes ensuring respect of the patient's autonomy and individuality (both as partners in determining treatment modalities and throughout their recovery), emphasizing skills and strengths, and avoiding reinforcement of paternalistic models of care provision.²⁴ Additionally, as appropriate and in line with the individual's goals, OUD care teams are encouraged to work collaboratively with patients and families, when appropriate, to develop long-term, personalized, strengths-based recovery plans regardless of the severity, complexity, and duration of their substance use.

3. Early Intervention

Early intervention should be emphasized when providing care for youth using illicit opioids. This includes responsive and time-sensitive treatment, which allows youth to receive care when they disclose their substance use to a care provider (e.g., same-day OAT starts for OUD when appropriate, timely access to psychosocial treatment and supports for all youth who use substances, if indicated). Additionally, early intervention allows for treatment to be provided to youth who are using substances problematically but do not meet diagnostic criteria for OUD. While this guideline supplement recognizes the important role of prevention and health promotion activities related to SUDs and problematic substance use in youth, the focus of this guideline supplement is for treating diagnosed OUDs in youth (see <u>Prevention</u> section below)

4. Full Range of Treatments Should Be Offered

The full range of available evidence-based treatments should be considered for youth with OUD, including OAT and other pharmacological treatments as well as psychosocial treatment interventions, supports and recovery-oriented services. This document recommends buprenorphine/naloxone as first-line treatment for moderate/severe OUD (see *Pharmacological Treatment* in this document).

5. Treatment Approaches Should Be Tailored Individually to Each Patient

Like with adult patients, treatment of OUD in youth should be matched to each patient's needs and circumstances and should encompass a comprehensive approach that includes assessment and treatment of any co-occurring psychiatric and learning disorder(s), psychosocial treatment interventions including cognitive behavioural therapy and motivational enhancement therapy, psychosocial supports (e.g., housing, education, and career planning), recovery services, and family involvement in care²⁵ (see Family Involvement in Care in this document). Treatment plans should factor in age, gender, substance use history and trajectory, any experiences of violence, exploitation, trauma, and other factors that may support or negatively impact treatment adherence, including romantic partners, gender identity, sexual orientation, and family history.

Due to the higher prevalence of trauma history and comorbid post-traumatic stress disorder among individuals with SUDs compared to the general population,²⁶ clinicians should be familiar with the principles of trauma-informed practice (e.g., trauma awareness; safety and trustworthiness; choice, collaboration and connection; strengths-based approaches and skill building). The provincial <u>trauma-informed practice (TIP)</u> <u>guide</u> may be a useful resource to inform care.²⁷ Referral sites for trauma-informed psychosocial services can be found on the <u>BC211 website</u>.

In addition, clinicians and staff should undertake cultural safety training to improve ability to establish positive partnerships with Indigenous clients seeking care for substance use and related harms. Cultural safety training is intended to help health care providers create an environment free from racism and

discrimination, allowing Indigenous youth and their families to safely access care. ²⁸ The San'yas Indigenous Cultural Safety Training Program, developed by the Provincial Health Services Authority (PHSA) Aboriginal Health Program, is an online training program designed to increase knowledge, enhance self-awareness, and strengthen the skills of those who work both directly and indirectly with Aboriginal people, and is an excellent resource for clinicians seeking to build their cultural competency. Please refer to the San'yas program website for more information.

6. Psychosocial Treatment Interventions and Supports

Psychosocial treatment interventions and support should be routinely offered to all youth with OUD but should not be a barrier to accessing care (see <u>Age-Appropriate Psychosocial Interventions and Supports</u> in this document).

7. Continuity of Care

Youth SUD treatment should ensure continuity of care. This includes continued support after, for example, tapering off OAT, or completing residential treatment services and transitioning into less intensive care, as well as ensuring that youth do not "age out" of care, thereby severing the trusting relationships that have been built with services and service providers. It is recommended that young adults continue to receive youth-oriented care rather than aging out and transitioning to adult-oriented care. It should be noted that youth-focused services have a variety of age range cut offs (e.g., 19, 23, or 25 years of age), and close attention should be paid to these age range cut offs. Special considerations should be made for older youth (i.e., 23-25 years old) when transitioning from the youth system into adult-oriented care (see *Transitioning into Adult-Oriented Care in* this document). It should be noted that different cultures may have different conceptualizations of when youth ends,²⁹ requiring flexibility and, when appropriate, advocacy to continue receiving youth-focused services beyond age range cut offs. Patients with developmental delays or other cognitive issues may also benefit from continued youth-oriented services.

Youth may also benefit from increased support to access services, which may include reminders of appointments, assistance in getting to appointments, and support linking to services, as well as flexibility in how care is provided.

8. Co-Occurring Disorders

All youth with OUD should be assessed for co-occurring disorders (see <u>Co-Occurring Disorders</u> in this document) and referred to specialized care when appropriate (<u>Foundry</u> can facilitate referrals in communities where Foundry Centres exist, or child and youth mental health and substance use services in each health authority).

9. Harm reduction

Opioid use disorder is often a chronic, relapsing disorder. Therefore, education and referral to take-home naloxone programs and other harm reduction services (including safer injection and inhalation supplies) should be routinely offered as part of standard care for OUD for all youth (see *Harm Reduction Strategies* in this document).

Table 2- Principles of Youth OUD Treatment (Summary)

- 1. SUDs are chronic, relapsing conditions and youth with OUD may need to engage in multiple approaches of varying intensities along the care continuum.
- 2. The continuum of care for OUD should be understood as inclusive and supportive of youth achieving long-term recovery, with an understanding that recovery looks different for each person.
- 3. Early intervention should be emphasized in providing care for youth using illicit (illegal and non-med ical) opioids.
- 4. The full range of available treatments should be considered for youth with OUD, including OAT and other pharmacological and non-pharmacological treatments, with buprenorphine/naloxone recommended as first-line treatment for moderate/severe OUD.
- 5. Treatment approaches should be tailored individually to each patient.
- 6. Psychosocial treatment interventions and supports should be routinely offered to all youth with OUD but should not be a barrier to accessing care.
- 7. Youth SUD treatment should ensure continuity of care, prevent "aging out", and support transitions between care settings and levels of care.
- 8. All youth with OUD should be assessed (and, when necessary, offered treatment), for co-occurring disorders.
- 9. Education and referral to take-home naloxone programs and other harm reduction services should be routinely offered as part of standard care for OUD.

Clinical Recommendations

Withdrawal Management

Safety Warning

IMPORTANT SAFETY NOTICE

Withdrawal management ("detox") alone is not recommended, due to high rates of non-completion and relapse to opioid use.³⁰⁻³² In addition, risks of serious harms including fatal and non-fatal overdose and transmission of HIV and hepatitis C are higher for individuals who have recently completed only withdrawal management compared to individuals who receive no treatment.³³⁻³⁵ Please see <u>A Guideline for the Clinical Management of Opioid Use Disorder</u> (p. 19) for more information on withdrawal management.

Medically-Assisted Withdrawal Management

As outlined above, withdrawal management alone is not an effective treatment for OUD and carries with it significant risk of overdose. However, in many places, medically assisted withdrawal management followed by intensive psychosocial treatment interventions and supports is considered the standard of care.² Withdrawal symptoms, especially cravings, can continue for weeks or even months after substance use has ceased.³⁶ A study comparing medication-assisted withdrawal management using a 28-day buprenorphine versus a 56-day buprenorphine taper found that the long taper of 56 days was significantly more effective in terms of abstinence and retention than a faster (28-day) taper in youth aged 16-24.³⁷ The slower tapering of opioids is theorized by the study authors to better control withdrawal symptoms and stabilize neurochemistry.³⁷ It should be noted that the study authors also postulate that buprenorphine maintenance treatment is likely to have superior retention and abstinence rates than withdrawal management and should be offered to all youth undertaking medically-assisted withdrawal management.³⁷

Pharmacological Treatment for Opioid Use Disorder

This guideline supplement recommends that the full range of available treatments and supports, from harm reduction services to recovery-oriented services to pharmacological treatment be considered for youth with OUD, with buprenorphine/naloxone recommended as first line treatment for moderate/severe OUD. Recent studies have suggested that pharmacological treatment with a full or partial opioid agonist paired with comprehensive psychosocial treatment interventions and supports leads to better clinical outcomes.^{14,18} It is not, however, clear which OAT is best for which patient in youth populations.¹⁸

Important Risk-Benefit Considerations

Some practitioners may be hesitant to prescribe OAT to youth, due to both a reluctance to start them on what is frequently considered a long-term treatment and concern over bringing youth into daily contact with adult patients,³⁸ if youth-specific OAT services are not available. These concerns should be carefully weighed against the risks of discontinuing or not starting pharmacotherapy and continued drug use including overdose, HIV, viral hepatitis, and other morbidity and mortality.^{2,37} Additionally, **this document recommends first line pharmacotherapy of buprerenophine/naloxone for moderate/severe OUD**, which often can be prescribed with flexible-take home dosing and may reduce concerns of youth coming into daily contact with adult patients. The significant risks associated with injecting opioids including fatal overdoses, endocarditis, human immunodeficiency virus (HIV) and hepatitis C, must also be considered for those patients who inject opioids.^{39,40} Any medications prescribed should be done in conjunction with a frequently reviewed treatment plan, appropriate psychosocial treatment interventions and supports, and recovery planning. The development of a medication monitoring plan with families, when involved, and the provision of incentives for medication compliance, should be considered as they can help improve treatment outcomes.² Further advantages and disadvantages of buprenorphine/naloxone and methadone can be found in <u>A Guideline for the Clinical Management of Opioid Use Disorder</u> (p. 26).

Criteria to Consider for Opioid Agonist Treatment in Youth

As individual situations vary, criteria to consider for opioid agonist treatment in youth (Table 3) with OUD are presented with the recognition that individual patients may not meet all of the listed criteria, while other criteria, not listed, could make a compelling case for the use of OAT. Clinicians are encouraged to consider each patient's situation, including age, maturity/developmental age, history and trajectory of drug use, and to consult with an addictions specialist or the RACEline when unsure.

It should also be noted that coroner data detects high proportions of stimulants (cocaine (48%) and methamphetamine/amphetamine (33%)) in illicit drug overdose deaths from 2015 to 2016 in British Columbia. The use of OAT may be appropriate in youth who have a mild OUD with active stimulant use disorder in the context of the current overdose crisis, in which the illegal drug supply has been toxically adulterated with fentanyl and other synthetic opioids.

The following criteria to consider for OAT in youth with OUD, adapted from Hammond (2016)² may be helpful in determining when OAT is an appropriate treatment. Additional guidance on selecting pharmacotherapies can be found in <u>A Guideline for the Clinical Management of Opioid Use Disorder</u>.

