



Injectable Opioid Agonist Treatment

iOAT for Opioid Use Disorder

NATIONAL

OPERATIONAL
GUIDANCE



CRISM-ICRAS

Canadian Research Initiative
in Substance Misuse

Initiative Canadienne de
Recherche en Abus de Substance



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About the Canadian Research Initiative in Substance Misuse

Funded by the Canadian Institutes of Health Research (CIHR), the Canadian Research Initiative in Substance Misuse (CRISM) is a national research consortium focused on substance use disorders, comprising four large interdisciplinary regional teams (nodes) representing British Columbia, the Prairie Provinces, Ontario, and Quebec/Atlantic. Each CRISM node is an expert network of research scientists, service providers, policy makers, community leaders, and people with lived experience of substance use disorders. CRISM's mission is to translate the best scientific evidence into clinical practice and policy change. More information about CRISM can be found at: <https://crism.ca>.

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Disclaimer for Health Care Providers

The recommendations in this guidance document represent the view of the National Operational Guidance Document Review Committee, arrived at after careful consideration of the available scientific evidence and external expert peer review. The application of the guidance contained in this document does not override the responsibility of health care professionals to make decisions appropriate to the needs, preferences, and values of an individual patient, in consultation with that patient (and their guardian[s] or family members, when appropriate), and, when appropriate, external experts (e.g., speciality consultation). When exercising clinical judgment in the treatment of opioid use disorder, health care professionals are expected to take this guidance document fully into account while upholding 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 defined by relevant governing bodies within regional or local jurisdictions. Nothing in this guidance document should be interpreted in a way that would be inconsistent with compliance with those duties.

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This document is intended to provide guidance to build an injectable opioid agonist treatment program. This guidance document 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 local health care professional.

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Executive Summary

Opioid use disorder (OUD) is one of the most challenging forms of substance use disorder facing the health care system in Canada and a major driver of the recent increase in overdose deaths across the country. In 2018, at least 4,460 Canadians died from an opioid overdose, with 94% determined to be unintentional (accidental) overdose. This represents a 9% increase in overdose deaths from 2017 and a 48% increase from 2016. The recent emergence of street fentanyl, carfentanil, and other highly potent synthetic opioids increasingly cut into heroin and other street drugs is a pressing public health concern, which has contributed significantly to the overdose emergency. Fentanyl and other synthetic analogues were implicated in 73% of opioid-related deaths in Canada in 2018, compared to 67% in 2017 and 50% in 2016. Although pan-Canadian opioid-related deaths were not tracked before 2016, at least 655 fentanyl-related deaths occurred between 2009 and 2014, compared to an estimated 3,256 deaths involving fentanyl or fentanyl analogues in 2018 alone.

This unprecedented public health emergency underscores the importance of developing comprehensive, collaborative, compassionate, and evidence-based health care services to address the harms related to untreated OUD. Injectable opioid agonist treatment (iOAT) is an evidence-based, high intensity, cost-effective treatment option for OUD for those patients who have not benefitted from other treatments and those whose individual situations and needs indicate they may benefit from injectable opioid agonist treatment.

When OUD is treated effectively, the benefits are not only to the individual (e.g., reduction in morbidity and mortality) but also to the community (e.g., reduced involvement in the criminal justice system). The primary aim of iOAT is to improve the health of the individual by reducing overdose risk and other imminent health and social harms associated with ongoing injection drug use. The second aim of iOAT is to engage individuals in addiction treatment who have not benefitted from less-intensive treatments or who have been otherwise unable to access other forms of treatment. Patients may not benefit from oral medications such as buprenorphine/naloxone, methadone, and slow-release oral morphine for a variety of reasons, including side effects, cravings persisting despite optimal OAT dosing, or being unable to reach a therapeutic dose. Repeated oral treatment attempts without significant benefit for these patients may result in increased risk of poor health and social outcomes, including fatal and non-fatal overdose(s).

The Canadian Research Initiative in Substance Misuse (CRISM), a Canadian Institutes of Health Research (CIHR)–funded research network, assembled an expert interdisciplinary committee composed of 26 individuals, including representation from physicians, nurses, pharmacists, people with lived experience, researchers, and front-line staff to develop this document. This guidance document provides an overview of the rationale for and evidence supporting iOAT, as well as guidance on implementation, operation, and evaluation of iOAT programs. Its partner document, National Injectable Opioid Agonist Treatment for Opioid Use Disorder Clinical Guideline provides three key clinical recommendations as well as clinical guidance on the provision of iOAT.

The target audience of this document is policy makers, clinical and operational leads in health authorities, team leaders, funders, and organizations that provide substance use disorder and addictions treatment and care.

1.0 Introduction

1.1 PURPOSE AND SCOPE

This guidance document was developed to provide an overview of the rationale for and evidence supporting injectable opioid agonist treatment (iOAT), as well as guidance on implementation, operation, and evaluation of iOAT programs. Implementation guidance includes an overview of potential models of care and how to select the most appropriate model for a given site; stakeholder consultations including appropriate ministries, peer and advocacy groups for people who use drugs, regulatory colleges, and health authorities; staff competencies; and guidance around the acquisition and storage of injectable medications. Operational guidance includes preparation and provision of injectable medications, eligibility considerations, and management of ongoing substance use. Evaluation guidance includes recommended assessment tools and recommendations for further guidance.

The opioid overdose crisis detailed in the following section has revealed significant gaps in the treatment options for opioid use disorder (OUD) in Canada. The primary purpose of this document is not to suggest the expansion of iOAT as a panacea for the opioid overdose crisis. Rather, the crisis has identified a profound need to improve the overall OUD system of care, including expanding treatment for those patients with OUD who have not benefited from other treatments.

The Canadian landscape is continually shifting, including quickly changing potency and contents of street drugs, evidence-based treatments expanding and becoming more available, and relevant policies changing. This document is based on currently-available evidence and clinical expertise and should be understood as creating a framework for offering injectable opioid agonist treatment in jurisdictions across Canada. This document should be understood as a living document, which will be updated regularly to reflect changes in evidence, policy, and practice. As the implementation and expansion of iOAT progresses, additional regulatory and training frameworks will emerge and be added to this document. Additional materials are available on the [CRISM website](#), including relevant updates that occur outside of scheduled updates for the full document.

1.1.i Intended Audience

The target audience of this document is policy makers, clinical and operational leads in health authorities, team leaders, funders, and organizations that provide substance use disorder and addictions treatment and care.

This document's partner document, [National Injectable Opioid Agonist Treatment for Opioid Use Disorder Clinical Guideline](#) (iOAT Clinical Guideline) provides clinical guidance for the provision of

iOAT. Those planning, implementing, and/or operating an iOAT program are encouraged to read the clinical guideline to help inform their activities.

1.2 CANADA OPIOID OVERDOSE EPIDEMIOLOGY

Opioid use disorder is one of the most challenging forms of substance use disorders facing the health care system in Canada. People with OUD who inject opioids face significant risks to their health, including fatal overdose, endocarditis, sepsis, human immunodeficiency virus (HIV), hepatitis C, emotional and physical violence, and stigmatization and discrimination.^{1,2} The burden on communities includes medical care, public health and criminal justice costs, public disorder, years of life lost due to unintentional opioid poisonings, and crimes against people and property. While current Canadian estimates are lacking, OUD is estimated to affect approximately 0.69% of Americans.³

In 2018, at least 4,460 Canadians died from an opioid overdose, with 94% determined to be unintentional (accidental) overdose.^a This represents a 9% increase in overdose deaths from 2017 and a 48% increase from 2016.⁴ The recent emergence of street fentanyl, carfentanil, and other highly potent synthetic opioids increasingly cut into heroin and other illicit (or “street”) drugs, including cocaine and methamphetamine, is a pressing public health concern that has contributed significantly to the overdose emergency. Contamination of street drugs is ongoing and progressive, with new agents such as benzodiazepine analogues being found in substances sold as opioids. Fentanyl and other synthetic analogues were implicated in 73% of opioid-related deaths in Canada in 2018, compared to 67% in 2017 and 50% in 2016.⁴ Although pan-Canadian opioid-related deaths were not tracked before 2016, at least 655 fentanyl-related deaths occurred between 2009 and 2014,⁵ compared to an estimated 3,256 deaths involving fentanyl or fentanyl analogues in 2018 alone.⁴

Although every part of Canada has been impacted by the opioid crisis, not all provinces and territories have been impacted to the same extent. Provincial overdose statistics and rate per 100,000 population help put the extent of the crisis in perspective. British Columbia has seen both the highest number of opioid overdose deaths (1,008 in 2016, 1,512 in 2017, and 1525 in 2018) and the highest rate (30.6/100,000 in 2018). Ontario has experienced the next highest number of overdose deaths (867 in 2016, 1265 in 2017, and 1471 in 2018; rate of 10.3/100,000 in 2018), while Alberta has the second-highest rate (18.0/100,000 in 2018; 775 deaths).⁴ In each of these jurisdictions, and others in Canada, overdose death rates have increased annually over the past three years. Substance use patterns continue to rapidly change.

^a Epidemiological data and research literature often use the term “overdose” or “accidental overdose” to refer to fatal and non-fatal dose intolerances to both prescription and illicit opioids. In the context of the drug supply being contaminated with fentanyl and other highly potent synthetic opioids, fatal and non-fatal overdoses may be reasonably considered “poisonings,” as the adulteration of the drug supply makes it difficult if not impossible to determine a safe dose without knowing the composition and strength of illicit opioids and other substances which may also contain highly potent synthetic opioids.

This unprecedented public health emergency underscores the importance of developing comprehensive, collaborative, compassionate, and evidence-based health services to address the harms associated with OUD. Opioid agonist treatment (OAT) has proven to be the most effective strategy to reduce morbidity and mortality associated with OUD.⁶⁻¹⁰ Per CRISM's [National Guideline for the Clinical Management of Opioid Use Disorder](#), oral OAT with buprenorphine/naloxone or methadone should be considered the first- and second-line pharmacological treatments for OUD, with slow-release oral morphine (SROM) considered an alternative option. While oral OAT represents a vital and foundational component of treating opioid use disorder, there are known limitations for some individuals with OUD. There is substantial evidence supporting the use of iOAT in individuals with severe opioid use disorder who have not benefitted from oral OAT.^{11,12} Thus, the purpose of this document is to provide guidance to policy makers, clinical and operational leads in health authorities, and funders making decisions regarding implementing and expanding iOAT provision in their region.

1.3 THE CONTINUUM OF CARE FOR OPIOID USE DISORDER

The continuum of care for OUD includes pharmacological (oral and injectable OAT) and non-pharmacological (e.g., psychosocial) treatment interventions and supports in order to meet individual and population needs. CRISM's [National Guideline for the Clinical Management of Opioid Use Disorder](#) provides guidance on oral OAT and discusses the evidence supporting the use of naltrexone, an opioid antagonist, for OUD, while this document focuses specifically on the role of iOAT.

Opioid agonist treatments have proven to be the most effective approach to supporting abstinence from illicit opioid use, while also reducing morbidity and mortality.⁶⁻¹⁰ In Canada, buprenorphine/naloxone, methadone, and, increasingly, slow-release oral morphine are most commonly used to treat OUD. Buprenorphine and methadone are supported by a large body of evidence for the treatment of OUD,¹⁰ and are included on the World Health Organization's list of essential medicines.¹³ However, there are known limitations, including side effects,^b adverse events, cost of medication, and inconsistent long-term retention rates. While Canadian statistics are lacking, one 2012 study of Medicaid-enrolled individuals in the United States found that 63% of new OUD treatment episodes did not include OAT.⁷ Of those who are started on OAT, long-term retention on OAT and relapse prevention remains an ongoing challenge. For example, 36–92.5% of patients who initiate methadone-based OAT discontinue treatment in the first year and relapse to opioid use.^{6,14-17} Additionally, studies have found that 34.3–74.0% of individuals who are initiated on buprenorphine/naloxone-based OAT have discontinued treatment at the 6-month mark.^{14,17,18}

^b Although side effects for opioids are a class effect, individuals may have different experiences on different opioid medications.

1.3.i Injectable Opioid Agonist Treatment

Individuals with opioid use disorder may not benefit from oral OAT medications for a variety of reasons, including: inadequate management of opioid withdrawal symptoms; opioid cravings persisting despite trying to optimize dosing; adverse events associated with oral OAT; contraindications to one or more OAT medications; insufficient improvements in health, social function, or quality of life; or a related patient preference to not initiate oral OAT (e.g., previous experience with oral OAT including intolerable reactions to specific medication(s) or insufficient reduction in craving and illicit drug use). Individuals who do not benefit from first-line medications, like other individuals using illicit opioids, face significant risks, including premature death, non-fatal overdose, acquiring and transmitting blood-borne infectious diseases (e.g., HIV and hepatitis C), violence, and arrest.^{1,2} Research has shown that, among patients who are treatment refractory^c to methadone, prescription injectable diacetylmorphine—administered under the supervision of trained health professionals in a clinic setting—reduces illicit opioid use, premature treatment discontinuation (or "treatment drop-out"), criminal activity, incarceration, and mortality.^{11,12,19,20}

While iOAT is still considered an emerging treatment in Canada, this treatment is an established standard of care in several other jurisdictions where, typically, diacetylmorphine is supplemented with flexible doses of oral OAT at the patient's and prescriber's discretion.²¹ In almost all countries where it is available,^d prescription diacetylmorphine is provided within supervised clinic settings (which ensures adherence and allows monitoring for safety and diversion), to patients with severe, treatment-refractory OUD.¹² Some jurisdictions have expanded their eligibility criteria beyond those with treatment-refractory OUD. For example, between 2005 and 2010 in Switzerland, over 90% of patients receiving diacetylmorphine-based iOAT had been on oral OAT, leaving a small but notable minority of patients who had not previously received oral OAT.^{11,21} Retention rates for diacetylmorphine treatment in clinical trials are consistently high, with an 87.8% 12-month retention rate found in the NAOMI trial,²⁰ and findings of 12-month retention rates between 67-88% overall,^{20,22,23} compared to a 54.1% 12-month retention rate for methadone in the NAOMI trial.²⁰ Retention rates for diacetylmorphine and hydromorphone were similar in the SALOME trial, based in Vancouver, BC. Six month clinical trial retention rates (receiving study medications at least 28 in the prior 30 days) were found to be 80% for diacetylmorphine and 77% for hydromorphone.¹⁹

Several randomized trials and cohort studies have shown that iOAT provided in dedicated clinics is feasible, safe, and effective when treating long-term, chronic injection opioid users for whom the available oral OAT options have not been effective.^{20,22-28} In these studies, patients treated with diacetylmorphine and hydromorphone showed improvements in a number of dimensions, including reductions in

^c It should be noted that there has been an intentional shift away from this term, as it may inadvertently perpetuate stigma against individuals with opioid use disorder. Substance use disorders are known to be chronic, relapsing conditions, which may require multiple treatment approaches across the life span. This document uses this term, when necessary, to reflect its use in the scientific literature.

^d Switzerland, Germany, Denmark, and the Netherlands use this model. The UK's unsupervised take-home model and Spain's limited weekday clinics are exceptions. See [Appendix 1](#) for more information on iOAT in other jurisdictions.

illicit heroin and, in the SALOME trial, other illicit opioids,¹⁹ as well as cocaine use, decreased criminal activity, and improvements in physical and mental health.^{20,22-26} In addition, studies in both Europe and Canada have found injectable diacetylmorphine treatment to be more cost-effective than oral methadone treatment, due to significant reductions in criminal activity and associated costs.²⁹⁻³¹ Similarly, hydromorphone has been found to be more effective and less costly than oral methadone treatment, due to significant reductions in criminal activity and hospitalization and associated costs.³² In addition to cost effectiveness, data from British Columbia shows that individuals receiving injectable hydromorphone and diacetylmorphine gain more quality-adjusted life years (QALYs) than individuals receiving methadone (8.4 [95% confidence interval (CI)=7.4 to 9.5] and 8.3 [95% CI= 7.2 to 9.5] versus 7.4 [95% CI=6.5 to 8.3], respectively). See [Appendix 1](#) for a thorough review of the evidence supporting iOAT, including safety and cost effectiveness.

Summary of evidence supporting iOAT

- 36–92.5% of patients are retained on methadone treatment in the first year^{6,14-17}
- 26.0–65.7% of patients are retained on buprenorphine/naloxone treatment in the first six months^{14,17,18}
- 67–88% of patients are retained on injectable diacetylmorphine in the first year^{20,22,23}
- 77% of patients are retained on injectable hydromorphone in the first six months¹⁹
- Supervised injectable diacetylmorphine treatment is beneficial in terms of reducing illicit opioid use, premature treatment discontinuation, criminal activity, incarceration, and mortality^{11,12,19}

1.4 DEVELOPMENT PROCESS

1.4.i Content Development

The Canadian Research Initiative in Substance Misuse (CRISM), a Canadian Institutes of Health Research (CIHR)–funded research network composed of four regional networks (nodes) distributed across Canada (British Columbia, the Prairies, Ontario, and Quebec–Atlantic), developed this national operational guidance document using a structured literature review approach. Relevant search terms and structured search strategies were used to search PubMed, the Cochrane Library databases, and reference lists (up to August 1, 2018) using a hierarchical approach, whereby meta-analyses and systematic reviews were given the most weight, followed by individual randomized controlled trials (RCTs), quasi-experimental studies, observational studies, and, lastly, expert opinion. The medical writer manually reviewed titles, abstracts, and full text of identified citations, selected evidence for inclusion, and compiled an evidence review for the guidance document review panel. Any questions or uncertainties in the literature search, evidence review, and synthesis processes were brought to the chairs for clarity and consensus. The guidance in this document can be understood as operational guidance informed by the existing literature and expert consensus from the National iOAT Operational Guidance Document Review Committee.

1.4.ii Review Process

The National iOAT Operational Guidance Document was written by the National iOAT Operational Guidance Document Review Committee. Once finalized, the operational document was reviewed by the National iOAT Clinical Guideline Review Committee, followed by external review by people with lived experience, international experts in the subject matter, and a family member impacted by opioid use disorder.

Composition of Guideline Review Committee

The CRISM National iOAT Steering Committee was assembled to coordinate guideline preparation activities including recruiting the committee, with representation sought from each of the four CRISM nodes (BC, Prairies, Ontario, and Quebec-Atlantic). The Steering Committee included representation from BC, Alberta, Ontario, and Quebec; each member had relevant expertise, including injectable opioid agonist treatment prescribing, research, and service planning. The National iOAT Steering Committee decided to create two complementary documents: A clinical guideline and an operational guidance document. To that end, the National iOAT Steering Committee assembled expert committees for each document. Each member of the Steering Committee was invited to nominate relevant experts from their own province and across the country. As committee members accepted the invitation to join, they were encouraged to nominate additional members to ensure a diverse committee representing a range of experience and expertise. Final committee composition was determined by co-chair consensus. The National iOAT Operational Guidance Document Review committee was composed of 26 individuals, including the four co-chairs, which included physicians, nurses, pharmacists, people with lived experience, researchers, and front-line staff.

2.0 Implementation

The provision of iOAT requires not only the implementation and operation of logistical and programmatic elements, but embedding a core value of patient-centred care throughout the planning, implementation, and operation of iOAT, regardless of the model(s) of care chosen. This philosophical approach should underpin iOAT provision in order to provide care that is respectful and responsive to individual patient needs. We begin with an introduction to patient centred-care, followed by logistical considerations including consultation, staffing competencies, models of care currently in operation, space requirements, and cost and medication coverage considerations.

2.1 PHILOSOPHICAL APPROACH—PATIENT-CENTRED CARE AND HARM REDUCTION

Patient-centred care takes into account the unique needs, values, and preferences of each patient, and aims to engage and empower patients as experts in their own care, including acting as the primary agent for reducing harms related to substance use, setting individualized treatment goals that are realistic and meaningful, and collaboratively selecting treatment options or interventions that will best support achieving their individual goals.³³ Patient-centred care encompasses a variety of approaches that attempt to account for power imbalances and experiences of marginalization while maintaining a commitment to the principles of harm reduction. 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.³⁴ Several core principles of harm reduction have been identified,³⁵ which should also be understood to inform the provision of iOAT. These include:

- **Pragmatism:** accept that non-medical use of psychoactive or mood-altering substances is a near-universal human cultural phenomenon;
- **Human rights:** respect the basic human dignity and rights of people who use injection drugs, including right to self-determination and informed decision making in a judgment-free context, which may include continuing to use illicit opioids and other substances;
- **Focus on harms:** prioritize decreasing the negative consequences of drug use to the person and others and recognize incremental changes as success;
- **Maximize intervention options:** recognize that there are a variety of different prevention or treatment approaches and people who use injection drugs should be able to choose and access a broad range of interventions;
- **Priority of immediate goals:** meet the person where they are in their drug use and address immediate needs first; and

- **Drug user involvement:** involve individuals as an active participant in their own care and in the planning of harm reduction policies and interventions. Recognize individuals' competency to make choices and change their own lives.

It is recommended that each iOAT program develop their own set of values, based on the above philosophical approach, which will guide the program. These values may include a commitment to the philosophy and principles of harm reduction (including [Indigenous Harm Reduction Principles and Practices](#), which integrate cultural ways of knowing into harm reduction strategies and services); a commitment to patient-centred care; a commitment to recognizing and addressing barriers to care for marginalized groups; and a commitment to providing evidence-based care.

2.1.i Trauma-Informed Care

Individuals with substance use disorders have higher rates of past trauma and comorbid post-traumatic stress disorder compared to the general population.³⁶ For example, an Australian systematic review found 12-month rates of PTSD in individuals with substance use disorders of 5-66%,³⁷ while epidemiological studies have found lifetime rates of 26-52%.³⁸ Thus, iOAT programs should integrate the principles of trauma-informed practice (i.e., trauma awareness; safety and trustworthiness; choice, collaboration, and connection; strengths-based approaches and skill building) into their design, service provision, and clinical care. There are several useful resources for learning about and integrating trauma-informed practice. These include the Canadian Centre on Substance Abuse's [The Essentials of Trauma-informed Care](#), Klinik Community Health Centre's [Trauma-informed: The Trauma Toolkit](#), and the Centre of Excellence in Women's Health's [Trauma-Informed Practice and the Opioid Crisis](#).

2.1.ii Providing Care to Groups at Risk of Marginalizing Experiences

The social determinants of health can be understood as “the social and economic factors that influence people’s health.”³⁹ They include income, housing, social exclusion, gender, Aboriginal status, race, and disability status, among others,³⁹ which impact health along a social gradient, with those at the lowest socioeconomic levels experiencing the worst health outcomes.⁴⁰ Injectable opioid agonist treatment programs providing care to groups at risk of marginalizing experiences, which includes people who inject drugs as well as Indigenous peoples, racialized people, gender and sexual minorities, women, sex workers, people with disabilities, people with chronic pain, newcomers and others with language barriers, and people living in poverty, should be sensitive to the ways that these social locations are subject to unequal distributions of power, economic opportunity, and resources.⁴⁰ Programs and providers should also be aware of the fact that a person’s multiple social locations (e.g., gender, race, and sexuality) interact with and impact each other,⁴¹ and should endeavour to remove any barriers to accessing care patients may experience.

Safety should be prioritized for all patients, including emotional and cultural safety. Patients belonging

to groups at risk of marginalizing experiences may also benefit from patient advocacy, for example, to secure housing, apply for disability assistance, or access psychosocial services. Injectable opioid agonist treatment programs should ensure that staff are aware of the social determinants of health, sensitive to the power differential between staff and patients, and able to provide support for patients—through staff care or referral—to improve the social determinants of health.