Table 3- Criteria to Consider for Opioid Agonist Treatment in Youth with OUDe

When to consider OAT for youth with OUD (not all criteria must be met):

- Moderate to severe OUD as per DSM-5 diagnostic criteria (see *Appendix 1*)
- Comorbid/co-occurring physical or psychiatric disorders that require medical intervention
- Youth has not benefitted significantly from psychosocial treatment interventions and recovery-oriented services
- History of overdose, injection drug use, emergency department visits related to opioid use
- Youth faces a high risk of morbidity and mortality (e.g., overdose, injection drug use, high risk sexual behaviours, driving while intoxicated)
- Family or parents/guardian (or other supports) are engaged in treatment planning and able to monitor and support ongoing treatment and recovery
- 16 years or older (Note: clinical judgment may supersede this criterion depending on severity of OUD, history of overdose, or other risks. Consultation with the RACEline or addiction medicine specialists is recommended)

Factors to consider when choosing a medication:

- Patient's past experience (e.g., type, medication adherence, duration) and treatment outcomes with OAT and preference
- Patient's past experience and treatment outcomes with psychosocial interventions and recovery-oriented services
- Patient and family's attitudes and beliefs regarding OAT (Note: this may be an opportunity for patient and family education)
- Family involvement in treatment and recovery planning
- Patient-centered goals (e.g., reducing use, safer use, abstinence)
- Health status (medical and psychiatric history, allergies)
- Potential contraindication for concurrent medication (methadone relative contraindications:
 MAOIs, SSRIs, anti-psychotics, quetiapine fumarate (tradename Seroquel®), benzodiazepines (see
 <u>Benzodiazepines and Opioid Agonist Treatment</u> in this document), and other CNS-depressants;
 buprenorphine/naloxone contraindications: benzodiazepines (relative, see <u>Benzodiazepines and Opioid Agonist Treatment</u> in this document), opioid analgesics, other CNS-depressants)
- Safety profile of medication

The choice of agonist treatment depends on several patient-specific factors such as initial presentation, comorbidities (e.g., liver disease, prolonged QTc interval), drug-drug interactions, treatment preference, family and social supports, and previous response(s) to treatment, as well as prescriber experience and appropriate education and training. Regardless of type of treatment administered, opioid agonist treatment should incorporate provider-led counselling—medically-focused, informal counselling that includes, but is not limited to, health and mental wellness checks, offering non-judgmental support and advice, assessing motivation and exploring barriers to change, developing a holistic treatment plan, promoting alternative strategies for managing stress, and providing referrals to health and social services when requested or appropriate, which may also include motivational interviewing. OAT treatment should also incorporate long-term substance use care (e.g., regular assessment, follow-up and urine drug tests), provision of compre-

^e Adapted from Hammond (2016)²

hensive preventive and primary care, and referrals to psychosocial treatment interventions, psychosocial and recovery supports, and specialist care as required, to optimize physical and mental wellness as the patient progresses in recovery.

Due to the risk of overdose from drug-drug interactions, current substance use, including alcohol, other sedatives, and prescription medications, should be reviewed with patients at every visit and confirmed with PharmaNet records.

Opioid Agonist Treatment

Buprenorphine/naloxone

In Canada, buprenorphine/naloxone treatment is currently indicated for patients over 18 years of age who meet the criteria for moderate to severe opioid disorder; see <u>Capacity to Consent</u> in this document for information on treating youth under 19 years. Although there is currently limited evidence supporting buprenorphine/naloxone use in adolescents there is extensive literature supporting the use of buprenorphine/naloxone in adults with OUD,⁴¹ and buprenorphine used as analgesia has been shown to be safe and efficacious in adolescents,⁴² while a retrospective evaluation of adolescents aged 15-18 receiving buprenorphine/naloxone for OUD found it to be well-tolerated by most.⁴³ Some patients were noted to have elevated liver enzymes.⁴⁴ A study of buprenorphine used for analgesia in patients under 18 years found no serious respiratory events and found side effects occurred at rates similar to those in adults.⁴² The limited evidence available suggests that buprenorphine/naloxone is effective in reducing opioid use in young adults aged 18-25, although reported retention rates are significantly lower than those observed in older adults.¹⁰⁻¹²

Two randomized controlled studies have shown the benefit of treatment with buprenorphine for youth with OUD, however, neither study included adolescents under 16 years old. These studies include a comparison of buprenorphine and clonidine, and a comparison of short-term vs. long-term buprenorphine tapers. In the first trial, a randomized controlled trial with adolescents given either a 28-day buprenorphine taper or a 20-day clonidine taper followed by 8 days of placebo, buprenorphine was found to be significantly superior to clonidine in terms of retention in treatment and sustained abstinence. A secondary analysis of the trial found that both heroin-dependent and prescription-opioid dependent youth show comparable levels of abstinence and retention, concluding that buprenorphine plus behavioural treatment is safe and efficacious for both heroin- and prescription opioid-using youth with OUD.

In the second randomized controlled trial, which evaluated the impact of extended, rather than short-term, buprenorphine/naloxone therapy for youth aged 15-21, one group of participants received a two week buprenorphine/naloxone taper and the other received eight weeks of buprenorphine/naloxone treatment followed by a four-week taper, both paired with twelve weeks of psychosocial treatment intervention.⁷ The youth who received eight weeks of buprenorphine followed by a four-week taper had significantly lower rates of non-medical and illegal opioid use while in treatment, compared to the group who completed a two-week taper. However, this difference faded shortly after buprenorphine was stopped completely. In light of this finding, there is currently no evidence for a rapid taper if a youth patient responds well to buprenorphine/naloxone.⁷ See <u>Transitioning Off of Opioid Agonist Treatment</u> in this document for information on tapering best practices when a taper is desired.

A secondary analysis of the buprenorphine/naloxone taper study found several factors that predicted higher rates of opioid-negative drug screens at week 12. Higher rates of opioid-negative urine drug screens were predicted by injection drug use and other indicators of advanced opioid use, and a higher number of active psychiatric and/or medical issues.⁴⁶ These findings are in line with similar findings in adults. Additionally, the study authors postulate that an awareness of deteriorating health and the considerable amount of time spent acquiring and using drugs at the expense of other activities may explain the associations between improved treatment outcomes and injection drug use, as well as higher rates of internalizing disorders and improved

treatment outcomes (see <u>Co-Occurring Disorders</u> in this document for more information on screening and treatment). ⁴⁶ Another secondary analysis found that early medication adherence and opioid-negative urine drug screens predicted retention at week 12. ³ These findings may help in determining who may benefit most from buprenorphine/naloxone, and when intensification of treatment is indicated. Additionally, the increased dropout in the two-week taper group was found to correspond with the end of the taper, adding further evidence that longer-term buprenorphine/naloxone treatment aids in retention.³

Young adults, aged 18-25, were found to have significantly lower retention rates compared to older adults in a collaborative care buprenorphine treatment program in which they received buprenorphine, nurse care management, and an intensive out-patient program which was then followed by psychosocial treatment weekly, in a retrospective chart review. This may suggest a need for youth-oriented services specifically for young adults aged 18-25, and greater support to promote adherence. More research is needed to identify factors that improve treatment retention in young adults. 10

Buprenorphine/naloxone is recommended as a preferred first-line option in youth in the absence of contraindications. For more information on buprenorphine/naloxone including safety and dosing, please see A Guideline for the Clinical Management of Opioid Use Disorder (p. 24).

INDUCTION AND DOSAGE:

Due to the lack of published evidence to guide dosing of OAT in youth, it is recommended that clinicians use an individualized and step-wise approach in order to determine the optimal dose for each patient. The instructions for buprenorphine/naloxone induction in <u>A Guideline for the Clinical Management of Opioid Use Disorder</u> (p. 41) may be followed and paired with clinical judgment. Further, prescribers without experience initiating youth on buprenorphine/naloxone may consult with a specialist with considerable experience treating youth with OUD or the <u>RACEline</u>.

Clinical experience from a medication-assisted treatment program in the United States indicates that youth, like adults, can successfully start buprenorphine/naloxone at home.¹³ The instructions for buprenorphine/naloxone home induction^f in <u>A Guideline for the Clinical Management of Opioid Use Disorder</u> (p. 41) can be followed. There is some evidence suggesting that limiting activities and cell phone access during the induction phase may be useful, as contact with friends who use drugs was found to be the most common contributor to relapse for patients in a medication-assisted treatment program in the United States.¹³

If home induction is pursued, it is important that youth have a supportive and responsible partner, family member, or other support person available to provide support and assistance during the home induction period, as well as telephone access to their prescriber.

Methadone

To date, the use of methadone for the treatment of OUD in adolescents has not been evaluated in a controlled trial. ^{2,19} However, descriptive and observational studies have found that methadone supports treatment retention in adolescents with OUD. ^{9,19} One observational study also found a higher retention rate for adolescents who use heroin receiving methadone-based OAT compared to buprenorphine/naloxone-based OAT, ⁴⁷ however, buprenorphine/naloxone remains the recommended first-line treatment for its superior safety profile and flexibility for take-home dosing. For those reasons, methadone may be considered a second-line option for youth with OUD who have been unable to start or did not respond well to buprenorphine/naloxone. Given the risk associated with starting and stopping OAT (i.e., decreased tolerance leading to a higher risk of overdose), methadone should be considered for youth who are unable to remain on buprenorphine/naloxone. Additionally, for patients who struggle with ongoing illicit opioid use while on adequately dosed buprenorphine/naloxone, a transition to methadone should be considered. A thorough

^fHome inductions may also be performed in group homes or juvenile detention centres when appropriate, as these may present an opportunity to engage youth in treatment.

review of the evidence supporting the use of methadone in those over 18 years can be found in <u>A Clinical Guideline for the Clinical Management of Opioid Use Disorder</u> (p. 22).

Methadone may be an acceptable alternative first-line option in cases where it will be challenging to induce onto buprenorphine/naloxone or where loss to follow-up could be highly problematic from the perspective of individual or public health (e.g., risk of HIV transmission, multiple non-fatal overdoses). For instance, methadone may be preferred for severely unstable individuals with risky, high-intensity use, for whom buprenorphine/naloxone doses may be suboptimal leading to poorer retention rates.⁴⁸ In the context of the current opioid overdose crisis resulting from highly potent synthetic opioids adulterating the street-drug supply, it is hypothesized by the Youth Supplement committee that some youth may require a full, rather than a partial, agonist.

It is recommended that an addictions specialist or the <u>RACEline</u> be consulted when escalating intensity of treatment, for example, transitioning from buprenorphine/naloxone to methadone. It should also be noted that most methadone clinics are not youth-friendly which may represent a barrier to youth accessing methadone. Youth may require assistance in finding an accessible pharmacy that dispenses methadone.

INITIATION AND DOSAGE:

Due to the lack of published evidence to guide dosing of OAT in youth, it is recommended that clinicians use an individualized and step-wise approach in order to determine the optimal dose for each patient. The instructions for methadone initiation in <u>A Guideline for the Clinical Management of Opioid Use Disorder</u> (p. 37) may be followed and paired with clinical judgment. Further, it is recommended that prescribers without experience initiating youth on methadone consult with a specialist with considerable experience treating youth with OUD or the <u>RACEline</u>.

Slow Release Oral Morphine

To date there is no evidence for the use of slow-release (24-hour) oral morphine in youth for the treatment of OUD. However, similar to the guidance given in A Guideline for the Clinical Management of Opioid Use Disorder (p. 27, 49) for the treatment of OUD in adults, slow-release oral morphine may be considered for patients who have been unsuccessful with first- and second-line options, or who have contraindications to first- and second-line treatment options. It is recommended that health care providers who wish to prescribe slow-release oral morphine complete the slow-release oral morphine module via the BCCSU's Provincial Opioid Addiction Treatment Support Program. Further, it is recommended that prescribers consult with a specialist with considerable experience treating youth with OUD or the RACEline.

Take-Home Dosing

Take-home dosing can be considered a standard component of treatment with buprenorphine/naloxone, whereas for methadone and slow-release oral morphine, treatment should involve daily witnessed ingestion, with graduated take-home dosing provided only when patient stability is clearly demonstrated and routinely assessed.