2.1.iii Cultural Safety and Humility When Working with Indigenous Peoples

Cultural safety can be understood as an outcome in which people feel safe when receiving care in an environment free from racism and discrimination, which results from respectful engagement that seeks to address power imbalances inherent in the health care system. Cultural humility is a process undertaken to understand, through self-reflection, personal and systemic biases, and to develop and maintain respectful processes and relationships based on mutual trust; it requires humbly acknowledging oneself as a learner when attempting to understand another person’s experience.^e

For an understanding of how the dominant health care system is frequently hostile and culturally unsafe to Indigenous peoples and how health care providers may lack insight into how their approaches, behaviours, and programs create barriers to Indigenous community members, this document strongly recommends that non-Indigenous prescribers and staff undertake cultural safety and humility training to improve their ability to establish positive partnerships with Indigenous clients seeking care for substance use and related harms. There are several health-specific cultural safety learning opportunities online, including training programs and webinars. These are generally designed to increase knowledge, enhance self-awareness, and strengthen the skills of those who work both directly and indirectly with Indigenous peoples. These include the [National Indigenous Cultural Safety Collaborative Learning Series](#); the [Ontario Indigenous Cultural Safety Program](#); [Nunavut Program’s Cultural Competency Modules](#); the [Saskatoon Health Region Cultural Competency & Cultural Safety Tool Kit](#); the [Manitoba Indigenous Cultural Safety Training](#); the College & Association of Registered Nurses of Alberta’s [Cultural Safety Webinar](#); the [San’yas Indigenous Cultural Safety Training](#), developed by the Provincial Health Services Authority (PHSA) Aboriginal Health Program in BC, and First Nations Health Authority (FNHA) and BC Patient Safety & Quality Council’s [Cultural Safety and Cultural Humility Webinar Series](#). In addition, in-person trainings are available in some jurisdictions.

In order to improve cultural safety, iOAT programs are encouraged to partner with local Indigenous communities and programs such as Indigenous patient nurse navigators, patient navigators, and Elders. For more information on providing culturally safe and competent care, see [iOAT Clinical Guideline](#).

^e Definitions borrowed and lightly adapted from the [First Nation’s Health Authority](#).

2.1.iv 2SLGBTQ+ Populations

Two-Spirit, lesbian, gay, bisexual, trans, queer, and other gender and sexually diverse individuals (2SLGBTQ+) face unique challenges that should be addressed when providing care to 2SLGBTQ+ patients with opioid use disorder. 2SLGBTQ+ individuals report disproportionate rates of substance use⁴²⁻⁴⁴ and enter treatment with greater severity of substance use problems.⁴⁵ Injectable opioid agonist treatment programs should be culturally sensitive and ensure staff have an awareness of the issues that 2SLGBTQ+ individuals are likely to face.

Injectable opioid agonist treatment programs should actively communicate that services are available for 2SLGBTQ+ patients, build relationships with organizations serving diverse marginalized communities, and use inclusive language in forms, clinical materials, and during appointments.⁴⁵ Injectable opioid agonist treatment programs should develop a referral list of local support groups and resources for 2SLGBTQ+ individuals. Injectable opioid agonist treatment programs should also endeavour to make their services accessible specifically to trans and gender nonconforming individuals. Strategies to demonstrate trans awareness and sensitivity include placing trans inclusive brochures and posters in waiting rooms, asking about gender identity on intake forms (and avoiding conflating gender and sex^f),⁴⁶ making gender neutral bathrooms available, and ensuring staff are non-judgemental, aware of, and sensitive to the barriers trans people can face in accessing health care.

For more information on providing care to this population, see [iOAT Clinical Guideline](#).

2.1.v Wellness and Self-Defined Progress

One of the goals of treatment across the continuum of care for OUD should be wellness, with an understanding that wellness looks different for each person, with many different possible paths.

Injectable opioid agonist treatment programs should incorporate and use language that promotes wellness in their service provision. This includes ensuring respect of the patient's autonomy and individuality, emphasizing skills and strengths, and avoiding reinforcement of paternalistic models of care provision.⁴⁷ The importance of peer navigators and peer support should also be recognized across the continuum of care for opioid use disorders. For wellness planning, iOAT programs should consider incorporating peer navigators to support long term, patient-centered treatment goals. See [iOAT Clinical Guideline](#) for more information on supporting wellness and self-defined progress.

^f Sex generally refers to the designation of a person as male, female, or intersex at birth, usually based on the appearance of their external anatomy, whereas gender refers to one's internal, deeply held sense of their gender, which may or may not align with the sex they were assigned at birth. A person's sex should not be assumed to match their gender, for example, that a person will have specific genitalia or reproductive anatomy based on their gender identity.

2.1.vi Referral Pathways and Primary Care

Regardless of the model(s) of care chosen, iOAT requires a multidisciplinary care approach in which individuals receive, as needed and appropriate, addiction care; primary care; mental health care; chronic pain management; and psychosocial services including access to housing, employment services, trauma therapy, and specialized services for women, youth, and Indigenous peoples.

As part of their implementation and operation, iOAT programs should establish fully functioning referral pathways to addiction, recovery-oriented, and substance use treatment programs, and harm reduction supports and services in their local area, to ensure access to a variety of related services.

Providers should discuss with their patients which type of program is most suited to their evolving goals, needs, and interests. Patients should be linked to a primary care provider or integrated primary care team. Depending on the population served, patient need, co-located services, and infrastructural barriers, some or all of the following additional/wrap-around services may be offered or referred to:

- Primary care
- Addiction care
- Counselling
- Social work
- Mental health care
- Dental care
- Nutritional support and food programs
- Respiratory therapy
- Medication management
- Money management and financial assistance
- Outreach and home health
- Sex worker support
- Pain management
- Elder support
- Psychiatry
- Spiritual support
- Women's only hours
- Harm reduction supplies
- Supervised consumption services
- Intensive case management ("wrap around service")
- Housing assistance
- Legal assistance
- Palliative care
- Peer support
- Specialized medical care

2.1.vii Family and Social Circle Involvement in Care

This document emphasizes the important role of families—as defined by patients, which may include romantic partners, close friends, and other people of significance who may or may not be legally recognized as family—as partners in patient care when appropriate. It is recommended that family members be included in decision-making processes and care at all levels when deemed appropriate by the adult patient and their care team. Patients should not be pressured to include family members and should be given full discretion on the decision to include family, if at all. Family members wanting support should be referred to external services and supports, to avoid overlap of service providers, which may impact client trust and create concerns about confidentiality or perceived conflicts of interest.

Injectable opioid agonist treatment programs can support the active and positive involvement of family (when chosen by the patient) through education—on iOAT and other treatment options as well as harm reduction including naloxone training—and the provision of resources for family members. A list of resources and referrals for family members can be found in [Appendix 4](#). For parents and/or caregivers of youth, offering group or individual sessions (e.g., parent guidance sessions) may be helpful. As mentioned above, unless the client has provided explicit consent for them to receive services from the same providers, parents and/or caretakers should be referred to external services to avoid overlap of service providers.

The care team must have current and complete knowledge of consent protocols for releasing information, including their jurisdiction’s privacy legislations. For more information on including family and other people of significance in care, see [iOAT Clinical Guideline](#).

2.2 PRE-IMPLEMENTATION CONSULTATION

Once funding has been secured and program planning has begun, there are a variety of stakeholders, regulators, and other entities that may need to be consulted and/or informed during the pre-implementation phase when designing an iOAT program or programs. As with any new or expanded medical treatment, consultation can help facilitate implementation, however, this process should be in service of program planning and should not hinder planning or create barriers. Rather, these consultations should be understood as processes undertaken to facilitate planning and service delivery. Different communities and contexts will require different levels and types of consultation.

2.2.i People with Lived Experience

The vital importance of including individuals with lived experience,^g including peer navigators, peer support, and drug user groups should be recognized across the continuum of care for opioid use disorders. This document and its authors gratefully recognize the tireless advocacy and organizing of peer and advocacy groups for people who use drugs including the Canadian Association of People Who Use Drugs (CAPUD) and the Vancouver Area Network of Drug Users (VANDU) in advocating for expansion of iOAT and the need for it to be low-barrier, especially in the current context of criminalization creating a toxic drug supply contaminated with fentanyl and other highly potent synthetic opioids.

Peer and advocacy groups for people who use drugs (also called first voices in Atlantic Canada), patient advocacy groups, and peer workers should be integrated into all stages of iOAT implementation, from planning to operation. Peer and advocacy groups for people who use drugs can help in identifying iOAT needs, barriers, and strategies for implementation and frequently have active community and political networks to support the program. Strategic plans should include the voices of those clients who will access these services. Local groups in each jurisdiction should be consulted. A list of peer and advocacy groups for people who use drugs can be found in [Appendix 4](#). In jurisdictions in which iOAT has never been offered, it may be helpful to consult external groups whose members have experience receiving and/or supporting the expansion of iOAT.

[“Nothing About Us Without Us”—Greater, Meaningful Involvement of People Who Use Drugs: A Public Health, Ethical, and Human Rights Imperative](#) identifies several important benefits to peer involvement especially relevant for the provision of iOAT. These include more patient “buy-in” to the program; the ability for patients’ needs to be recognized and addressed; service delivery that meets the needs of patients by being realistic, low-barrier, and useful; and providing a sense of ownership for the peers.⁴⁸ A qualitative study of a peer-run overdose response program in emergency shelters identified several factors that lead to increased feelings of safety from peer workers compared to non-peer paid staff, including social safety due to shared experiences, an absence of uneven power dynamics, and a perception of being cared for that contrasted with their everyday experiences.⁴⁹ Peer workers working at VANDU have identified several significant benefits to their work, including decreased risks associated with sex work, drug dealing, or theft as well as increased social contact, social recognition, structure, collective purpose, and an acknowledgment of their work.⁵⁰

^g People with lived experience are referred to by many names, including peers, people who use drugs, first voices, and drug users. This document primarily uses “people with lived experience” to highlight the knowledge and insights individuals with lived experience of opioid use disorder have. Generally, “peer” is used to denote when individuals with lived experience would be acting as a peer to other service users (e.g., peer workers).

2.2.ii Professional Regulatory Bodies

The appropriate professional regulatory bodies in each jurisdiction may be consulted while planning and implementing iOAT programs. The form of consultation will vary with the jurisdiction and regulatory body, and may range from a true collaborative process to informing and/or gathering support.

The regulatory body for physicians and surgeons in each jurisdiction may be educated about iOAT to help garner support for including iOAT in the continuum of care and, where appropriate, may be consulted to help implement a process for ensuring the necessary education and training requirements have been met.

The regulatory body for nurses in each jurisdiction should be consulted to ensure that iOAT care is included in the scope of practice for nurses, which may include intra-muscular injection in the case of patients who cannot self-administer their dose as well as prescribing privileges for nurse practitioners; that a process for ensuring the necessary education and training requirements have been met; and that policies and practices meet the standards, limits, conditions, and safe prescribing practices set out by the regulatory body, including any requirements for prescribing controlled drugs and substances.

The regulatory body for social workers in each jurisdiction may be consulted to ensure that iOAT care is included in scope of practice; that a process for ensuring the necessary education and training requirements have been met; and that policies and practices meet the standards, limits, and conditions set out by the regulatory body.

In jurisdictions where the pharmacy model (see [Models of Care](#)) will be implemented, the regulatory body for pharmacists should be consulted to ensure that iOAT dispensing and supervision is included in the scope of care for pharmacists; that a process for ensuring the necessary education and training requirements have been met; and that policies and practices meet the standards, limits, conditions, and safe prescribing practices set out by the regulatory body, including any requirements for dispensing controlled drugs and substances. The regulatory body should also work with local pharmacies interested in providing iOAT to ensure they are able to meet facility requirements.

2.2.iii Relevant Provincial Ministries

In order to build collaborative relationships and ensure access to evidence-based care, iOAT program planners are encouraged to consult the relevant ministries in each jurisdiction in the planning stage. The ministry responsible for health, which determines which services and medications are to be offered in each jurisdiction, may be consulted. This ministry will also determine coverage for services and medications. See [Cost and Coverage](#) and [Diacetylmorphine-Specific Consultation](#) in this document. The ministry responsible for justice and public safety may also be consulted, as reduction in crime and criminal justice costs represent a significant benefit of iOAT provision. In addition, the ministry responsible for justice and public safety should be consulted to ensure continuity of treatment in the case of incarceration.

2.2.iv Regional Health Authority or Equivalent

If a health authority is operating an iOAT program, they should create internal policy for where iOAT programs will be located, as well as policies ensuring initial and ongoing funding. Regional health authorities will also determine which clinicians can staff their internal iOAT programs and the required training, the number of patient spots available, overall staffing needs, and medication storage requirements. Clinicians working outside of the health authority system do not need to consult with the health authority but may wish to do so in order to support and maintain collaborative relationships.