Take-home dosing of oral agonist therapy may be beneficial in terms of improved motivation to participate in OAT, improved treatment retention, increased patient autonomy and flexibility, positive reinforcement of abstinence, decreased treatment burden, and decreased costs related to daily witnessed ingestion. Family support, when appropriate, is important and can be helpful in maintaining take-home dosing. However, these benefits must be balanced against patient and public health risks associated with take-home dosing.

Regular urine drug testing is the standard of care in OAT programs and can be used to assess adherence to OAT, validate self-reported use of opioids or other substances, detect use of other substances which may

affect safety (e.g., benzodiazepines), and evaluate treatment response and outcomes (i.e., abstinence from heroin or other opioids). See <u>A Guideline for the Clinical Management of Opioid Use Disorder</u> for urine drug testing recommendations for each OAT medication.

It is important to note that there are major individual and public safety differences that exist between different opioid agonist therapies. For instance, an estimated 25% of prescription opioid overdose fatalities in British Columbia in recent years have involved methadone,⁴⁹ whereas deaths resulting from buprenorphine/naloxone are very uncommon, even in settings where rates of take-home dosing of buprenorphine/naloxone prescription are high.⁵⁰ It is for these reasons that take-home dosing is recommended as a standard component for buprenorphine/naloxone only.

Specific recommendations for take-home dosing and monitoring of take-home dosing can be found in <u>A</u> <u>Guideline for the Clinical Management of Opioid Use Disorder</u> (p. 53).

Benzodiazepines and Opioid Agonist Treatment

Although concurrent use of benzodiazepines and opioids increases the risk of overdose due to depression of the central nervous system, the harms and risks associated with untreated opioid use disorder may outweigh these risks. The Careful management of medications, including patient education and, when possible, benzodiazepine tapers, can mitigate these risks. Additional guidance on managing concurrent use of benzodiazepines and OAT can be found on the <u>U.S. Food and Drug Administration's website</u>. Per guidance from the College of Physicians and Surgeons of BC, benzodiazepines must not be co-prescribed with opioids unless as a documented taper, and PharmaNet should be reviewed at each clinical visit to confirm that another care provider has not prescribed these medications. The College of Physicians and Surgeons of BC's <u>Safe Prescribing of Drugs with Potential for Misuse/Diversion</u> should be consulted to ensure safe prescribing standards are being met.

Transitioning Off of Opioid Agonist Treatment

The optimal duration of OAT in youth is unknown and this document does not recommend OAT be provided with a pre-determined end-date. However, once stabilization is achieved, and if patient and prescriber agree that de-intensification of treatment is appropriate, the evidence supports voluntary,⁵³ long, gradual stepped-tapering schedules where dose reductions are scheduled to occur monthly or bimonthly, over a period of many months.⁵⁴ This approach is strongly recommended. See "Combination approaches and movement between approaches" in <u>A Guideline for the Clinical Management of Opioid Use Disorder</u> (p. 29) for more information on transitioning off of OAT.

Naltrexone

Extended-release naltrexone (XR-NTX, brand name Vivitrol³⁵) is an opioid antagonist that fully blocks the effects of opioids. This blockade effect can help reduce relapse and overdose while increasing treatment adherence.¹⁸ However, further research is needed to establish the safety and efficacy of XR-NTX in youth.^{19,55} For those youth where OAT is not indicated or wanted, preliminary evidence suggests XR- NTX is tolerated well and associated with good treatment outcomes.⁵⁶ However, caution is advised when interpreting this evidence based on descriptive case studies. In the case series of adolescents prescribed XR-NTX, those patients who reported opioid use while receiving the medication reported experiencing little or no euphoria or other subjective effects of opioid intoxication. For many, this reduced the value of taking illegal and non-medical opioids.⁵⁶ Although the blockade effect of XR-NTX is reported to last 30 days, testing the blockade was quite common and some patients found they were able to overcome the blockade in the last few days of

the 30-day period.⁵⁶ Therefore, extreme caution is required for all patients on XR-NTX that are at risk of overdose; subsequent follow-up visits and monthly injections must be scheduled prior to the 30-day agonist blockade window ending. Like with other pharmacological treatments, medication compliance is integral to success and may be enhanced by the involvement of parents in care.⁵⁶ At present, XR-NTX is only available in Canada for clinical and research purposes or through Health Canada's Special Access Programme. Recently, however, Health Canada has included XR-NTX on a list of approved drugs for importation to British Columbia to address the urgent public health need to treat addiction, which will allow for importation outside of the Special Access Programme.⁵⁷

Oral naltrexone has been shown to have limited effects over placebo.⁵⁸ More information on oral naltrexone efficacy can be found in <u>A Guideline for the Clinical Management of Opioid Use Disorder</u> (p. 28).

Non-Pharmacological Treatment

Age-Appropriate Psychosocial Treatment Interventions and Supports

Psychosocial treatment interventions and supports should be routinely offered to youth with OUDs. Clinical trials have demonstrated that cognitive behavioural therapy (CBT) and family therapy approaches are efficacious in treating adolescents with problematic substance use,⁵⁹ however, their efficacy in treating OUD has not been studied. Additionally, a number of modalities are likely to be efficacious for the treatment of SUD,⁵⁹ with vocational support, family intervention approaches, and other behavioural interventions aimed at reducing use incrementally recommended by the American Society for Addiction Medicine for the treatment of OUD in youth.¹⁹ Initial research has shown the feasibility and acceptability of the Adolescent Community Reinforcement Approach for adolescents with symptoms that aligned with DSM-IV-TR definitions of opioid abuse or dependence, or who reported weekly or more frequent opioid use.⁶⁰ Because outcomes can vary widely and no single approach has been found to be equally efficacious in all youth,⁵⁹ each youth should be offered an individualized treatment approach based on a comprehensive assessment of their needs and other factors.²⁰ As with adult populations, involvement in psychosocial treatment interventions should be routinely offered, however, participation in these programs should not be viewed as a requirement or barrier to receiving treatment for OUD.

Contingency Management

Contingency Management (CM) applies contingencies in the form of reinforcement and consequences in order to reduce substance use.⁶¹ Although contingency management has been shown effective in adults with opioid use disorder who are not receiving OAT,⁶² very little research has been done on CM interventions for youth with OUD. The goal of contingency management is to reduce the reinforcement provided by drug use while simultaneously increasing the reinforcement for healthier activities, with an emphasis on those which are incompatible with continuing to use drugs.⁶¹ A study with 347 patients between the ages of 12 and 18 in a community-based SUD treatment centre found a statistically significant reduction in opioid-positive urine drug tests, although opioid-positive urine drug tests overall made up a small number of the substance positive urine drug tests.⁶³ See <u>Appendix 4</u> for an example of contingency management.

Family Involvement in Care

The informed involvement of family members, as defined by the youth, can be instrumental to achieving successful outcomes for youth with SUDs.⁶⁴ In addition to providing emotional support, family members can also function as caregivers and may help monitor the patients between follow-up appointments while ensuring that patients attend their pharmacy for daily witnessed ingestion and/or ensure that take-home

doses (when appropriate) are consumed as prescribed and appointments are kept.³⁸ Parental participation in the treatment of youth should be actively encouraged, and family members should be supported with sufficient information and training. Offering group or individual sessions to parents and/or caregivers (i.e., parent guidance sessions) may be helpful.

It is recommended that a family history be taken, when possible, to identify and treat any mental health or substance use issues requiring treatment in the youth's family. It should also be noted that not all youth have healthy or positive relationships with their family members and decisions to include family members in care should be made with an understanding of the family dynamic and the patient's wishes.

Family-based approaches have been found to be more effective in treating adolescent substance use than several other psychosocial treatment intervention approaches including cognitive behavioural therapy, group counseling, motivational interviewing, and psychoeducational therapy.⁶⁴ These approaches are based on the influence that families have on child and adolescent development and seek to address family risk factors including poor problem-solving skills, lack of family cohesiveness, and poor communication in order to reduce drug use and problematic behaviours associated with it.²⁰

More information on family involvement in care can be found in the *Families at the Centre* document developed by the Family Mental Health and Substance Use Task Force. Family members who have been impacted by addiction can be referred to the <u>BCCSU website</u> for resources including support groups.

Residential Treatment

Evidence regarding residential treatment^g for OUD in youth is sparse. Residential treatment for adolescent SUDs more broadly is highly variable, with no clear consensus on models or characteristics of residential treatment.⁶⁶ A retrospective study of adolescents in Turkey receiving treatment for OUD found that those who completed a buprenorphine/naloxone medication-assisted inpatient treatment for 8 weeks had higher retention rates and a higher probability of abstinence at 12 months compared to those who discontinued the buprenorphine/naloxone treatment prior to the end of the 8 weeks.⁶⁷ A longitudinal comparison of young adults with OUD, opioid misuse, or no opioid use in residential treatment found that residential treatment with ongoing continuing care may be beneficial for young adults with OUD, but concludes that more research is needed.⁶⁸ Additionally, the American Society of Addiction Medicine recommends that adolescents requiring medication-assisted withdrawal management receive residential treatment,⁶⁹ which should be followed by intensive outpatient treatment.¹⁸ Outpatient services can slowly be tapered and then replaced by long-term maintenance and monitoring.¹⁸ More high quality evidence on residential treatment for youth with OUDs is needed. It should be noted that private programs frequently have a high associated cost which may present a barrier to accessing care for many individuals and families.

Some youth may choose abstinence-oriented recovery residences which provide supportive living environments where individuals in recovery can foster mutually supportive social networks and find support.

Special Considerations

Capacity to Consent

In British Columbia, youth under 19 years of age do not need parental consent in order to receive treatment. Capacity to consent for youth under 19 is determined based on the capacity to fully understand the treatment and possible consequences of treatment.⁷⁰ A patient under 19 seeking treatment who is determined able to understand the treatment and give consent should not require parental permission or notification. Informed consent and discussion of rationale for treatment should be documented. For more information

g This document uses an adapted definition of residential treatment from the Substance Abuse and Mental Health Services Administration (SAMHSA):

A direct service with multiple components that is delivered in a licensed facility used to evaluate, diagnose, and treat the symptoms of SUDs.⁶⁵

on determining capacity to provide consent in those under 18, refer to guidance from the <u>Canadian Medical Protective Association</u>⁷¹ and <u>Royal College of Physicians and Surgeons of Canada</u>. ⁷²

Youth-Centered Environment and Approach

Several studies have found that adolescents and youth experience the adult-oriented environment of most treatment services as a barrier to accessing and continuing treatment.^{14,18,73} Services aimed toward youth should ensure that they are relevant, interesting, and accessible in order to engage patients in care.¹⁸ While, generally, the elements that improve retention in adults also apply to youth (e.g., staff who are well-trained, clear policies, and little turnover in staff),¹⁵ several youth-specific factors have been identified. These include confidentiality of services,¹⁹ inclusion of family members, the opportunity to develop close relationships with staff, use of pharmacological treatments when appropriate, a combination of pharmacological treatments and psychosocial treatment interventions and supports, and ensuring treatment is provided without a pre-determined end date.¹⁴

Adolescents receiving methadone maintenance treatment in the United States identified several factors that impact adolescent engagement in treatment, including a reluctance to access treatment in locations populated by older patients who appeared to have more experience with substance use, as well as the relatability of language and environment.¹⁴ Additionally, these adolescents underlined the necessity of separating from peers and romantic partners who use drugs in order to succeed in treatment.¹⁴ However, these findings may not generalize to all youth, some of whom may benefit from engaging in treatment in concert with their romantic partners. Additionally, some street-involved youth may experience rules barring pets as a barrier to accessing services. Inclusion of peer navigators and peer support may also support a youth-centered approach, for example, by helping youth who may be ambivalent about receiving care from adult professionals who have not experienced OUD feel more comfortable accessing treatment. Peer support staff, with their own lived experience of OUD, can offer hope, model problem-solving skills, and offer an example of the benefits of participating in OUD treatment.⁷⁴

Considering the age range of clients and staff when referring youth may prove beneficial for patient retention and the success of the treatment. This consideration should be extended to pharmacy services for youth receiving OAT.

Transitioning into Adult-Oriented Care

In many locations, youth care is managed by the same few individuals in a community that may also manage adults. In other locations with more youth-specific services, youth will transfer from youth-oriented services into adult-oriented services. In these circumstances, the treating care provider (i.e., OAT prescriber) is likely to remain consistent. Thus, they are uniquely positioned to help ensure that the youth transitions smoothly into adult-oriented care.

Transfer of care to adult-oriented care should be planned in advance to ensure a gradual transition, ensuring that patients are linked to equivalent services as they age out of youth care (e.g., housing, employment, and other psychosocial supports).

In situations where the patient's OAT prescriber will change as they transfer to adult services, it is important to identify individuals who will continue to provide these services and arrange for the patient to meet the new prescriber prior to ceasing the existing relationship to ensure continuity of care.

Co-Occurring Disorders

Surveys of adolescents with SUDs as well as samples of adolescents in treatment for substance use have found that many (63-64%) have a co-occurring psychiatric disorder of varying severity,⁷⁵⁻⁷⁷ with conduct

disorder (59%), depression (15%), and attention deficit hyperactivity disorder (ADHD) (13%) being the most common.⁷⁶ Co-occurring disorders in adolescents are associated with higher rates of relapse, and relapse occurring more quickly than in adolescents with SUDs but no co-occurring disorders.⁷⁵

It is recommended that all youth with OUD be assessed for co-occurring disorders when possible and offered referral as needed and treatment when necessary. Those with co-occurring disorders should receive comprehensive and integrated treatment and continuing care, targeted to the particular co-occurring psychiatric disorder(s) present,⁷⁵ including both pharmacological and psychosocial treatment interventions where indicated. Some co-occurring disorders may require referral to a specialist (i.e. moderate or severe) while others may be treated in primary care (e.g., mild to moderate depression and anxiety may not require referral to a psychiatrist or mental health service provider). The treatment plan should be based on severity rather than simply presence of a diagnosis.⁷⁵ When co-occurring mental health disorders require treatment by a psychiatrist or other specialist, it is important that treatment approaches for OUD and the co-occurring disorder(s) be integrated, allowing for coordination in assessment, treatment planning and delivery, and monitoring of outcomes.⁷⁸ In the absence of active suicidality, treatment for OUD can be initiated before in-depth assessment and treatment of co-occurring disorders. See <u>Screening</u> section below for additional detail on screening assessments recommended for co-occurring disorders.

For those youth who present with a co-occurring SUD and/or severe psychiatric disorder, or other diagnoses that may require specialist referral, referrals can be made to <u>Foundry</u> in communities where Foundry Centres exist, child and youth mental health and substance use services in each health authority, or the <u>Provincial Youth Concurrent Disorders Program</u> at BC Children's Hospital.

Drug-Drug Interactions

If patients are requiring psychiatric medication to manage or treat co-occurring disorders it is vital that drug-drug interactions be checked prior to prescribing. Potential contraindications for buprenorphine/nal-oxone include: benzodiazepines, opioid analgesics, and other CNS-depressants.⁷⁹ Potential contraindications for methadone include: MAOIs, SSRIs, anti-psychotics including quetiapine fumarate (tradename Seroquel*), benzodiazepines, and other CNS-depressants.⁸⁰

Youth who have achieved abstinence or are in the process of medically-supported withdrawal should be frequently reassessed. Due to the possibility of pharmacological treatment with SSRIs increasing methadone concentrations^{81,82} and decreasing metabolism of methadone and buprenorphine when co-prescribed with certain SSRIs (as shown in in vitro trials),⁸³ there may be utility in stabilizing a youth's opioid use disorder prior to initiating a trial of psychiatric medications such as SSRIs in the absence of clear evidence of pre-morbid psychiatric illness.

Drug-drug interactions can be looked up on the <u>Drug Cocktails</u> website or <u>www.drugbank.ca</u>.

Spectrum of Substance Use and Overdose Crisis

This guideline supplement recognizes a spectrum of substance use, ranging from beneficial to problematic to SUDs of varying severity. 84 However, in the context of the current opioid overdose crisis, which is largely attributed to the adulteration of the street-drug supply with highly potent synthetic opioids, opioid use that may otherwise not be harmful is likely to substantially increase the risk of overdose and death. Thus, treatment decisions should be made in partnership with the patient and family (if applicable) with awareness of this increased risk.

Screening

This guideline supplement recommends the use of two different screening assessments. The GAIN-SS, which screens for substance use and co-occurring mental health disorders is preferentially recommended, with the CRAFFT, a substance use disorder screener, recommended in resource-challenged settings where administering the GAIN-SS is not feasible.

Youth, due to their younger age and shorter substance use trajectory, may not present to care having received an SUD or mental health diagnosis despite the presence of one or both. Thus, it is important to look for loss of function that may suggest a diagnosis in addition to any pre-existing diagnoses when screening for co-occurring disorders.

- A) Screening for co-occurring disorders using the GAIN-SS: The Global Appraisal of Individual Needs-Short Screener (GAIN-SS), is a short screening tool that can be used to, relatively quickly, identify those individuals who are likely to have a disorder in one of three dimensions (internalizing, externalizing, or substance use, as well as crime/violence problems) and rule out those who most likely do not need services. So A score of 3 or higher indicates a need for more in-depth assessment and intervention, while a score of 1-2 indicates a possible diagnosis. However, the GAIN-SS has not been validated for OUD in youth. The instrument, manual, and training resources can be accessed through the GAIN Coordinating Center. This guideline supplement recommends both SUDs and mental health issues be screened for, given the high rate of co-occurrence in youth (see Co-Occurring Disorders) in this document). Administration of the GAIN-SS may be more feasible where there are allied health providers, for example, in community health centres, family health teams, and multi-disciplinary walk-in clinics, as it takes more time to administer than the very brief CRAFFT. It may also be incorporated into existing intake assessments.
- B) Screening in primary care and other resource-challenged settings using the CRAFFT: For individual primary care providers, or in rural and remote settings, an initial screen with the CRAFFT test may be more feasible than the GAIN-SS. This guideline supplement recommends that the CRAFFT test, ⁸⁶ a tool validated for screening adolescents for SUDs and related problems (though not specifically OUD), be used in primary care settings for initial screening of SUDs (see <u>Appendix</u> 2) where routine use of the GAIN-SS is not feasible. A score of 2 or higher indicates the need for further assessment, ⁸⁷ using the DSM-5 clinical diagnostic criteria for OUD, which can be found in <u>Appendix 1</u>. It should be noted that DSM-5 diagnostic criteria for OUD has not been validated in adolescents, and that there is a possibility of under- or over-diagnosis when using these criteria. Because of this, a more thorough evaluation of risks and impacts on functionality is recommended in cases where a diagnosis of OUD is unclear.

In addition to the above screening tools, a longitudinal history focused on loss of function due to mental health symptoms and family history focused on mental health and addiction is recommended for those diagnosed with an SUD or co-occurring disorders. Screening for adverse childhood experiences (ACES; which include problematic substance use or mental illness in the home; physical, sexual, emotional abuse or neglect; domestic violence; parental separation or divorce; and having a family member in jail or prison⁸⁸) may be useful in young adults. Although Canadian numbers are not available, American studies have found that over half (54%) of adolescents (12-17 years) have been exposed to one or more ACEs, while over a quarter (28%) have been exposed to at least two.⁸⁸ A higher number of ACES has been associated with a

h Note: As there is a licensing fee for the GAIN-SS, we have not included it as an appendix. For paper-only administration, there is a \$100 USD fee that covers five years of use. For digital administration using the GAIN Assessment Building System (GAIN ABS), a one-time \$100 USD agency setup fee and an additional fee of \$252 USD per GAIN ABS user per year apply.

higher likelihood of substance use in adulthood. 89,990 Although more research is needed, the existing literature on childhood experiences of abuse and brain development shows a negative effect on brain structure and function including affect regulation, motivation processing, response inhibition, and attention. 91 The adolescent years represent an opportunity to mitigate the impacts of trauma (both short- and long-term), and thus identifying youth who have experienced trauma is an important first step. 88 The ACES questionnaire can be found in <u>Appendix 3</u>. More information on ACEs can be found on the <u>Centers for Disease Control and Prevention's website</u>.

As per the main provincial guideline, all youth with OUD should also be screened for HIV and hepatitis C. For other useful screening and assessment tools, see the following footnote.

Confidentiality

As with all medical care, confidentiality requirements should be followed when treating youth. This includes maintaining confidentiality from the youth's parent(s) or legal guardian(s), unless the youth gives consent for their medical information to be shared with their parent(s) or other family members. It is important to discuss confidentiality with youth (and any family members involved in their care). This is particularly important during a first encounter with a young person or when beginning treatment for substance use, to ensure that youth have a clear understanding that their care will be kept confidential, while also understanding the limits to confidentiality (for example, duty to report, see the College of Physicians and Surgeons of British Columbia's *Professional Standards and Guidelines: Duty to Report* or the *B.C. Handbook for Action on Child Abuse and Neglect*. If care is being kept confidential from parents or caregivers, the challenges and logistics of this should be discussed with the patient (for example, appointments and medication storage). If family members are aware of and involved in the youth's care, they can share information with health care providers without violating confidentiality. The limits of confidentiality should be revisited frequently to ensure the youth has a good understanding.

Harm Reduction Strategies

Broadly defined, harm reduction refers to policies, programs, and practices that aim to reduce the adverse health, social, and economic consequences of licit and illicit substance use. ¹⁰¹ In British Columbia, established harm reduction initiatives include needle/syringe distribution programs, overdose prevention with take-home naloxone, and supervised injection or consumption services. Including these harm reduction approaches within the continuum of addiction care provides additional mechanisms for promoting health and safety in diverse patient populations, including individuals who have difficulties achieving abstinence, or relapse to opioid use. There is substantial evidence that uptake of harm reduction services is associated with significant decreases in substance-related harms, including risky behaviours, HIV and hepatitis C infection, and overdose deaths. ^{35,102-108} In addition, research has shown that participation in harm reduction services can promote entry into addiction treatment. ¹⁰⁹⁻¹¹² For these reasons, if a patient is at risk of opioid-related harms, providing information and referrals to harm reduction services is a reasonable and appropriate clinical

¹ HEEADSSS is a mnemonic tool for conducting a psychosocial screen to assess the emotional, physical, and social well-being of youth.^{92,93} HEEADSSS is an acronym to guide assessment of 8 domains: Home, Education and employment, Eating, Activities, Drugs and alcohol, Sexuality, Suicidality, depression, and self-harm, and Safety from injury and violence.⁹² Example questions can be found in *Appendix* 5.