In jurisdictions without a comprehensive prescription monitoring program, it is recommended that regional health authorities should work collaboratively with the relevant regulatory bodies to develop one to help ensure patient safety, adequate controls, and monitoring, especially when offering new treatment options.

2.2.v Local Authorities

Local authorities including municipal governments and police departments should be consulted and educated in order to build positive relationships and assist in regulatory issues.

2.2.vi Political and Community Support

Implementation and expansion of iOAT may face political opposition in some communities. In communities where significant political opposition is a concern, political support may be garnered through education of local elected officials and government, community groups, police, and medical associations on harm reduction approaches, the continuum of care for opioid use disorder, and iOAT as an extension of existing care approaches. However, as with the expansion of other medical treatments, this should not be considered a requirement for starting an iOAT program.

2.2.vii Health Canada

The Health Canada Therapeutic Products Directorate is responsible for licensing hydromorphone and diacetylmorphine for the treatment of opioid use disorder. As iOAT is expanded in jurisdictions across Canada, health administrators and ministries responsible for health care should consult with Health Canada to ensure adequate access to the required medications. This may include working with domestic pharmaceutical manufacturers to secure a drug identification number (DIN) for diacetylmorphine and to begin domestic production, as well as securing more hydromorphone products (for example 100 mg/mL and 200 mg/mL, which would reduce the volume of medication needed for each dose).

Diacetylmorphine-Specific Consultation

Due to the regulatory barriers limiting importation and provision of diacetylmorphine, there are specific additional considerations for those programs which will provide diacetylmorphine.

If prescribers are seeking to prescribe diacetylmorphine as part of their iOAT program, they must apply through Health Canada’s [Special Access Programme](#) for each patient.

For access to diacetylmorphine for a large number of patients, the provincial or territorial public health official can request the addition of diacetylmorphine be made to Health Canada’s [List of Drugs for an Urgent Public Health Need](#). **Note:** As of April 25, 2019, diacetylmorphine has been added to the [List of Drugs for an Urgent Public Health Need](#) for the whole country. If this changes in the future, the above text should guide those wishing to prescribe diacetylmorphine.

Health Canada’s [Office of Controlled Substances](#) must be consulted to ensure adequate planning for diacetylmorphine importation. This will ensure unexpected supply issues are avoided.

See [Determining Which Medication\(s\) to Provide](#) in this document for more considerations around medication selection.

2.3 MODELS OF CARE

Each iOAT program must determine which model(s) of care should be offered, depending upon a variety of factors including need, community context, resources available, and jurisdiction-specific regulations. Depending upon the needs, capacity, and existing services, iOAT programs may adopt one of the existing models of care in operation across Canada or may adopt elements from one or more models of care in designing a unique program. Regardless of which elements make up the model(s) of care offered, iOAT provision should be guided by the philosophical approach identified above, which includes patient-centred care, harm reduction, trauma-informed care, patient safety, and cultural safety and humility (see [Philosophical Approach](#)). The provision of iOAT requires a multidisciplinary care approach in which individuals have access to, as needed and appropriate, addictions care; primary care; harm reduction services; mental health care; chronic pain management; and psychosocial services including access to housing, employment services, trauma therapy, and specialized services for women, youth, 2SLGBTQ+ individuals, and Indigenous peoples.

2.3.i Existing Models of Care in Operation Across Canada

Several models of care are currently in operation across Canada. For the sake of clarity, this document presents four discrete models of care, however, the models have significant areas of overlap and many iOAT programs currently in existence use elements of one or more models of care, in order to best meet the needs of their clients. Model 1 (A Comprehensive and Dedicated Injectable Opioid Agonist Treatment Program) is the most studied and has been in operation in Europe for many years. The other three models are newer, having been first implemented in British Columbia. More research is needed on these three newer models. An overview of each model of care follows.

1. A Comprehensive and Dedicated Injectable Opioid Agonist Treatment Program

In this model of care, a comprehensive model of care dedicated specifically to the delivery of supervised iOAT for people with severe, long-term OUD is instituted. This may be a stand-alone facility or located at a hospital or other acute care centre. In addition to attending the clinic up to three times per day for injectable hydromorphone or diacetylmorphine doses under the supervision of qualified health professionals or trained staff supervised by qualified health professionals, patients can be linked with ancillary services co-located at the clinic or referred to community services. These services may include addictions care; primary care; mental health care; chronic pain management; and psychosocial services including housing, employment services, trauma therapy, and specialized services for women, youth, 2SLGBTQ+ individuals, and Indigenous peoples. The Providence Health Care Crosstown Clinic in Vancouver and the iOAT clinic at Sheldon M. Chumir Health Centre in Calgary are examples of a comprehensive and dedicated supervised iOAT model. The majority of European jurisdictions that offer iOAT (Switzerland, Germany, Denmark, and the Netherlands) also use the comprehensive and dedicated supervised model, with a combination of stand-alone clinics and clinics co-located with other addictions and psychosocial services (England, with its unsupervised take-home model, and Spain, which has a very limited weekday program, are exceptions).

2. Integrated or Embedded Injectable Opioid Agonist Treatment Program

In this model of care, existing community health clinics, harm reduction programs (such as supervised consumption sites), and housing programs integrate an iOAT program within their range of treatments and programs offered. Similar to the comprehensive and dedicated iOAT program presented above, the integrated model fosters client and health care provider relationships, continuity, and comprehensiveness of care. As patients may already be familiar with the staff and services in the existing program, the integration of an iOAT program represents an extension of the range of programs already offered to clients. Additional services, which may not be available on site, should be referred out. These may include addictions care; primary care; mental health care; chronic pain management; psychosocial services including housing, employment services, trauma therapy; and specialized services for women, youth, and Indigenous peoples.

Examples of this integrated or embedded program include iOAT programs embedded in existing health clinics and acute care settings, shelters, overdose prevention sites, hospice care, and supportive housing programs. Several such programs are in existence, including programs embedded in existing health clinics and supportive housing programs in Vancouver, BC, and the residential managed opioid program in Ottawa, Ontario. This model could also be integrated into pre-existing supervised injection sites.

3. Pharmacy-Based Injectable Opioid Agonist Treatment Program

In this model of care, primary care and addiction services are provided in existing clinics with supervision of iOAT administration provided by appropriately trained pharmacists at select pharmacy

locations once patients have been initiated onto medication and reached a stable dose. This allows for access to iOAT in communities where the integrated/embedded model may not be appropriate or feasible. This model also allows for more flexibility for patients who may be at a point in their life where they do not require or want more comprehensive models of care, for example, for those who prefer the ability to access a pharmacy closer to where they reside. This option may be appropriate, in jurisdictions where it is feasible, for patients who are already well connected to other services and/or in places where it makes more sense logistically to provide medications in a pharmacy and connect patients to services provided in other settings. Patients who are not connected to adequate services should be referred as needed. These services may include mental health care; chronic pain management; and psychosocial services including housing, employment services, trauma therapy, and specialized services for women, youth, LGBT2Q+ individuals, and Indigenous peoples.

Similar to daily pharmacy-witnessed methadone ingestion, prescribed hydromorphone or diacetylmorphine syringes are prepared, dispensed, and self-administration is witnessed by trained pharmacists, nurses, or trained supervised staff. Patients are titrated onto a stable dose at their prescriber's office or clinic, with injection supervised by qualified health professionals or trained staff supervised by qualified health professionals and then transferred to the pharmacy for supervised injection, with ongoing regular prescriber visits to ensure appropriate dosing and provision of other addiction care. This model requires that pharmacies develop processes to ensure the safe delivery of iOAT (e.g., prevent diversion, ensure overdose risk is addressed) and pharmacy staff undergo additional training (e.g., overdose response, education on preventing diversion, first aid). In this pharmacy-based supervised iOAT model, it would be the responsibility of the pharmacist to complete the pre- and post-intake evaluations (see [iOAT Clinical Guideline](#)) and provide referral to ongoing treatment of needle-site wounds. Onsite supervision allows for immediate intervention and treatment in case of an adverse event or dose intolerance (i.e., call 911, administer naloxone, perform rescue breathing or provide oxygen, as appropriate), ensuring the safety of the patient.

In this model, the pharmacist and prescriber work closely together to ensure adequate dosing, make any changes to dosing as needed, and provide ongoing addiction care to ensure patients' basic health and psychosocial needs are met. Ongoing coordination of care and regular communication between pharmacist and prescriber help ensure that any emerging care issues outside the scope of practice for pharmacy professionals (e.g., wound care) can be quickly referred to the prescribing physician or nurse practitioner for follow-up.

All pharmacies must follow the applicable bylaws of their province's regulatory body for pharmacists, including requirements for security, disposal of drugs, proper documentation, and inventory management. In addition, those pharmacies providing pharmacy-based supervision of iOAT must provide reports to prescribers and update provincial electronic health records with regard to doses administered, report on adverse events, and (where applicable) manage injection space including managing supplies and equipment, attending to overdoses, and reporting overdoses.

4. Hospital-Based Injectable Opioid Agonist Program

In this model of care, iOAT is initiated in hospital (including psychiatric hospitals), with transfer to community-based prescribers at the time of discharge. Initiations may be performed for hospitalized patients during admission or at on-site hospital-based outpatient services (e.g., St Paul’s Hospital’s [Rapid Access Addiction Clinic](#) in Vancouver, BC) or inpatient addictions services (e.g., the Royal Alexandra Hospital’s [Addiction Recovery and Community Health \(ARCH\) Team](#) via the inpatient Supervised Consumption Site in Edmonton, Alberta). This model could also be used in psychiatric hospitals, to ensure access to iOAT for individuals with concurrent opioid use and psychiatric disorders. Hospital-based programs should have a process in place for transfer of care from the hospital to a community iOAT prescriber before initiating treatment.

The hospital model can also provide iOAT for individuals admitted to hospital who are already stabilized on community iOAT. See [Hospitalization](#) for more information on programmatic requirements for initiating iOAT in hospital and [Hospitalization and Acute Pain Events](#) for more information on the policies and procedures that should be put in place.

2.3.ii Additional Elements for All Models of Care

All iOAT programs should integrate harm reduction education, supplies, and services (including naloxone provision and training), develop rules to guide their program, and ensure that patient flow allows for constant observation and monitoring regardless of the model(s) of care offered. See [Minimum Recommended Criteria](#) for more information.

2.3.iii Site Design

Each iOAT program’s site design will vary, based on a number of factors, including the physical space, number of clients, model(s) of care offered, and existing infrastructure. Generally, each site should have designated areas for assessment, administration of injectable medications, a monitoring or “chill-out” space, and a private space for conversation with social workers and others, and ensure that patient flow allows for constant observation and monitoring. A variety of supplementary materials are available on the [CRISM website](#), including an example of physical site design from an existing iOAT program.

Harm Reduction

Across Canada, 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 reduction in 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.⁵¹⁻⁵⁸ In addition, research has shown that participation in harm reduction services can promote entry into addiction treatment.⁵⁹⁻⁶² Beyond specific harm reduction interventions, programs should take a non-punitive approach to treatment that utilizes a strength-based approach and meets patients where they are.

There are a variety of harm reduction services and networks in existence across Canada. These include—but are not limited to: [Toward the Heart](#), which provides an online directory of harm reduction services and supplies in British Columbia; [Street Connections](#), which provides a searchable map of harm reduction service locations in Winnipeg, Manitoba; [Alberta Health Services, SafeWorks Harm Reduction Program](#), and the [Alberta Community Council on HIV Harm Reduction Projects](#); the [Ontario Harm Reduction Distribution Program](#), which has a searchable harm reduction services database; the [Nova Scotia Take-Home Naloxone Program](#); [CACTUS Montréal](#), which provides harm reduction services and supplies and operates a supervised injection site, [Méta d'Âme](#), a peer group which provides harm reduction training and supplies, and [L'Association Québécoise pour la promotion de la santé des personnes utilisatrices de drogues \(AQPSUD\)](#), which provides harm reduction services and supplies in Quebec; the [Safe Works Access Program](#) in Newfoundland and Labrador, which operates a needle exchange program and provides education on harm reduction; the Prince Edward Island [Needle Exchange Program](#), which offers a variety of harm reduction services and supplies; the [Blood Ties Four Directions Centre](#), which offers harm reduction supplies and a listing of other services in the Yukon, and the [Whitehorse Outreach Van](#) program.