The General Anxiety Disorder-7 (GAD-7) is a brief screening tool which has been validated in adults in both primary care94 and the general population.⁹⁵ It has not been validated specifically in adolescents, however, the study which validated the GAD-7 for the general population used individuals as young as 14 years old.⁹⁵ The GAD-7 screening tool can be found in *Appendix 6*.

The Patient Health Questionnaire (PHQ-9) is a brief screening tool for assessing the presence and severity of depression. ⁹⁶ It has been validated in adolescents. ⁹⁷ The PHQ-9 can be found in *Appendix 7*.

decision, particularly in the current environment of heightened overdose risk. Youth may not recognize certain issues as harmful or potentially harmful,¹¹³ thus harm reduction services for youth should be both honest and informed by the context of youth's lives.¹¹⁴

There are a number of actions clinicians can take to increase awareness of harm reduction services among patients, starting with routinely including information and education about harm reduction and safer injection practices when appropriate in discussions with patients and families. In order to provide informed referrals, clinicians should also be aware of harm reduction programs available in the local area and services provided. A current listing of harm reduction services that provide needles, syringes and other injection supplies, overdose prevention training, and take-home naloxone kits can be found on the <u>Toward the Heart website</u>. In addition, as part of the provincial response to the overdose crisis, emergency-use naloxone was recently unscheduled and deregulated in BC, and patients can be advised that naloxone may be purchased without a prescription at community pharmacies, healthcare sites, treatment centres and community agencies. There is no age restriction for accessing take-home naloxone kits. For individuals enrolled in Plan W (a new PharmaCare plan effective October 1, 2017, designed for First Nations persons in BC), naloxone (injectable and intranasal) and injection supplies remain covered through the federal Non-Insured Health Benefits program (NIHB) and are available at no-cost from any pharmacy that carries naloxone; no prescription or paperwork is required.

With these recent regulatory changes, community-based clinics should also consider <u>providing naloxone kits</u> and overdose prevention education directly to patients and families who would benefit.

Prevention

Although there is significant literature on school-based programs,¹¹⁵ mentoring,¹¹⁶ and personality-based prevention programs,¹¹⁷ for the prevention of alcohol and substance use, there is a paucity of literature on opioid-specific prevention for youth. A 2013 Cochrane review found some evidence for an association between mentoring and lower rates of drug use, although it did not specify opioid use.¹¹⁶ However, few well-designed studies have been conducted evaluating the potential effects of mentoring on drug use in youth.¹¹⁶ A 2014 Cochrane review of school-based prevention programs found small but consistent protective effects from programs that combined social competence and social influence approaches, but did not address opioid use specifically.¹¹⁵ The Substance Abuse and Mental Health Services Administration offers online substance use prevention training for families and advocates as well as professional care providers through the Center for the Application of Prevention Technologies Online Training Portal.

Pregnancy

For guidance on treating pregnant youth with OUD, see the BCCSU's <u>A Guideline for the Clinical Management of Opioid Use Disorder—Pregnancy Supplement.</u>

LGBT2Q+ Youth

Lesbian, gay, bisexual, trans, Two-Spirit, queer, and other gender and sexually diverse individuals (LGBT2Q+) face unique challenges that should be addressed when providing care to LGBT2Q+ youth with SUDs. LGBT2Q+ individuals report disproportionate rates of substance use, 118-120 and enter treatment with greater severity of substance use problems. 121 Suggested explanations for these disproportionate rates include the stress of being in a minority group, dealing with social prejudice and discrimination, internalized stigma, and lack of cultural competence in the health care system. 121,122 Data on OUD specifically in LGBT2Q+ is

lacking, however, given the high rates of substance use in LGBT₂Q+ individuals, OUD treatment should be culturally sensitive and aware of the issues that LGBT₂Q+ youth are likely to face.

Strategies for working with LGBT2Q+ youth include actively communicating that services are available for LGBT2Q+ clients, establishing contacts within the LGBT2Q+ community, and using inclusive language in forms and clinical materials. Although substance use treatment for LGBT2Q+ individuals is similar to that for other populations, additional factors must be considered, including addressing the patient's feelings about their sexual and gender identities and the impacts of stigma and discrimination in their lives. LGBT2Q+ individuals may also have experienced discrimination in the health care system and thus require extra sensitivity from health care providers in order to build trust. A list of support groups for LGBT2Q+ individuals in BC can be found here. Additional information and guidance can be found in the Substance Abuse and Mental Health Services Administration's publication, A Provider's Introduction to Substance Abuse Treatment for Lesbian, Gay, Bisexual, and Transgender Individuals.

A non-judgmental attitude, active demonstration of awareness and sensitivity of trans issues, and a reinforcement of confidentiality can help young trans people feel safe approaching care providers.¹²⁴ Other ways to demonstrate transgender awareness and sensitivity include placing trans inclusive brochures and posters (e.g., from the Transgender Health Information Program) in waiting rooms, asking about gender identity on intake forms,¹²⁴ and using open-ended questions about sexuality and gender.¹²³ More information on working with trans, two-spirit, and gender diverse youth can be found in Trans Care BC's *Gender-affirming Care for Trans, Two-Spirit, and Gender Diverse Patients in BC: A Primary Care Toolkit*. Additional resources include the Trans Speciality Care Program and Transgender Health Information Program.

Specialist Consultation

Prescribers who require additional support in treating youth with OUD may consult addictions specialists through the Rapid Access to Consultative Expertise (RACE) line. If administration of pharmacotherapy to this patient population is beyond scope of practice or expertise, care providers should refer such patients to a health care professional with experience in treatment of adolescents with SUDs. Prescribers who do not have the capacity to treat concurrent mental health disorders may refer to Foundry, which is in the process of building a provincial network of integrated health and social services for youth aged 12-24, 125 or child and youth mental health and substance use services in each health authority.

Prescribers wanting additional education and training on treating OUD in youth may complete the Youth module of the <u>Provincial Opioid Addiction Treatment and Support Program (POATSP)</u> and/or complete a preceptorship through the POATSP program with a physician experienced in treating youth.

Future Directions and Evidence Gaps

Due to the limited research on SUDs in youth, and specifically OUDs, there are several evidence gaps that should guide future research. These opportunities for research include the impact of substance use on brain development in adolescence; the efficacy of extended release naltrexone in youth with OUD; strategies for effectively tapering OAT and when transitioning off of OAT is appropriate; effective early intervention strategies; efficacy of non-pharmacological approaches for youth with OUD (e.g., contingency management); efficacy of residential treatment for youth with OUD; factors that increase OAT retention in youth; and recovery-oriented systems of care for youth.

Appendix 1: DSM-5 Clinical Diagnostic Criteria for Opioid Use Disorder

While the DSM-5 clinical diagnostic criteria for OUD may provide a helpful framework for diagnosing adolescents, it should be noted that the criteria have not been validated in adolescents. There may be adolescents who do not meet the necessary criteria for a diagnosis yet have significant impairment and face high risk of overdose, making them good candidates for OUD treatment, including OAT. In cases where a diagnosis of OUD is unclear, a more thorough evaluation of risks and impacts on functionality is recommended.

Clin	cal Diagnostic Criteria for Opioid Use Disorder	
1	Opioids are often taken in larger amounts or over a longer period than was intended	
2	There is a persistent desire or unsuccessful efforts to cut down or control opioid use	
3	A great deal of time is spent in activities necessary to obtain the opioid, use the opioid, or recover from its effects	The presence of at least 2 of these symptoms
4	Craving or a strong desire to use opioids	indicates an OUD
5	Recurrent opioid use resulting in a failure to fulfill major role obligations at work, school, or home	The severity of the OUD is
6	Continued opioid use despite having persistent or recurrent social or interpersonal problems caused or exacerbated by the effects of opioids	defined as:
7	Important social, occupational, or recreational activities are given up or reduced because of opioid use	MILD: The presence of 2 to 3 symptoms
8	Recurrent opioid use in situations in which it is physically hazardous	
9	Continued use despite knowledge of having a persistent or recurrent physical or psychological problem that is likely to have been caused or exacerbated by opioids.	MODERATE: The presence of 4 to 5 symptoms
10	Tolerance*, as defined by either of the following: a) Need for markedly increased amounts of opioids to achieve intoxication or desired effect b) Markedly diminished effect with continued use of the same amount of opioid	SEVERE: The presence of 6 or more symptoms
11 *Dati	Withdrawal*, as manifested by either of the following: a) Characteristic opioid withdrawal syndrome b) Same (or a closely related) substance is taken to relieve or avoid withdrawal symptoms	wo critaria (with drawal and
Pati	ents who are prescribed opioid medications for analgesia may exhibit these t	wo criteria (withdrawai and

References:

American Psychiatric Association. *Diagnostic and statistical manual of mental disorders: DSM-5*TM. 5th ed. Arlington, VA: American Psychiatric Publishing, Inc.

tolerance), but would not necessarily be considered to have an SUD.

Appendix 2—CRAFFT Screening Interview

The CRAFFT test⁸⁶ is a validated tool for screening youth for SUDs and related problems, although it has not been validated for opioid use specifically.

C	Have you ever ridden in a <u>car</u> driven by someone (including yourself) who was "high" or had been using alcohol or drugs?
R	Do you ever use alcohol or drugs to <u>relax</u> , feel better about yourself, or fit in?
Α	Do you ever use alcohol or drugs while you are by yourself, <u>a</u> lone?
F	Do you ever <u>f</u> orget things you did while using alcohol or drugs?
F	Do your family or <u>friends</u> ever tell you that you should cut down on your drinking or drug use?
T	Have you ever gotten into <u>trouble</u> while you were using alcohol or drugs?

Scoring: One point for each "yes" response. A total score of 2 or higher is a positive screen, indicating additional assessment is needed.

Appendix 3—Adverse Childhood Experiences (ACES) Questionnaire¹²⁶

While you were growing up, during your first 18 years of life:	
1. Did a parent or other adult in the household often:	
Swear at you, insult you, put you down or humiliate you? or	
Act in a way that made you afraid that you might be physically hurt?	
Yes No	If yes, enter 1:
a Did a payont ay ather adult in the household after.	
 Did a parent or other adult in the household often: Push, grab, slap, or throw something at you? 	
or	
Ever hit you so hard that you had marks or were injured?	
Yes No	If yes, enter 1:
3. Did a parent or person at least 5 years older than you ever :	
Touch or fondle you or have you touch their body in a sexual way?	
Or	
Try to or actually have oral, anal, or vaginal sex with you? Yes No	If yes, enter 1:
165 140	11 yes, effect 1
4. Did you often feel that:	
No one in your family loved you or thought you were important or special?	
or	
Your family didn't look out for each other, feel close to each other, or support	
Yes No	If yes, enter 1:
- Did often feelahet	
5. Did you often feel that: You didn't have enough to eat, had to wear dirty clothes, and had no one to present the present of the present	rotect vou?
or	otect you:
Your parents were too drunk or high to take care of you or take you to the doc	tor if you needed it?
Yes No	If yes, enter 1:
6. Were your parents ever separated or divorced?	
Yes No	If yes, enter 1:
7 Was your mather or stepmether.	
7. Was your mother or stepmother: Often pushed, grabbed, slapped, or had something thrown at her?	
or	
Sometimes or often kicked, bitten, hit with a fist, or hit with something hard?	•
or	
Ever repeatedly hit over at least a few minutes or threatened with a gun or kni	ife?
Yes No	If yes, enter 1:
8. Did you live with anyone who was a problem drinker or alcoholic or who used street	_
Yes No	If yes, enter 1:
9. Was a household member depressed or mentally ill or did a household member atte	mnt suicide?
Yes No	If yes, enter 1:
	. , ,
10. Did a household member go to prison?	
Yes No	If yes, enter 1:
A.I. 1107 / TILL 197	
Add up all 'Yes' answers: This is your ACE score.	

Appendix 4—Contingency Management Example

The following example is adapted from the Center for Substance Abuse Treatment's *Medication-Assisted* treatment for Opioid Addiction in Opioid Treatment Programs.¹²⁷

Contingency management strategy for abstinence from opioids:

- 1. Determine an easily measured target behaviour (e.g., abstinence from opioids).
- 2. Determine a non-monetary reward that can be delivered upon documentation of the desired behaviour. For example, three consecutive negative urine drug screens may result in non-refundable vouchers (e.g., movie passes or coffee cards).
- 3. Clearly define the link between the target behaviour and the reward (for example, one negative urine screen may be rewarded with one voucher).
- 4. Make a written contract that specifies the duration of the agreement and any changes over time.

It should be noted that frequency, timing, and magnitude of incentives are key factors in successfully changing behaviour, with more frequent rewards of larger incentives delivered as soon as possible after the targeted behaviour occurs being optimal.¹²⁸ Additionally, using escalating rewards for continued meeting of targeted behaviour with rewards being reset when behaviour is missed (e.g., a positive urine screen) has been found to promote sustained abstinence.^{129,130} An example of this escalating schedule with contingent reset would be an addition of \$0.50 to the value of a coffee card with each week of negative urine drug screens, with a positive urine drug screen getting no reward and a return to the baseline amount for the next set of negative urine drug screens.

Additional resources for implementing contingency management (also known as Motivational Incentives) including a training course and software can be found on the <u>Better Tx Outcomes</u> website maintained by the Blending Initiative, a joint initiative from the National Institute on Drug Abuse (NIDA) and the Substance Abuse and Mental Health Services Administration (SAMHSA).

Appendix 5—HEEADSSS

The following example questions are borrowed and slightly modified from Smith and McGuinness (2017)92 and Goldenring and Rosen (2004).93 Additional and alternative questions can be found on Modern Medicine Network's <u>HEEADSSS Resource Centre website</u>.

Domain	Example Question		
<u>H</u> ome	Where do you live?		
	How long have you lived there?		
	Who lives with you?		
	What are relationships like at home?		
Education and employment	What are your favourite and least favourite subjects at school?		
	Have you changed schools in the past few years?		
	Is your school a safe place? (Why?)		
	What are your grades like?		
	Are you working? (Where? How much?)		
	What are your future education/employment plans?		
<u>E</u> ating	What do you like and not like about your body?		
	Have you ever worried about having enough food to eat?		
<u>A</u> ctivities	What do you do for fun? Reading? Sports? Video games?		
	How much TV do you watch each week?		
<u>D</u> rugs and alcohol	Do any of your friends smoke? Drink alcohol? Use other drugs?		
	Have you ever tried smoking, drinking alcohol, or doing other drugs with your friends?		
<u>S</u> exuality	Tell me about the people that you've dated.		
	Have any of your relationships been sexual?		
	What does the term "safer sex" mean to you?		
Suicide, depression, and self-	Have you ever thought about hurting yourself or someone else?		
harm	Have you lost interest in things that you used to really enjoy doing?		
Safety from injury and violence	Do you always wear a seat belt when in a car?		
	Have you ever ridden with a driver who was drunk or high? (How often?)		
	Is there a lot of violence in your school? In your neighbourhood? Where you live?		
	Have you ever been picked on or bullied?		
	Have you ever felt the need to protect yourself? Do you still feel that way?		

Appendix 6—GAD-7

The Generalized Anxiety Disorder-7 (GAD-7) is a brief screening tool for assessing generalized anxiety disorder.⁹⁴ It has not been validated for use in those with OUD specifically.

Over the <u>last 2 weeks</u> , how often have you been	Not	Several	More	Nearly
bothered by the following problems?	at all	days	than	every
			half	day
			the	
			days	
1. Feeling nervous, anxious, or on edge	0	1	2	3
2. Not being able to stop or control worrying	0	1	2	3
3. Worrying too much about different things	0	1	2	3
4. Trouble relaxing	0	1	2	3
5. Being so restless that it is hard to sit still	0	1	2	3
6. Becoming easily annoyed or irritable	0	1	2	3
7. Feeling afraid as if something awful might happen	0	1	2	3

Total score:

Scores:

5: Mild anxiety

10: Moderate anxiety

15: Severe anxiety

A score of 10 or higher indicates the need for an expanded diagnostic evaluation. 95

Appendix 7—Patient Health Questionnaire (PHQ-9)

The Patient Health Questionnaire (PHQ-9) is a brief screening tool for assessing the presence and severity of depression. 96 It has been validated in adolescents 97

Over the last a weeks how often have you been bethered by	Not	Several	More	Moorly
Over the <u>last 2 weeks</u> , how often have you been bothered by				Nearly
the following problems?	at all	days	than	every
			half	day
			the	
			days	
1. Little interest or pleasure in doing things	0	1	2	3
2. Feeling down, depressed or hopeless	0	1	2	3
3. Trouble falling asleep, staying asleep, or sleeping too much	0	1	2	3
4. Feeling tired or having little energy	0	1	2	3
5. Poor appetite or overeating	0	1	2	3
6. Feeling bad about yourself – or that you're a failure or have	0	1	2	3
let yourself or your family down				
7. Trouble concentrating on things, such as reading the	0	1	2	3
newspaper or watching television				
8. Moving or speaking so slowly that other people could have	0	1	2	3
noticed. Or, the opposite – being so fidgety or restless that				
you have been moving around a lot more than usual				
9. Thoughts that you would be better off dead or of hurting	0	1	2	3
yourself in some way				_
Column totals:			++	

Column totals:	++
	Total:

10. If you checked off any problems, how difficult have those problems made it for you to do your work, ta	ake
care of things at home, or get along with other people?	

□ Not difficult at all	☐ Somewhat difficult	□ Very difficult	☐ Extremely difficult
	- Johnewhat unficult	VEIV UIIILUIL	TEXTIELL ALLEGE

Guide for	r Interpreting PHQ-9 Score	25
Score	Depression severity	Action
0-4	None-minimal	Patient may not need depression treatment
5-9	Mild	Use clinical judgment on treatment, based on patient's duration of symptoms and functional impairment
10-14	Moderate	Use clinical judgment on treatment, based on patient's duration of symptoms and functional impairment
15-19	Moderately severe	Treat using anti-depressants, psychotherapy or a combination of treatment
20-27	Severe	Treat using antidepressants with or without psychotherapy

The screener and manual are available at www.phqscreeners.com.

REFERENCES

- American Academy of Pediatrics. Medication-Assisted Treatment of Adolescents With Opioid Use Disorders. Pediatrics. 2016.
- Hammond CJ. The Role of Pharmacotherapy in the Treatment of Adolescent Substance Use Disorders. Child and Adolescent Psychiatric Clinics of North America. 2016;25(4):685-711.
- Warden D, Subramaniam GA, Carmody T, et al. Predictors of attrition with buprenorphine/naloxone treatment in opioid dependent youth. Addictive behaviors. 2012;37(9):1046-1053.
- Boak A, Hamilton, HA, Adlaf, EM, Mann, R,. Drug use among Ontario students, 1977-2017: Detailed Findings from the Ontario Student Drug Use and Health Survey. Centre for Addiction and Mental Health;2017.
- MacDougall L, Mohammed, A., Emerson, B. The Epidemiology of Illegal Drug Overdoses in BC. 2017.
- BC Coroners Service. Illicit Drug Overdose Deaths in BC: January 1, 2007-October 31, 2017. In: Ministry of Public Safety and Solicitor General, ed. Burnaby, BC: Office of the Chief Coroner; 2017.
- Woody GE, Poole SA, Subramaniam G, et al. Extended vs short-term buprenorphine-naloxone for treatment of opioid-addicted youth: a randomized trial. Jama. 2008;300(17):2003-2011.
- 8. Smyth BP, Fagan J, Kernan K. Outcome of heroin-dependent adolescents presenting for opiate substitution treatment. Journal of Substance Abuse Treatment. 2012;42(1):35-44.
- Minozzi S, Amato L, Bellisario C, Davoli M. Maintenance treatments for opiate -dependent adolescents. Cochrane Database of Systematic Reviews. 2014(6).
- 10. Schuman-Olivier Z, Weiss RD, Hoeppner BB, Borodovsky J, Albanese MJ. Emerging adult age status predicts poor buprenorphine treatment retention. Journal of substance abuse treatment. 2014;47(3):202-212.
- Dreifuss JA, Griffin ML, Frost K, et al. Patient Characteristics Associated with Buprenorphine/Naloxone Treatment
 Outcome for Prescription Opioid Dependence: Results
 from a Multisite Study. Drug and alcohol dependence.
 2013;131(0):112-118.
- 12. Vo HT, Robbins E, Westwood M, Lezama D, Fishman M. Relapse prevention medications in community treatment for young adults with opioid addiction. Substance Abuse. 2016;37(3):392-397.
- Cottrill CB, Matson SC. Medication-Assisted Treatment of Opioid Use Disorder in Adolescents and Young Adults. Adolescent medicine: state of the art reviews. 2014;25(2):251-265.
- 14. Guarino HM, Marsch LA, Campbell WS, 3rd, Gargano SP, Haller DL, Solhkhah R. Methadone maintenance

- treatment for youth: experiences of clients, staff, and parents. Substance use & misuse. 2009;44(14):1979-1989.
- Hopfer CJ, Crowley TJ, Khuri E. Treating Adolescent Heroin Use. Journal of the American Academy of Child & Adolescent Psychiatry. 2003;42(5):609-611.
- Dettmer K, Saunders B, Strang J. Take home naloxone and the prevention of deaths from opiate overdose: two pilot schemes. BMJ (Clinical research ed). 2001;322(7291):895-896.
- Oluwajenyo Banjo M, Tzemis D, Al-Qutub D, Amlani A, Kesselring S, Buxton JA. A quantitative and qualitative evaluation of the British Columbia Take Home Naloxone program. CMAJ open. 2014;2(3):E153-161.
- Sharma B, Bruner A, Barnett G, Fishman M. Opioid Use Disorders. Child and Adolescent Psychiatric Clinics. 2016;25(3):473-487.
- American Society of Addiction Medicine. The National Practice Guideline for the Use of Medications in the Treatment of Addiction Involving Opioid Use. American Society of Addiction Medicine; 2015:65.
- Winters KC, Tanner-Smith EE, Bresani E, Meyers K. Current advances in the treatment of adolescent drug use. Adolescent Health, Medicine and Therapeutics. 2014;5:199-210.
- Cohen AO, Breiner K, Steinberg L, et al. When Is an Adolescent an Adult? Assessing Cognitive Control in Emotional and Nonemotional Contexts. Psychological Science. 2016;27(4):549-562.
- 22. Squeglia LM, Gray KM. Alcohol and Drug Use and the Developing Brain. Current psychiatry reports. 2016;18(5):46-46.
- Substance Abuse and Mental Health Services Administration. SAMHSA's Working Definition of Recovery: 10
 Guiding Principles of Recovery. In: Substance Abuse and Mental Health Services Administration, ed. Rockville, MD: SAMHSA; 2012.
- BC Harm Reduction Strategies and Services. Respectful Language and Stigma: Regarding People Who Use Substances. Toward the Heart; 2017.
- Simkin DR, Grenoble S. Pharmacotherapies for Adolescent Substance Use Disorders. Child and Adolescent Psychiatric Clinics of North America. 2010;19(3):591-608.
- 26. Grant BF, Saha TD, Ruan WJ, et al. Epidemiology of DSM-5 Drug Use Disorder: Results From the National Epidemiologic Survey on Alcohol and Related Conditions-III. JAMA Psychiatry. 2016;73(1):39-47.
- 27. Arthur E SA, Dartnall M, Beltgens P, Poole N, Smylie D, North N, Schmidt R. Trauma-Informed Practice Guide. 2013; http://bccewh.bc.ca/wp-content/uploads/2012/05/2013_TIP-Guide.pdf.