Naloxone

Injectable opioid agonist treatment programs should institute policies which ensure that all iOAT patients receive overdose prevention education and naloxone distribution when they initiate iOAT and have ongoing and continuous access to harm reduction services and supplies. Families and other people of significance (potentially including colleagues, friends, and other loved ones) should also be engaged to receive overdose response and prevention education and naloxone kit use training. In jurisdictions where naloxone is not available free of charge, iOAT programs should include provision of naloxone kits in their budget.

Safety Contracts/Patient Agreements

Each iOAT program should develop its own set of rules, in collaboration with service users and peers, which should be included in the orientation and consent process for patients. The development of rules or patient agreements should be guided by principles of patient safety and dignity and staff safety and should be developed in collaboration with staff, patients, and peer groups.

Rules may include respectful treatment of staff and other clients; not presenting to care intoxicated; and rules around attempted diversion; as well as rules suggested by clients, such as a patient bill of rights. Example program expectations and patient bill of rights are available in the supplementary materials available on the [CRISM website](#).

Programs should also develop rules that outline the care that individuals deemed not suited for iOAT or for a specific model of care should receive (for example, an individual requiring more intensive care than available through the pharmacy-based model). This should include referral and follow-up of these individuals, to ensure that they receive the care and treatment they require.

2.4 CONSIDERATIONS FOR DETERMINING MODEL(S) OF CARE TO BE IMPLEMENTED

For the sake of clarity, this document presents four separate models of care (comprehensive and dedicated, integrated or embedded, pharmacy-based, and hospital-based), however, in reality there is significant overlap between these models and particular programs may have one or more models of care offered or a unique model of care made up of elements from one or more models. The model or models of care to be offered in a given jurisdiction will depend on multiple factors. These include:

- The number of patients who would benefit from iOAT;
- The infrastructure and services already in place;
- The method of drug procurement (e.g., in hospital or out of hospital);
- The existing model of care already in place (where applicable; e.g., a supervised injection site or community clinic);
- The funding available;
- The setting—among other considerations, rural vs. urban settings will likely have different infrastructure and number of eligible patients;
- Patient population and needs (e.g., individuals requiring very close medical supervision due to concurrent stimulant and opioid use leading to repeated instances of stimulant and opioid mixed toxicity require a more intensive level of care such as the comprehensive and dedicated injectable iOAT program);
- The number of staff available and staffing models available (this may include physicians [primary care vs. specialists], nurse practitioners, social workers, pharmacists, mental health workers, and peer support workers, and is dependent on professional scope of practice and jurisdictional laws and regulations);
- Access to other ancillary staff and services, including addiction services, psychologists, counsellors, dieticians, physical therapists, and occupational therapists; and
- The feasibility of co-locating or embedding iOAT programs within other programs (e.g., safe consumption facilities, overdose prevention sites, hospital emergency departments, psychiatric hospitals, or primary care clinics).

2.4.i Determining the Number of Potential Patients

Each jurisdiction will have to determine the potential number of patients who would be eligible for and benefit from iOAT. Although there is no simple algorithm to determine this number, there are several factors that should be considered. In the European jurisdictions in which iOAT is offered, iOAT represents <1% to 12% of all patients engaged in treatment for OUD.^{21,63,64} Switzerland, which has offered iOAT as a standard of care for the past twenty years reports 12% of their OAT patients as receiving iOAT.⁶⁴ Thus, it may be estimated that, in specific urban locales with high numbers of injection opioid users, approximately 10-15% of patients eligible for OAT would benefit from iOAT. In addition to individuals on oral OAT who are not adequately benefiting from treatment, individuals accessing safe consumption sites represent a population that should be connected with physicians for assessment, some of whom may benefit from referral to iOAT programs. In addition, the Swiss programs have consistently found that approximately 30% of iOAT clients self-select to transition to oral OAT every year, with some transitioning back to iOAT as needed.⁶⁵

2.4.ii Community Context

There are multiple ways to plan, design, and implement iOAT services, depending on the community context, the number of individuals who would benefit from iOAT, availability of medications, existing network of services for people who use drugs, jurisdictional issues including coverage, and resources available, which include funding, space, and staff. These considerations, and others which emerge through the consultation process, will all inform the model(s) of care to be implemented. As with any new treatment, local people who use drugs should be involved in the planning and execution of such feasibility work and service planning. In communities without experience with iOAT, it may also be useful to include non-local people who have experienced treatment with iOAT in the planning process.

In addition to feasibility and planning work for iOAT services, each regional health authority should strive to create a community context in which there is robust addiction treatment available across the continuum of care. As such, it is recommended that regional health authorities also prioritize the scaling-up of oral OAT to ensure that same-day initiation of buprenorphine/naloxone, methadone, and SROM is available in addition to a full range of addiction treatment and supports, including iOAT. This increased capacity should not be understood as a pre-requisite to offering iOAT but rather the necessary expansion of all evidence-based treatments across the country, to ensure patients and their families have access to a full continuum of care for the treatment of OUD in each region.

2.4.iii Minimum Recommended Criteria for Models of Care

Each model of care, regardless of the specific details, should meet the following minimum recommended criteria in order to ensure patients' safety and provide continuity of care. These criteria should be achievable in a variety of settings, with programming tailored to the needs and capacities of the community.

Minimum Recommended Criteria

- Dedicated space for supervised self-administration;
- Dedicated space for post-dose observation (or “chill out” space);
- Capacity to observe patients before, during, and after administration of medication;
- Trained health professionals to provide health care provider administered injection when clinically appropriate, as well as pre- and post-dose assessment, monitoring, and response to adverse events, see [iOAT Clinical Guideline](#);
- Staff trained in harm reduction and patient-centred care;
- At least one nurse practitioner, Registered Nurse, Registered Psychiatric Nurse, or pharmacist who has the authority and experience to manage opioids under the Controlled Drugs and Substances Act to oversee the program;
- A plan for patient safety in case of overdose or other adverse event and appropriate equipment to manage an overdose prior to transfer to a higher level of care;
- A plan to prevent diversion and manage attempts at diversion;
- Provision for adequate access to medication (starting with a minimum of 3 hours between doses, most patients require 3 doses per day), including oral OAT, seven days per week;
- Ability to provide individually titrated, patient-specific doses;
- Secure, locked storage for medication;
- A staff-to-patient ratio that is appropriate to the space and number of patients;
- Ongoing and consistent access to prescribers to allow medication adjustment;
- Ongoing and consistent access to consultation with addiction medicine specialists (for example, the [RACEline](#) in BC or the [Opioid Use Disorder Consult Service](#) in Alberta);
- Capacity to distribute naloxone and sterile injection supplies and provide instruction on safer injecting practices;
- Ability to provide primary care or link patients to primary care; and
- Ability to provide or refer patients to ancillary services.

2.5 OBTAINING AND STORING INJECTABLE MEDICATIONS

The ministry responsible for health care in each jurisdiction should identify appropriate and sustainable suppliers for each medication. Once the suppliers have been identified and an agreement has been reached, the division responsible for pharmacy services should work with each iOAT program to ensure timely access to the required medications. The [Office of Controlled Substances](#) must be informed when both diacetylmorphine and hydromorphone are being prescribed, including amounts, as unexpected increases can impact the available supply, resulting in a shortage that creates gaps in treatment.

2.5.i Determining Which Medication(s) to Provide

Both hydromorphone and diacetylmorphine may be considered a reasonable medication choice, based on availability, patient choice, and prescriber judgement. However, due to significant limitations on importation of diacetylmorphine, the feasibility of offering diacetylmorphine in most jurisdictions is currently low. A domestic producer of diacetylmorphine is required in order to make it widely available to those who need it. Thus, for most jurisdictions, hydromorphone will be the primary medication available for iOAT.

2.5.ii Obtaining Injectable Hydromorphone

Hydromorphone may be dispensed by pharmacies in two ways—either through advanced compounding and preparation of doses in a NAPRA-compliant pharmacy⁶⁶ or via delivery of single-use vials by a local pharmacy, which are drawn into a syringe prior to administration. The decision of which format is utilized will vary based on the number of patients for whom the medication is needed in a particular setting as well as available infrastructure and resources and provincial regulations for health care professionals at the site. Advanced compounding has advantages, when possible, including the prevention of drug wastage and potential for diversion, however, the lack of an embedded pharmacy to provide this service should not preclude consideration of offering this treatment to patients who would benefit. In jurisdictions with more established iOAT programs, more options may be available (e.g., single-use vials, higher potency formulations). However, while advocacy continues for more formulations and increased access to services, newly established iOAT programs are working to meet an urgent public health need with existing options.

2.5.iii Obtaining Injectable Diacetylmorphine

Diacetylmorphine is available in 100mL (100mg/mL) vials. Health authorities should be involved in providing this medication and/or contracting for pharmacy services within their area. It is important to note that the procurement mechanisms for access to diacetylmorphine are evolving rapidly. The information contained herein is the most up-to-date and accurate information at the time of publication. Updates to this document are planned for every two years. Developments that occur outside of the update schedule will be posted on the [CRISM website](#).

Diacetylmorphine is currently available via two federal mechanisms:

1. [List of Drugs for an Urgent Public Health Need \(UPHN\)](#)⁶⁷: The drugs identified on this web-based list have been requested by a federal or provincial public health official to address an immediate and urgent public health need within their jurisdiction. This mechanism is to support population needs rather than individual patient needs (which are addressed via the Special Access Programme). Drugs accessed via the UPHN regulatory pathway enable a public health official to request a quantity of drug deemed necessary for use in their jurisdiction for an urgent public health need in Canada, and allow for repeated importation of the drug as needed for a period of one year. Drugs included on this list can be renewed by the jurisdictional public health officer on a yearly basis. Those wishing to obtain diacetylmorphine via the UPHN mechanism are encouraged to contact the ministry responsible for health in their jurisdiction for assistance in navigating access to this medication.
2. [Special Access Programme \(SAP\)](#): This program offers another avenue to allow access to drugs that are not authorized for sale in Canada. This regulatory mechanism is designed to address individual patient needs. The decision to authorize or deny an SAP request is discretionary and made on a case-by-case basis. This is based on availability of alternative medications and information provided by the requesting practitioner regarding the use, safety, and efficacy of the drug. If the request is approved and access to the drug is granted, the practitioner must report on the use of the drug in that particular patient. This includes any adverse events that occur, in addition to accounting for all quantities received; the information should be provided to both the drug manufacturer and the SAP.

It is important to note that, as of May 19, 2018, paragraph 24(4) of the *Narcotic Control Regulations* restricts the sale and provision of diacetylmorphine in the following way. Diacetylmorphine may be sold or provided by a licensed dealer to the following:

- (a) another licensed dealer;
- (b) a hospital employee, if that hospital provides care or treatment to persons;
- (c) a practitioner of medicine or a nurse practitioner;
 - (c.1) if practising in a hospital that provides care or treatment to persons, a practitioner of dentistry;
 - (c.2) a pharmacist; or
- (d) a person exempted under section 56 of the Act with respect to the possession of that narcotic for a scientific purpose.

Diacetylmorphine can only be imported into Canada from the manufacturer in Switzerland by a Health Canada licensed dealer. The role of the licensed dealer is outlined in the *Narcotic Control Regulations*, with compliance requiring highly specialized knowledge, facilities, and processes.⁶⁸ Specific eligibility criteria must be met, with applications reviewed on a case-by-case basis.

The public health office or health authority is responsible for narcotic accountability at all stages including reporting on medication wastage, loss, and destruction of the drug. Expertise is required in managing the timing of import and export permits to ensure adequate supply of medication while meeting necessary storage requirements.

When to Use the Special Access Programme vs. List of Drugs for an Urgent Public Health Need

Although individual patients may receive approval for diacetylmorphine through the SAP, the SAP should be understood as an advocacy tool advancing the need for increased access to diacetylmorphine, rather than a process by which patients may receive diacetylmorphine. Due to the absence of a domestic producer, all diacetylmorphine must be imported, which is not feasible for small numbers of patients.