- 28. First Nations Health Authority. Cultural Humility. 2017; http://www.fnha.ca/wellness/cultural-humility.
- 29. Arnett JJ, Taber S. Adolescence terminable and interminable: When does adolescence end? Journal of Youth and Adolescence. 1994;23(5):517-537.
- 30. Gowing L, Ali R, White JM. Buprenorphine for the management of opioid withdrawal. Cochrane Database Syst Rev. 2009(3).
- Gowing L, Farrell M, Ali R, White JM. Alpha(2)-adrenergic agonists for the management of opioid withdrawal. Cochrane Database of Systematic Reviews. 2016(5).
- 32. Amato L, Davoli M, Minozzi S, Ferroni E, Ali R, Ferri M. Methadone at tapered doses for the management of opioid withdrawal. Cochrane Database Syst Rev. 2013(2).
- 33. MacArthur GJ, Minozzi S, Martin N, et al. Opiate substitution treatment and HIV transmission in people who inject drugs: systematic review and meta-analysis. BMJ (Clinical research ed). 2012;345:e5945.
- 34. Strang J, McCambridge J, Best D, et al. Loss of tolerance and overdose mortality after inpatient opiate detoxification: follow up study. BMJ (Clinical research ed). 2003;326(7396):959-960.
- 35. MacArthur GJ, van Velzen E, Palmateer N, et al. Interventions to prevent HIV and Hepatitis C in people who inject drugs: A review of reviews to assess evidence of effectiveness. International Journal of Drug Policy. 2014;25(1):34-52.
- 36. Minozzi S, Amato L, Bellisario C, Davoli M. Detoxification treatments for opiate dependent adolescents. Cochrane Database of Systematic Reviews. 2014(4).
- 37. Marsch LA, Moore SK, Borodovsky JT, et al. A randomized controlled trial of buprenorphine taper duration among opioid-dependent adolescents and young adults. Addiction. 2016;111(8):1406-1415.
- Ranjan R, Pattanayak RD, Dhawan A. Long-term agonist and antagonist therapy for adolescent opioid dependence: a description of two cases. Indian J Psychol Med. 2014;36(4):439-443.
- 39. Degenhardt L, Bucello C, Mathers B, et al. Mortality among regular or dependent users of heroin and other opioids: a systematic review and meta-analysis of cohort studies. Addiction. 2011;106(1):32-51.
- Haber PS, Demirkol A, Lange K, Murnion B. Management of injecting drug users admitted to hospital. The Lancet. 2009;374(9697):1284-1293.
- 41. Mattick RP, Breen C, Kimber J, Davoli M. Buprenorphine maintenance versus placebo or methadone maintenance for opioid dependence. The Cochrane database of systematic reviews. 2014;2:CD002207.
- 42. Harcus AW, Ward AE, Smith DW. The Monitored Release of Buprenorphine: Results in the Young. Journal of International Medical Research. 1980;8(2):153-155.

- Marsch LA, Bickel WK, Badger GJ, et al. Comparison of pharmacological treatments for opioid-dependent adolescents: A randomized controlled trial. Archives of General Psychiatry. 2005;62(10):1157-1164.
- 44. Demirci AC, Gunes H, Adaletli H, Bulanik E, Erdogan A. Liver enzyme levels in adolescent patients treated with buprenorphine and additional psychotropic agents. American Journal of Drug & Alcohol Abuse. 2015;41(1):107-113.
- 45. Motamed M, Marsch LA, Solhkhah R, Bickel WK, Badger GJ. Differences in Treatment Outcomes between Prescription Opioid-Dependent and Heroin-Dependent Adolescents. J Addict Med. 2008;2(3):158-164.
- 46. Subramaniam GA, Warden D, Minhajuddin A, et al. Predictors of Abstinence: National Institute of Drug Abuse Multisite Buprenorphine/Naloxone Treatment Trial in Opioid-Dependent Youth. Journal of the American Academy of Child & Adolescent Psychiatry. 2011;50(11):1120-1128.
- 47. Bell J, Mutch C. Treatment retention in adolescent patients treated with methadone or buprenorphine for opioid dependence: a file review. Drug and alcohol review. 2006;25(2):167-171.
- 48. Proctor SL, Copeland AL, Kopak AM, Herschman PL, Polukhina N. A naturalistic comparison of the effectiveness of methadone and two sublingual formulations of buprenorphine on maintenance treatment outcomes: Findings from a retrospective multisite study. Experimental and clinical psychopharmacology. 2014;22(5):424-433.
- 49. Gladstone EJ, Smolina K, Morgan SG. Trends and sex differences in prescription opioid deaths in British Columbia, Canada. Inj Prev. 2015.
- Marteau D, McDonald R, Patel K. The relative risk of fatal poisoning by methadone or buprenorphine within the wider population of England and Wales. BMJ Open. 2015;5(5):e007629.
- 51. US Food & Drug Administration. FDA Drug Safety Communication: FDA urges caution about withholding opioid addiction medications from patients taking benzodiazepines or CNS depressants: careful medication management can reduce risks. Drug Safety and Availability 2017; https://www.fda.gov/Drugs/DrugSafety/ ucm575307.htm.
- College of Physicians and Surgeons of British Columbia. Safe Prescribing of Drugs with Potential for Misuse/ Diversion. 2016.
- Kornor H, Waal H. From opioid maintenance to abstinence: a literature review. Drug and alcohol review. 2005;24(3):267-274.
- Nosyk B, Sun H, Evans E, et al. Defining dosing pattern characteristics of successful tapers following methadone maintenance treatment: results from a population-based retrospective cohort study. Addiction. 2012;107(9):1621-1629.

- Connery HS. Medication-Assisted Treatment of Opioid Use Disorder: Review of the Evidence and Future Directions. Harvard Review of Psychiatry. 2015;23(2):63-75.
- 56. Fishman MJ, Winstanley EL, Curran E, Garrett S, Subramaniam G. Treatment of opioid dependence in adolescents and young adults with extended release naltrexone: preliminary case-series and feasibility. Addiction. 2010;105(9):1669-1676.
- 57. Health Canada. List of Drugs for an Urgent Public Health Need. 2017; https://www.canada.ca/en/health-canada/ services/drugs-health-products/access-drugs-exceptional-circumstances/list-drugs-urgent-public-health-need. html.
- Minozzi S, Amato L, Vecchi S, Davoli M, Kirchmayer U, Verster A. Oral naltrexone maintenance treatment for opioid dependence. The Cochrane database of systematic reviews. 2011(2):CD001333.
- Waldron HB, & Turner, C.H. Evidence-Based Psychosocial Treatments for Adolescent Substance Abuse. Journal of Clinical Child & Adolescent Psychology. 2008;37(1):238-261.
- 60. Godley MD, Passetti LL, Subramaniam GA, Funk RR, Smith JE, Meyers RJ. Adolescent Community Reinforcement Approach implementation and treatment outcomes for youth with opioid problem use. Drug and Alcohol Dependence. 2017;174:9-16.
- Stanger C, Budney AJ. Contingency Management Approaches for Adolescent Substance Use Disorders. Child and Adolescent Psychiatric Clinics. 2010;19(3):547-562.
- 62. Petry NM, Carroll KM. Contingency Management Is Efficacious in Opioid-Dependent Outpatients Not Maintained on Agonist Pharmacotherapy. Psychology of addictive behaviors: journal of the Society of Psychologists in Addictive Behaviors. 2013;27(4):1036-1043.
- 63. Lott DC, Jencius S. Effectiveness of very low-cost contingency management in a community adolescent treatment program. Drug and Alcohol Dependence. 2009;102(1):162-165.
- 64. Horigian VE, Anderson AR, Szapocznik J. Family-Based Treatments for Adolescent Substance Use. Child and Adolescent Psychiatric Clinics of North America. 2016;25(4):603-628.
- Sharon Reif, Preethy George, Lisa Braude, et al. Residential Treatment for Individuals With Substance Use Disorders: Assessing the Evidence. Psychiatric Services. 2014;65(3):301-312.
- 66. Plant RW, Panzarella, P. Residential Treatment of Adolescents with Substance Use Disorders: Evidence-Based APproaches and Best Practice Recommendations. In: Leukefeld CC, Gollotta, T. P., Staton-Tindall, M., ed. Adolescent Substance Abuse: Evidence-Based Approached

- to Prevention and Treatment. New York, NY: Springer Science+Busines Media; 2009:136-154.
- Mutlu C, Demirci AC, Yalcin O, Kilicoglu AG, Topal M, Karacetin G. One-Year Follow-Up of Heroin-Dependent Adolescents Treated with Buprenorfine/Naloxone for the First Time in a Substance Treatment Unit. Journal of Substance Abuse Treatment. 2016;67:1-8.
- 68. Schuman-Olivier Z, Greene MC, Bergman BG, Kelly JF. Is residential treatment effective for opioid use disorders? A longitudinal comparison of treatment outcomes among opioid dependent, opioid misusing, and non-opioid using emerging adults with substance use disorder. Drug and alcohol dependence. 2014;144:178-185.
- Mee-Lee D, Shulman, GD, Fishman, MJ, Gastfriend, DR, Miller, MM, eds. The ASAM Criteria: Treatment Criteria for Addictive, Substance-Related, and Co-Occurring Conditions. Carson City, NV: American Society of Addiction Medicine;2013.
- 70. College of Physicians and Surgeons of British Columbia. Consent of "Minors": Infants Act. College of Physicians and Surgeons of British Columbia; 2015.
- 71. The Canadian Medical Protective Association. Can a child provide consent? Duties and responsibilities: Expectations of physicians in practice 2016; https://www.cmpa-acpm.ca/en/advice-publications/browse-articles/2014/can-a-child-provide-consent. Accessed May 31, 2017.
- Jackman M, and McRae, A. Medical Decision-Making and Mature Minors. In: Canada TRCoPaSo, ed. 1.5.2. Vol 1.5.2: The Royal College of Physicians and Surgeons of Canada; 2013.
- AAP Committee on Substance Use and Prevention. Medication-Assisted Treatment of Adolescents With Opioid Use Disorders. Pediatrics. 2016;138(3):e20161893.
- 74. Barton J, Hendreson, J. Peer Support and Youth Recovery: A Brief Review of the Theoretical Underpinnings and Evidence. Canadian Journal of Family and Youth. 2016;8(1):1-17.
- Bukstein OG, Horner MS. Management of the Adolescent with Substance Use Disorders and Comorbid Psychopathology. Child and Adolescent Psychiatric Clinics of North America. 2010;19(3):609-623.
- 76. Grella CE, Hser YI, Joshi V, Rounds-Bryant J. Drug treatment outcomes for adolescents with comorbid mental and substance use disorders. The Journal of nervous and mental disease. 2001;189(6):384-392.
- Hser Y, Grella CE, Hubbard RL, et al. An evaluation of drug treatments for adolescents in 4 us cities. Archives of General Psychiatry. 2001;58(7):689-695.
- 78. Hawkins EH. A tale of two systems: co-occurring mental health and substance abuse disorders treatment for adolescents. Annual review of psychology. 2009;60:197-227.