Thus, the List of Drugs for an Urgent Public Health Need is more useful for procuring diacetylmorphine. In order for diacetylmorphine to be added to the List of Drugs for an Urgent Public Health Need, an emergency must be declared by a public health officer. More information on adding medications to the List of Drugs for an Urgent Public Health Need list can be found in Health Canada's "[Questions and Answers: Access to Drugs in Exceptional Circumstances](#)." **Note:** As of April 25, 2019, diacetylmorphine has been added to the List of Drugs for an Urgent Public Health Need List for the whole country. If this changes in the future, the above text should guide those wishing to prescribe diacetylmorphine.

2.5.iv Storage Requirements

All pharmacies must follow the applicable bylaws of their jurisdiction's regulatory body for pharmacists, including requirements for security, disposal of drugs, proper documentation, and inventory management.

Both diacetylmorphine and hydromorphone must be transported like any other opioid.

2.6 STAFF COMPETENCIES AND TRAINING

Any staff working in an iOAT program, including prescribers, nurses, social workers, pharmacists, peers, and non-health care unregulated staff (e.g., front-desk or administrative staff) should have the following general competencies: trauma-informed practice (see [Trauma-Informed Practice](#)) including [strengths-based approaches](#); competence with culturally safe care (see [Cultural Safety and Humility](#)); an understanding of the power differentials inherent in working with marginalized communities as someone with institutional power (see [Providing Care to Groups at Risk of Marginalizing Experiences](#)); training in non-violent crisis intervention, de-escalation, or similar; overdose response,

including calling for assistance or administration of naloxone; and an understanding of non-stigmatizing approaches.

Several best practice and payment standards documents for employing people who use drugs exist. These include a [Peer Engagement Principles and Best Practices](#) document and [Peer Payment Standards](#) from the BC Centre for Disease Control, [Harm Reduction at Work: A Guide for Organizations Employing People Who Use Drugs](#) from Open Society Foundations, and [Best Practices in Peer Support](#) from Addictions & Mental Health Ontario, which provide guidance for programs engaging with and employing people with lived experience. Programs employing peer workers may consider, in concert with peer workers, instituting mentoring and/or other support mechanisms for peer workers, to support their wellness and self-defined progress. Peer workers should be understood as equal members of the team, who should be fully integrated and compensated fairly.

In addition, staff should be trained (as appropriate to their role and responsibilities) on the following:

- Protocols and procedures, including:
 - Supervision of injections,
 - Pre-dose assessment,
 - Post-dose assessment and treatment of adverse events (e.g., dose intolerance—see [iOAT Clinical Guideline](#) for a sample protocol),
 - Missed dose protocol;
- Goals of the program;
- Approaches and policies on issues like disruptive behaviour, missed appointments, and the importance of consistency across staff;
- Strategies to make patients feel welcome and supported;
- Preventing and mitigating stigma by avoiding and rejecting stigmatizing language, labels, and behaviour;^h
- Familiarity with relevant legislation, including legislation that governs mental health care, adult guardianship, and the mental health certification process;
- A thorough understanding of the range of treatment options along the continuum of care and local community programs and resources;
- Training in harm reduction philosophy, practices, and patient education including counseling on safer injection practices and naloxone administration.

^h [Toward the Heart](#) has multiple resources on reducing stigma, including training modules and guidance on respectful language.

In addition to training opportunities available in each jurisdiction, the BC Centre on Substance Use provides general addiction care training, including modules on treating opioid use disorder, patient-centred care, cultural competency, and working with LGBT2Q+ communities through its [Addiction Care and Treatment Online Certificate](#), which is open to individuals across Canada.

Each program will determine its own staffing needs, models, and roles. The following suggested competencies should not be understood as a requirement for each staff type to be included on all care teams, but rather basic suggested competencies for staff members by staff role.

2.6.i Peers

In addition to the general competencies above, peer staff should receive training to equip them to provide peer orientations for new clients. Peers can also be trained to identify infection and provide education on safer injection practices, which will enable them to confirm track marks for patients who are uncomfortable with a health care provider doing so during a physical exam. In some jurisdictions, peers may also be able to assist with injections for clients who have difficulty self-administering their doses. Those peers should be trained in safe injection practices. For individuals interested in further training and certification, [Peer Support Accreditation and Certification Canada \(PSACC\)](#) provides National Peer Support Certification and Peer Support Mentor Certification.

2.6.ii Prescribers

Health Canada permits both physicians and nurse practitioners to prescribe diacetylmorphine and hydromorphone. However, the regulatory body responsible for nurse practitioners in each jurisdiction will have to determine whether prescribing iOAT is within scope for nurse practitioners and what training they require.

Each jurisdiction will have its own expectations for the training and maintenance of competency of prescribers. This is determined by health ministries/departments, regional health authorities, and/or regulatory colleges. However, the following experience and training are recommended as minimum requirements:

- Previous experience and training with oral OAT prescribing;
- An understanding of the biopsychosocial model of addiction and the factors that impact addiction;
- Training in motivational interviewing;
- Completion of iOAT-specific training;
- A preceptorship (which could be completed remotely through telehealth); and
- The capacity to work collaboratively on an interprofessional team.

The BC Centre on Substance Use provides online training on iOAT prescribing through the [Provincial Opioid Addiction Treatment Support Program](#).

2.6.iii Nurses

In addition to the general competencies outlined above, nurses (which may include Registered Nurses, Registered Psychiatric Nurses, Registered Practical Nurses, and Licensed Practical Nurses) should have the following competencies:

- Vein finding;
- Previous experience and training in addictions care;
- Completion of iOAT-specific training.

The BC Centre on Substance Use provides online training on iOAT prescribing through the [Provincial Opioid Addiction Treatment Support Program](#).

The following competencies are also recommended:

- An understanding of the biopsychosocial model of addiction and the factors that impact addiction;
- Training in motivational interviewing and adequate knowledge to provide or make appropriate referrals for the following modalities: cognitive behavioural therapy, dialectical behaviour therapy, solution-focused therapy, group therapy, family systems theory;
- Case management skills;
- An understanding of the stages of change model;
- An ability to conduct a psychosocial assessment with an addiction focus (e.g., history of use, history of treatment, determining patient readiness for change); and
- The capacity to work collaboratively on an interprofessional team.

2.6.iv Pharmacists

In addition to the general competencies outlined above, pharmacists should have the following competencies and authorizations:

- Previous experience in addiction care, including provision of oral OAT;
- Completion of iOAT-specific training;

- The capacity to collaborate and communicate across disciplines and roles;
- Authorization to administer drugs by injection;
- Current certification in CPR and First Aid; and
- Authorization to prescribe drugs (dependent on the specific jurisdiction in which the pharmacist practices).

2.6.v Social Workers

In addition to the general competencies outlined above, the following competencies are recommended for social workers in iOAT programs:

- An understanding of the biopsychosocial model of addiction and the factors that impact addiction;
- Training in motivational interviewing and adequate knowledge to provide or make appropriate referrals for the following modalities: cognitive behavioural therapy, dialectical behaviour therapy, solution-focused therapy, group therapy, family systems theory;
- An understanding of frequently co-occurring mental health disorders, the DSM-5, and basic psychopharmacology;
- Case management skills;
- An understanding of frequently used licit and illicit substances and their effects on the body;
- The ability to conduct a psychosocial assessment with an addiction focus (e.g., history of use, history of treatment, determining patient readiness for change); and
- The capacity to work collaboratively on an interprofessional team.

2.6.vi Non-Health Care Staff

In addition to the general competencies outlined above, non-health care unregulated staff should receive training to ensure they understand the requirements of confidentiality and its limits as well as training in administering naloxone to reverse overdoses.

2.7 STAFFING

Staffing levels and roles will depend on both the model of care and number of patients enrolled in the program. The following responsibilities must be planned for, with the appropriate staff members tasked with them.

2.7.i Patient Orientation and Education

Prior to admission, individuals identified as likely to benefit from iOAT should go through an admission process that involves informed consent and an orientation provided by peer workers, to ensure program regulations, time commitments, and other requirements are fully understood. Some patients starting iOAT have not previously been engaged in care in the health system; these patients may benefit from peer support in navigating the system and advocacy as needed.

Peers should also be included in the education of potential patients and the larger community. Working with peers to create clear messaging about the expectations, benefits, and requirements of iOAT will help ensure that new patients have realistic expectations for the treatment.

2.7.ii Supervision of Injection

Clients self-administer under supervision of a qualified staff member.ⁱ Training for staff who will be supervising injection includes training on conducting pre- and post-injection assessments, responding to overdose, and aftercare, as well as orientation to an existing supervised injection program, where possible.

Supervision of self-administered injection involves completing a pre-injection assessment, coaching or assisting with vein finding or landmarking (for intramuscular injection), coaching on vein health and maintenance, direct observation of the injection, and a post-injection assessment (see [iOAT Clinical Guideline](#) for more information on pre- and post-injection assessments).

2.7.iii Increasing and Decreasing Doses

A physician, nurse practitioner, pharmacist (depending on the model; in consultation with the prescribing physician or nurse practitioner), or nurse (in consultation with the prescribing physician or nurse practitioner) may, in consultation with the patient, order a lower dose based on patient response and safety concerns. Patients may also choose to not inject the full dose prescribed. Only prescribers (physicians and nurse practitioners, where applicable) may increase a dose or permanently decrease a dose.

ⁱ Any appropriately trained unregulated health care worker may supervise injection as long as a regulated health professional is also in the room and can attend to any issues that may arise.

2.7.iv Health Care Provider Administration of Injectable Medication

Depending on the model of care and jurisdiction, health care providers may provide subcutaneous injections or IM injections in the deltoid, ventrogluteal, or dorsogluteal muscles. Nurses may be able to provide IV injection when requested by the patient and determined to be appropriate. However, regional differences may exist in terms of what medications can be administered by IV injection by nursing professionals. Institutional policies should be developed to outline appropriate orders required, standard protocols for IV injection, and necessary staff education. See [iOAT Clinical Guideline](#) for more information on health care provider administration of injectable medication.

2.7.v Additional Services and Wrap-Around Care

Additional services may include outpatient, inpatient, and residential treatment programs; recovery-oriented services including peer-support programs; supportive recovery housing; psychosocial treatment interventions and supports; chronic pain management; primary care; addiction medicine specialist consultation; trauma therapy; and specialized services for women, youth, 2SLGBTQ+ individuals, and Indigenous peoples.

Some programs may co-locate or partner with community organizations which provide psychosocial services, others may offer some services on-site (e.g., counselling, housing workers) and refer out to other community services, and others will utilize referral pathways to ensure service users can access the psychosocial services they need and will benefit from. Programs that provide ancillary services on site will need to ensure adequate staffing.

2.7.vi Outreach/Follow-up

Injectable opioid agonist treatment programs should ensure provisions are made for outreach and follow-up services as necessary. This may involve program staff, including social workers, nurses, mental health workers, and other staff members, or partnering with existing outreach teams. In some cases, the iOAT program may negotiate protocols in advance for follow-up of the admitted patients in cases of unexpected incarceration or hospital admission.

2.8 SPACE

Space requirements will vary with the model(s) of care offered, the number of patients seen, and any other services or programs co-located. General space requirements include a dedicated injection area and, ideally, a storage area for patients' belongings; a storage area for injection supplies; a secure area for storage and preparation of medications; syringe disposal that allows for the counting

and examination of syringes; narcotic security tailored to setting and capacity; controlled entry to the injection room; space for post-injection monitoring; space for treatment if required in the event of an overdose; and a private space for conversation with social workers or other health care providers. Space requirements for each model of care can be found in [Appendix 2](#).

2.9 SECURITY

Specific security requirements will vary with the model(s) of care offered and medications provided. General requirements include supervision of self-administered injections to observe for diversion; narcotic security tailored to setting and capacity; controlled entry to the medication preparation and injection room; syringe disposal that allows for the counting and examination of syringes; and syringe labelling that meets the requirements of relevant regulatory bodies. Security requirements for each model of care can be found in [Appendix 2](#). General storage requirements for both diacetylmorphine and hydromorphone can be found in [Storage Requirements](#).

2.10 MEDICAL RECORDS

Medical records, whether electronic medical records (EMRs) or other medical records that are accessible for communication of important patient care details, should be used as appropriate to communicate important care details. For example, medical records should be shared with in-hospital care providers in the event that a patient is hospitalized to communicate important care details such as the date and size of the last dose received by the patient, as well as contact information for the iOAT program.