- Canadian Pharmacists Association. Suboxone [product monograph]. Compendium of Pharmaceuticals and Specialities (CPS). Ottawa, Canada2017.
- 80. Canadian Pharmacists Association. Methadose [product monograph]. Compendium of Pharmaceuticals and Specialities (CPS). Ottawa, Canada2017.
- 81. McCance-Katz EF, Sullivan L, Nallani S. Drug Interactions of Clinical Importance among the Opioids, Methadone and Buprenorphine, and other Frequently Prescribed Medications: A Review. The American Journal on Addictions. 2010;19(1):4-16.
- 82. Hamilton SP, Nunes EV, Janal M, Weber L. The Effect of Sertraline on Methadone Plasma Levels in Methadone-Maintenance Patients. The American Journal on Addictions. 2000;9(1):63-69.
- 83. Iribarne C, Picart D, Dréano Y, Berthou F. In vitro interactions between fluoxetine or fluoxamine and methadone or buprenorphine. Fundamental & Clinical Pharmacology. 1998;12(2):194-199.
- 84. Ministry of Health Services and Ministry of Children and Family Development. Healthy minds, healthy people: A 10-year plan to address mental health and substance use in British Columbia. British Columbia: Ministry of Health Services and Ministry of Children and Family Development; 2010.
- 85. Dennis ML, Chan Y-F, 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. The American Journal on Addictions. 2006;15:s80s91.
- 86. Knight JR, Sherritt L, Shrier LA, Harris S, Chang G. Validity of the crafft substance abuse screening test among adolescent clinic patients. Archives of Pediatrics & Adolescent Medicine. 2002;156(6):607-614.
- 87. Mitchell SG, Kelly SM, Gryczynski J, et al. The CRAFFT cut-points and DSM-5 criteria for alcohol and other drugs: A re-evaluation and re-examination. Substance abuse: official publication of the Association for Medical Education and Research in Substance Abuse. 2014;35(4):376-380.
- 88. Soleimanpour S, Geierstanger S, Brindis CD. Adverse Childhood Experiences and Resilience: Addressing the Unique Needs of Adolescents. Academic Pediatrics.17(7):S108-S114.
- 89. Mersky JP, Topitzes J, Reynolds AJ. Impacts of adverse childhood experiences on health, mental health, and substance use in early adulthood: A cohort study of an urban, minority sample in the U.S. Child Abuse & Neglect. 2013;37(11):917-925.
- 90. Kalmakis KA, Chandler GE. Health consequences of adverse childhood experiences: A systematic review. Journal of the American Association of Nurse Practitioners. 2015;27(8):457-465.

- 91. Hart H, Rubia K. Neuroimaging of child abuse: a critical review. Frontiers in Human Neuroscience. 2012;6:52.
- 92. Smith GL, McGuinness TM. Adolescent Psychosocial Assessment: The HEEADSSS. J Psychosoc Nurs Ment Health Serv. 2017;55(5):24-27.
- Goldenring JM, Rosen DS. Getting into adolescent heads: an essential update. Contemporary Pediatrics. Vol 212004:64+.
- 94. Spitzer RL, Kroenke K, Williams JW, Löwe B. A brief measure for assessing generalized anxiety disorder: The gad-7. Archives of internal medicine. 2006;166(10):1092-1097.
- Lowe B, Decker O, Muller S, et al. Validation and standardization of the Generalized Anxiety Disorder Screener (GAD-7) in the general population. Med Care. 2008;46(3):266-274.
- Kroenke K, Spitzer RL, Williams JB. The PHQ-9: validity of a brief depression severity measure. J Gen Intern Med. 2001;16(9):606-613.
- 97. Allgaier AK, Pietsch K, Fruhe B, Sigl-Glockner J, Schulte-Korne G. Screening for depression in adolescents: validity of the patient health questionnaire in pediatric care. Depression and anxiety. 2012;29(10):906-913.
- 98. The Canadian Bar Association BC Branch. Children and Consent to Health Care. 2017; https://www.cbabc.org/For-the-Public/Dial-A-Law/Scripts/Health-Law/422. Accessed October 18, 2017.
- College of Physicians and Surgeons of British Columbia. Professional Standards and Guidelines: Duty to Report. College of Physicians and Surgeons of British Columbia; 2013.
- 100. Government of British Columbia. The B.C. Handbook for Action on Child Abuse and Neglect For Service Providers. In: Development MoCaF, ed. British Columbia: Government of British Columbia: 2017.
- 101. Harm Reduction International. What is harm reduction? A position statement from Harm Reduction International. https://www.hri.global/what-is-harm-reduction
- 102. Marshall BDL, Milloy MJ, Wood E, Montaner JSG, Kerr T. Reduction in overdose mortality after the opening of North America's first medically supervised safer injecting facility: a retrospective population-based study. Lancet (London, England). 2011;377(9775):1429-1437.
- 103. Walley AY, Xuan ZM, Hackman HH, et al. Opioid overdose rates and implementation of overdose education and nasal naloxone distribution in Massachusetts: interrupted time series analysis. Bmj-British Medical Journal. 2013;346.
- 104. Milloy MJ, Kerr T, Tyndall M, Montaner J, Wood E. Estimated drug overdose deaths averted by North America's first medically-supervised safer injection facility. PLoS One. 2008;3(10):e3351.

- 105. Salmon AM, van Beek I, Amin J, Kaldor J, Maher L. The impact of a supervised injecting facility on ambulance call-outs in Sydney, Australia. Addiction. 2010;105(4):676-683.
- 106. Turner KME, Hutchinson S, Vickerman P, et al. The impact of needle and syringe provision and opiate substitution therapy on the incidence of hepatitis C virus in injecting drug users: pooling of UK evidence. Addiction. 2011;106(11):1978-1988.
- 107. Potier C, Laprevote V, Dubois-Arber F, Cottencin O, Rolland B. Supervised injection services: what has been demonstrated? A systematic literature review. Drug Alcohol Depend. 2014;145:48-68.
- 108. McDonald R, Strang J. Are take-home naloxone programmes effective? Systematic review utilizing application of the Bradford Hill criteria. Addiction. 2016;111(7):1177-1187.
- 109. DeBeck K, Kerr T, Bird L, et al. Injection drug use cessation and use of North America's first medically supervised safer injecting facility. Drug and Alcohol Dependence. 2011;113(2-3):172-176.
- 110. Small W, Van Borek N, Fairbairn N, Wood E, Kerr T. Access to health and social services for IDU: The impact of a medically supervised injection facility. Drug and alcohol review. 2009;28(4):341-346.
- 111. Strathdee SA, Celentano DD, Shah N, et al. Needle-exchange attendance and health care utilization promote entry into detoxification. Journal of Urban Health-Bulletin of the New York Academy of Medicine. 1999;76(4):448-460.
- 112. Wood E, Tyndall MW, Zhang R, Montaner JSG, Kerr T. Rate of detoxification service use and its impact among a cohort of supervised injecting facility users. Addiction. 2007;102(6):916-919.
- Poulin C. Harm Reduction Policies and Programs for Youth. Canadian Centre on Substance USe;2006.
- 114. Jenkins EK, Slemon A, Haines-Saah RJ. Developing harm reduction in the context of youth substance use: insights from a multi-site qualitative analysis of young people's harm minimization strategies. 2017.
- 115. Faggiano F, Minozzi S, Versino E, Buscemi D. Universal school-based prevention for illicit drug use. Cochrane Database of Systematic Reviews. 2014(12).
- 116. Thomas RE, Lorenzetti DL, Spragins W. Systematic Review of Mentoring to Prevent or Reduce Alcohol and Drug Use by Adolescents. Academic Pediatrics. 2013;13(4):292-299.
- 117. Conrod PJ. Personality-Targeted Interventions for Substance Use and Misuse. Current Addiction Reports. 2016;3(4):426-436.
- 118. Marshall BD, Wood E, Shoveller JA, Patterson TL, Montaner JS, Kerr T. Pathways to HIV risk and vulnerability among lesbian, gay, bisexual, and transgendered methamphetamine users: a multi-cohort gender-based analysis. BMC public health. 2011;11(1):20.

- 119. Cochran BN, Stewart AJ, Ginzler JA, Cauce AM. Challenges Faced by Homeless Sexual Minorities: Comparison of Gay, Lesbian, Bisexual, and Transgender Homeless Adolescents With Their Heterosexual Counterparts. American Journal of Public Health. 2002;92(5):773-777.
- 120. Balsam KF, Huang B, Fieland KC, Simoni JM, Walters KL. Culture, trauma, and wellness: a comparison of heterosexual and lesbian, gay, bisexual, and two-spirit native americans. Cultural diversity & ethnic minority psychology. 2004;10(3):287-301.
- 121. Cochran BN, Cauce AM. Characteristics of lesbian, gay, bisexual, and transgender individuals entering substance abuse treatment. Journal of Substance Abuse Treatment. 2006;30(2):135-146.
- 122. Hunt J. Why the Gay and Transgender Population Experiences Higher RAtes of Substance Use. Center for American Progress; March 9, 2012 2012.
- 123. Substance Abuse and Mental Health Services Administration. A Provider's Introduction to Substance Abuse Treatment for Lesbian, Gay, Bisexual, and Transgender Individuals. In: Substance Abuse and Mental Health Services Administration, ed. Rockville, MD: Substance Abuse and Mental Health Services Administration; 2012.
- 124. Vries A, Cohen-Kettenis P, Henriette D-V, Waal D, White Holman C, Goldberg J. Caring for Transgender Adolescents in BC: Suggested Guidelines Clinical Management of Gender Dysphoria in Adolescents Ethical, Legal, and Psychosocial Issues in Care of Transgender Adolescents. 2006.
- 125. Foundry. Foundry. 2017; http://foundrybc.ca/. Accessed August 4, 2017.
- 126. Felitti VJ, Anda RF, Nordenberg D, et al. Relationship of Childhood Abuse and Household Dysfunction to Many of the Leading Causes of Death in Adults: The Adverse Childhood Experiences (ACE) Study. American journal of preventive medicine. 1998;14(4):245-258.
- 127. Center for Substance Abuse Treatment. Medication-Assisted Treatment for Opioid Addiction in Opioid Treatment Programs. In: Administration SAaMHS, ed. Rockville, MD2005.
- 128. Stanger C, Lansing AH, Budney AJ. Contingency Management Approaches for Adolescent Substance Use Disorders. Child and adolescent psychiatric clinics of North America. 2016;25(4):645-659.
- 129. Roll JM, Higgins ST. A within-subject comparison of three different schedules of reinforcement of drug abstinence using cigarette smoking as an exemplar. Drug Alcohol Depend. 2000;58(1-2):103-109.
- 130. Hser Y-I, Li J, Jiang H, et al. Effects of a randomized contingency management intervention on opiate abstinence and retention in methadone maintenance treatment in China. Addiction. 2011;106(10):1801-1809.