Where feasible, EMRs can be used to track doses and trigger the missed dose protocol (see [iOAT Clinical Guideline](#)), as well as provide a reminder for when prescriptions need to be renewed.

2.11 PROTOCOLS AND PRE-PRINTED ORDERS

Each program may have the following in place (practices are dependent upon jurisdiction [province/territory] and specific professional regulations and authorizations):

- Pre- and post-dose assessment and treatment protocols with, where necessary, a client-specific prescriber's order to apply the protocols if an unforeseen critical incident arises (e.g., dose intolerance, seizure) (see [iOAT Clinical Guideline](#))
- Hospitalization and acute pain events (see [Hospitalization and Acute Pain Events](#))

- Transition to oral OAT, for both short and long-term transitions (see [Transition to Oral OAT](#))
- Missed doses (see [iOAT Clinical Guideline](#))

Example treatment protocols are available in the supplementary materials available on the [CRISM website](#).

2.11.i Pre-Printed Orders

Where possible, a variety of pre-printed orders may be used to save time, reduce potential for medication errors, reduce the need for follow up with prescribers, and improve documentation. Practices are dependent upon jurisdiction (province/territory) and specific professional regulations and authorizations. Examples of pre-printed orders that may be used include:

- Titration orders for diacetylmorphine
- Missed days orders for post-initiation dose of diacetylmorphine
- Titration orders for high-dose hydromorphone
- Missed days protocol for post-initiation dose of high-dose hydromorphone
- Medication orders

In some provinces (for example, Alberta), nurses may require a pre-printed order to be for a specific client and signed by the prescriber prior to implementation of the orders. These orders can then be used for that patient's care while in the clinic or until their condition warrants a change in orders.

Example pre-printed orders are available in the supplementary materials available on the [CRISM website](#).

2.12 COST AND COVERAGE

2.12.i Cost

Cost will depend on several factors, including the model(s) of care offered, number of patients, the staffing model used, and medication(s) provided. As described elsewhere in this document, in the population that continues to use illicit opioids despite attempts at oral OAT, iOAT is superior to oral OAT. Injectable opioid agonist treatment is both more effective and more cost effective than oral OAT,^{29,32} therefore, iOAT should be expanded. However, it should be noted that cost savings will depend upon the price of the medications. See [Cost Effectiveness](#) for more information on cost effectiveness.

The cost of hydromorphone will vary by jurisdiction (province/territory), depending on the price negotiated, the number of patients, and program specifics (for example, hospital vs. non-hospital). The cost of hydromorphone may differ significantly, depending on the negotiations made between each province and supplier. Health Canada's recent approval of injectable hydromorphone for the treatment of severe opioid use disorder may contribute to a lower cost in the future.^{70,71}

See [Appendix 2](#) for more information on budgetary considerations.

Negotiating Medication Costs

Each jurisdiction will have to negotiate with the supplier to determine which products (that is, what potency) will be added to its formulary and the price per unit. Because this process can take a significant amount of time, it is recommended that planners begin negotiations early in the planning process.

Each jurisdiction may have additional stakeholders who should be involved in negotiations, but, generally, the following stakeholders will be involved: ministry or ministries responsible for health, [Health Canada—Therapeutics Products Directorate](#), and the potential supplier(s). Additional stakeholders who may support negotiations include [the pan-Canadian Pharmaceutical Alliance](#), which conducts joint provincial/territorial/federal negotiations and has been successful at lowering drug prices in the past, and pharmacy consulting firms, which may assist in negotiating prices. Provincial ministries responsible for health may also choose to work together to reduce price as a combined procurement strategy.

Currently, [Sandoz](#) produces the hydromorphone indicated for treatment of severe opioid use disorder in Canada.⁷¹ Hydromorphone HP 10 (10mg/mL), Hydromorphone HP 20 (20mg/mL), Hydromorphone HP 50 (50mg/mL), and Hydromorphone HP Forte (100mg/mL) are all indicated for supervised iOAT in adults with severe OUD who inject opioids and have not benefitted from previous oral OAT attempts.⁷¹ In the future, additional suppliers could allow for more negotiation of price.

Diamo produces and exports the diacetylmorphine used to treat severe opioid use disorder in Canada, currently. However, if a Canadian producer were to be secured, this would both bring the price down and eliminate the barriers to more patients receiving diacetylmorphine-based iOAT.

2.12.ii Coverage

Drug coverage is determined by each province's ministry or department of health. For a discussion of cost effectiveness, see [Appendix 1](#).

3.0 Operational

3.1 SUMMARY OF CLINICAL PRACTICE GUIDANCE

The following table summarizes the clinical guidance provided in the [iOAT Clinical Guideline](#), this document's partner document. In-depth clinical guidance is available in the clinical guideline, as well as three key clinical recommendations made using the Grading of Recommendations Assessment, Development, and Evaluation (GRADE) tool and evidence supporting each one.

General considerations	Individuals with severe opioid use disorder who inject opioids and have continued to experience significant health/and or social consequences who have not benefitted from previous attempts at oral opioid agonist treatment, or other circumstances and risks that indicate they may benefit from iOAT.
Eligibility	Recommended considerations for eligibility in concert with clinical judgment and precautions.
Medication selection	Both hydromorphone and diacetylmorphine are reasonable choices, based on availability, patient choice, and prescriber judgment.
Titration process	The titration protocol should be followed.
Pre-intake assessment	Performed by a qualified health professional or other trained staff member supervised by a health professional to ensure the patient is not intoxicated or in any other contraindicated acute clinical condition.
Administration of injectable medications	Generally, up to 3 visits per day are recommended. Individuals should self-administer under supervision of a qualified health professional. Patients may inject intravenously, intramuscularly, or subcutaneously. Intravenous injection is recommended in upper extremities only. Lower extremity injection should be discussed and risks identified for those who cannot find an appropriate site in their upper extremities or who otherwise prefer intravenous injection in their legs or feet. Intramuscular sites should be identified by a qualified health professional and rotated according to established practice standards.
Post-intake assessment	Performed by a qualified health professional or other trained staff member supervised by a health professional to ensure safety and attend to dose intolerance or other adverse event.
Co-prescription of oral OAT	Consider co-prescription of slow release oral morphine or methadone to prevent withdrawal and cravings between iOAT doses, particularly overnight.
Missed doses	The short-acting nature of iOAT medications requires adequate supervision for missed doses. Refer to missed doses protocol.
Ongoing substance use	Ongoing substance use while on iOAT may be an indication to intensify treatment, which may include dose increases, transferring to a more intensive model of care, and/or increasing psychosocial and other supports. See substance-specific guidance.

3.2 GENERAL CONSIDERATIONS

Injectable opioid agonist treatment is generally considered for those individuals with severe OUD who inject opioids and have continued to experience significant health and social consequences related to their OUD despite past experience or attempts with appropriately dosed oral OAT (per CRISM’s [National Guideline for the Clinical Management of Opioid Use Disorder](#)), previous attempts at oral OAT without being able to achieve a therapeutic dose, or other circumstances and risks that indicate the patient may benefit from iOAT (see [iOAT Clinical Guideline](#)).

3.3 PATIENT POPULATION AND ELIGIBILITY

As individual situations vary, considerations for eligibility, eligibility precautions, and general cautions for treatment, rather than strict eligibility criteria, are presented in the [iOAT Clinical Guideline](#). In operationalizing the eligibility considerations, program managers are advised to allow for clinical judgment and collaborative decision-making in determining with each individual which treatment(s) have the highest likelihood of ensuring the goals of care, which should include survival, reduction in the harms related to drug use, stabilization,^j increased quality of life, and any other patient-defined goals based on their context and needs.

3.3.i Specific Populations

Hospitalization

Hospitals (including psychiatric settings) providing iOAT inductions should have a policy which governs inductions, ongoing care, and transition to community care. The policy should include the following components:

- Eligibility considerations
 - These should include clinical stability and assessment by a physician with expertise in iOAT.
- Close supervision and education around safe injection techniques for individuals with existing injection-related infection.
- Education and supports for health care staff to provide patient-centred and culturally safe care (see [Philosophical Approach](#) in this document).

^j Definitions of stabilization will be patient-specific. See entry in [Glossary](#) for more information.

- Requirements that hospital-based inductions be performed in coordination with an outpatient prescriber and/or program who agrees to receive the patient into care upon discharge.
- A defined process for seamless transfer of care, which may include a pre-discharge appointment with the community social worker, an accompanied visit to the new program to meet the community prescriber (for example, with an outreach, peer, or social worker), and a discharge package that includes information about dosage, time and size of last dose, and a take-home naloxone kit.

Youth

The research to date on iOAT has not included participants younger than 18 years old (19 in British Columbia). Thus, the research evidence presented in the [iOAT Clinical Guideline](#) has been extrapolated from studies conducted in adult populations, with the recognition that prescribers may encounter adolescent (aged 12–17 years) and young adult (aged 18–25 years) populations with severe OUD who do meet some or all of the considerations for eligibility for iOAT in their practice. Treatment decisions for youth (12-25) should be made by or with consultation from health care professionals with experience in treatment of adolescents and young adults with substance use disorders. Injectable opioid agonist treatment programs that may encounter youth who meet some or all of the considerations for eligibility for iOAT should ensure they have referral pathways in place for youth, if the care of youth is beyond the scope of practice, expertise, or experience of the program’s staff. More information on treating youth can be found in [iOAT Clinical Guideline](#).

As with any treatment, youth under the legal age of majority of Canada do not need parental consent in order to receive treatment. Capacity to consent for these youth is determined based on the capacity to fully understand the treatment and possible consequences of treatment, except in Quebec, where the age of consent is 14 years and older,⁷² and New Brunswick, where the age of consent is 16 unless two medical practitioners are in agreement that the individual is capable of consenting and that the medical procedure in question is in the patient’s best interest.⁷³ Injectable opioid agonist treatment programs should have policies and training in place that ensure all staff are familiar with their jurisdiction’s age of consent (where applicable) or how to determine capacity to consent and the limits of confidentiality (for example, duty to report). For more information on determining capacity to provide consent in those under the age of majority, refer to guidance from the [Canadian Medical Protective Association](#)⁶⁹ and [Royal College of Physicians and Surgeons of Canada](#).⁷⁰

Youth-Centered Environment and Approach

Several studies on oral OAT and substance use treatment more generally have found that adolescents and youth experience the adult-oriented environment of most treatment services as a barrier to accessing and continuing treatment.⁷⁴⁻⁷⁶ It should be noted, however, that the evidence base is for substance use disorder treatment more generally and oral OAT rather than iOAT. Injectable opioid

agonist treatment programs that serve youth should consider the age range of staff and clients, make referrals to youth-focused ancillary services (e.g., mental health care, housing workers, trauma therapy) when possible, and consider inclusion of youth peer navigators and peer support workers, which 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. More information on youth-centred approaches can be found in [iOAT Clinical Guideline](#).

Women

Women starting iOAT face additional vulnerabilities compared to men, including higher rates of lifetime physical and sexual abuse, HIV and hepatitis C infections, cocaine use, suicide attempts, past-month sex work, lower age, and lower rates of employment.⁷⁷⁻⁷⁹ In addition to these vulnerabilities, a recent study of overdose prevention sites (OPS) in Vancouver, BC, found that many OPS designated gender neutral are experienced as male-dominated or “masculine” spaces, which can act as a barrier to access for women. Women reported routinely experiencing harassment from men at OPS, including from men accessing OPS who had previously victimized them.⁸⁰ For these reasons, where feasible, it is recommended that women-only services or hours be offered.

Pregnancy and People of Child-Bearing Capacity

Injectable opioid agonist treatment programs should ensure that all patients of childbearing capacity starting iOAT are offered screening for pregnancy at intake, with contraceptive counselling and prescriptions offered as appropriate, and ongoing sexual health and pregnancy planning provided as is standard in primary care. Contraceptive counselling services and supplies should also be offered to patients who are currently pregnant in order to reduce the likelihood of a subsequent unplanned pregnancy as short intervals between pregnancies may disrupt ongoing treatment and amplify potential risks to recovery and long-term health.⁸¹

For a review of evidence and guidance on iOAT for pregnant people, see the [iOAT Clinical Guideline](#).

3.4 PREPARATION AND PROVISION OF INJECTABLE MEDICATIONS

See [Obtaining and Storing Injectable Medications](#), above, for information on obtaining and storing the injectable medications.

3.4.i Preparation of Hydromorphone

Hydromorphone may be prepared at point of care for immediate use or in advance if appropriate infrastructure and procedures are in place. Beyond use dating is dependent upon several factors, including equipment and infrastructure. Injectable opioid agonist treatment programs should refer to the [National Association of Pharmacy Regulatory Authorities \(NAPRA\) sterile compounding standards](#)⁶⁶ and bylaws of each province's regulatory body for pharmacists. Please see the relevant regulatory body's website for more information on bylaws. Regional health authorities should be involved in providing the service or contracting for pharmacy services within their area. The decision of which format is to be utilized will vary based on the number of individuals for whom the medication is needed in a particular setting as well as available infrastructure and resources. Advanced compounding has advantages, when possible, including the prevention of drug wastage and potential for diversion, however, the lack of an embedded pharmacy to provide this service should not preclude consideration of offering this treatment to patients who would benefit.

3.4.ii Preparation of Diacetylmorphine

Currently, diacetylmorphine hydrochloride is purchased from the supplier as lyophilized powder (10g vials) and prepared for injection with sterile water to a final concentration of 100mg/mL under a Laminar Flow hood, per standard operating procedures, such as those defined in the [National Association of Pharmacy Regulatory Authorities \(NAPRA\) sterile compounding standards](#) or the [Canadian Society of Hospital Pharmacists' Compounding Guidelines](#). In the future, as access to diacetylmorphine expands, and if a Canadian supplier is secured, diacetylmorphine may be prepared at point of care for immediate use or in advance if appropriate infrastructure and procedures are in place. Beyond use dating is dependent upon several factors, including equipment and infrastructure. Injectable opioid agonist treatment programs should refer to the [National Association of Pharmacy Regulatory Authorities \(NAPRA\) sterile compounding standards](#)⁶⁶ and bylaws of each province's regulatory body for pharmacists. Please see the relevant regulatory body's website for more information on bylaws. Regional health authorities should be involved in providing this medication and/or contracting for pharmacy services within their area. It is important to note that the procurement mechanisms for access to diacetylmorphine are evolving rapidly and this document will be updated every two years to reflect the most up-to-date information. Developments that occur outside of scheduled updates will be listed on the [CRISM website](#).

3.4.iii Supervision of Injections

Service users self-administer under the supervision of a qualified staff member,^k or may, when clinically indicated and feasible, receive health care provider administered injection (see [iOAT Clinical Guideline](#)). The options available for health care provider administered injection will be determined

^k Any appropriately trained unregulated health care worker may supervise injection as long as a regulated health professional is also in the room and can attend to any issues that may arise.

by each province's regulations and the health care professional's scope of practice. Training for staff members involves orientation to an existing supervised injection program, along with training on conducting pre- and post-injection assessments, responding to overdose, and aftercare.

Supervision of self-administered injection involves completing a pre-injection assessment, direct observation of the injection, and a post-injection assessment (see following section for more information on pre- and post-injection assessments).

3.4.iv Pre- and Post-Injection Assessment

The purpose of the pre-injection assessment is to ensure that the patient is not intoxicated, including by centrally-acting sedatives and/or stimulants, or in any other acute clinical condition that would increase the risk of an adverse event with the administration of iOAT.

Patients can leave the premises when they are deemed fit to do so after the minimum 15-minute post-dose observation period. Each program should create a policy on post-dose observation periods, depending on the context and patient population, which prioritizes patient safety. The post-injection observation period may be an ideal time to engage service users in psychosocial services and other medical care, although some individuals may not wish to engage after receiving their dose.

The pre- and post-injection assessment protocols can be found in [iOAT Clinical Guideline](#).

3.4.v Administration of Injectable Medications

It is recommended that patients have access to the iOAT program up to three times per day, however, some programs may provide additional doses per day when feasible and required, while others may provide two injections per day due to patient preference and/or operational constraints. Patients self-administer their prepared dose under the supervision of a qualified health professional. For safety reasons, it is recommended that intravenous injection only be allowed in the upper extremities (hands or arms, no jugular or femoral vein use permitted), while intramuscular injections can be allowed in deltoid, ventrogluteal, or dorsogluteal muscles. However, for individuals who cannot find appropriate sites in their upper extremities, intravenous injection may be permitted in legs or feet. Subcutaneous injection or short-term transition to oral OAT is also an option for those patients who need to give their veins a rest to heal venous damage.

When clinically indicated, certain health care providers can administer the injectable medication. See [iOAT Clinical Guideline](#) for more information on health care provider administered injection.

3.4.vi Provision of Supplementary Oral OAT

Oral OAT (methadone or slow-release oral morphine) is frequently co-prescribed with iOAT in order to prevent withdrawal and cravings between iOAT doses, particularly overnight during the longest

between-dose period, as the injectable medications are relatively short-acting. In this way, co-prescription of oral OAT helps provide greater clinical stability. Injectable opioid agonist treatment programs may provide supplementary oral OAT onsite when patients present for one of their doses, or may refer out to a local pharmacy for these doses.

3.5 ONGOING SUBSTANCE USE

Ongoing substance use while on iOAT may be an indication to intensify treatment, which may include dose increases, transferring to a more intensive model of care, and/or increasing psychosocial and other supports, depending on which substances are being used. See [iOAT Clinical Guideline](#) for clinical guidance on addressing ongoing substance use. Those planning iOAT programs must ensure that their programming and training reflects the needs of the patients they will serve (for example, in jurisdictions in which polysubstance use is common, services and supports must be in place to appropriately manage ongoing polysubstance use).

3.6 TREATMENT TRANSITIONS

This document recommends the use of a stepped and integrated continuum of care model for treatment of OUD, where treatment approaches are continually adjusted to match individual patient needs and circumstances over time and recognizes that many individuals may benefit from the ability to move between treatments. This includes intensification (e.g., initiating iOAT when oral OAT approaches have not been met with success), deintensification (e.g., transitioning from iOAT to oral OAT) when patients achieve successful outcomes and wish to transition to lower intensity treatments, and the ability to reinstate iOAT as needed, if an individual is not benefitting adequately from oral OAT after transitioning from iOAT.

Decisions to transition to another type of care should be made collaboratively between the patient (and their family, if included in their care), iOAT prescriber, and any other relevant health care providers, rather than imposed by the prescriber or program policies.

Injectable opioid agonist programs should have policies and procedures in place which ensure that patients do not have their treatment discontinued without consent. For example, there should be procedures in place to ensure that, in the case of a prescriber retiring or moving, the patient would have the choice to be transferred to another iOAT prescriber, be slowly titrated off of iOAT, or transitioned to oral OAT, as well as policies for specific transitions such as hospitalization, travel, and incarceration (see following sections in this document). As outlined in the [iOAT Clinical Guideline](#), patients and care teams may also benefit from filling out a client safety care plan or behaviour agreement at

the beginning of treatment. This would include identification of triggers and irritants, calming strategies, and an agreement for how staff will respond if a patient is upset or is otherwise violating program rules (such as behaviour that threatens staff or other clients), with the aim of ensuring safety for all clients and staff and maintaining access to care whenever possible.

More information on strategies for treatment transitions can be found in [iOAT Clinical Guideline](#).

3.6.i Hospitalization and Acute Pain Events

Individuals on iOAT may have comorbidities which put them at increased risk for hospitalization, whether for acute or chronic physical or mental health conditions. For this reason, community-based iOAT programs must have protocols in place for when patients are hospitalized. As part of the treatment agreement and consent process (see [Appendix 3](#)), consent should be sought for communication between health care providers, to ensure safety and continuity of care.

The following components are recommended, when possible, in order to support continuity of care:

- Protocol in place for community prescriber to contact in-hospital most responsible provider (MRP) to inform them that patient is on iOAT and, thus, will have a high opioid tolerance.
- Protocol in place for community prescriber to contact addiction medicine consult team (AMCT) in hospitals where these services exist. In the absence of these services, the community provider should be consulted to support inpatient care.
- Protocol in place for acute care prescribers and addiction medicine consult services to contact the community prescriber.
- Protocol in place for the hospital team providing care to access date and size of last dose received by patient (for example, uploaded to provincial electronic health record or prescription monitoring program, where possible).
- Contact information for all iOAT programs, including ability to contact program outside of program hours.

More information on hospitalization and acute events can be found in the [iOAT Clinical Guideline](#).

3.6.ii Transition to Oral Treatment

Individuals receiving iOAT may need to transition to oral treatment on a short-term basis (e.g., for travel) or longer term (e.g., due to incarceration). Injectable opioid agonist treatment programs should have protocols in place for both short-term and longer-term transitions to oral treatment.

For short-term transition for travel, methadone or SROM may be prescribed. Prescribers should ensure that witnessed ingestion of SROM or methadone is possible at the location the client is travelling to

and be aware that prescriptions filled outside the province or territory of residence may not be reimbursed by the patient's drug plan. Specific guidance on short-term transition to oral OAT, including a conversion table, can be found in the [iOAT Clinical Guideline](#).

Incarceration should not result in inadequate treatment for OUD, and best efforts should be made to provide the best standard of care for OUD regardless of setting. However, at this point in time, iOAT is not provided to individuals in correctional facilities in Canada. It should be noted, however, that there are two prison-based iOAT programs currently in operation in Switzerland.⁸¹ In addition, a 2018 case study reported on the successful integration of iOAT into a drug court treatment program in B.C., with positive health and social outcomes reported for the individual.⁸² Custodial settings represent an important site for expansion of iOAT, given the high prevalence of opioid use both immediately prior to and during incarceration,⁸³⁻⁸⁵ and the risk of overdose in the post-release period.⁸⁶ Patients who have been convicted of a crime and face a period of incarceration must be transitioned to a suitable oral OAT option prior to, or as quickly as possible following, their entry into the correctional system. Detailed recommendations for managing this transition can be found in [iOAT Clinical Guideline](#).

The following components are recommended, when possible, in order to support continuity of care:

- Protocol in place for community prescriber to contact MRP in correctional facility to inform them that patient is on iOAT and, thus, will have a high opioid tolerance.[†]
- Protocol in place for community prescriber to communicate and make recommendations for management should a patient be subjected to a custodial environment while on iOAT.
- Protocol in place for MRP in correctional facility to contact the community prescriber.
- Protocol in place for the correctional health care team providing care to access date and size of last dose received by patient (for example, uploaded to provincial electronic health record or prescription monitoring program, where possible).
- Contact information for all iOAT programs, including ability to contact program outside of program hours.

3.6.iii Continuity of Care

Programs should ensure that, regardless of which decisions are made regarding transition from iOAT to oral OAT, individuals have continued access to the ancillary services offered as part of the iOAT program (for example, social workers, housing workers, psychosocial supports) to ensure that continuity is maintained and that patients continue to receive a high quality of care.

[†] Provincial electronic medical records or prescription monitoring programs are ideal, however, in jurisdictions lacking these systems, programs should provide patients with documents (for example, a wallet card) that can be given to corrections staff.

4.0: Evaluation

Emerging iOAT programs are encouraged to consider embedding evaluation into planning activities as early as possible. Evaluation of iOAT should be understood as a priority to inform ongoing planning, policy, and practice, with recognition of the potential strengths of collaboration to generate a national data set. Table 1, below, lists a variety of validated assessment tools that may be used for evaluating iOAT programs. A logic model may be useful when planning evaluation activities. Program planners are encouraged to contact CRISM leadership for additional guidance on program evaluation.

Table 1: Assessment Tools

Assessment Tool	Purpose	Administration Time
Maudsley Addiction Profile ⁸⁷	Treatment related outcomes	12 minutes
Addiction Severity Index ^{88,89}	Basic diagnostic information; assessment of change in client status and treatment outcome	30-45 minutes
Opiate Treatment Index ⁹⁰	Measures effectiveness of drug treatment	20-30 minutes
Treatment Perception Questionnaire ⁹¹	Treatment satisfaction	3 minutes
Client Satisfaction Questionnaire ⁹² paired with two open-ended questions: ⁹³ What did you like about the program? What could be improved?	Treatment satisfaction	3 to 8 minutes
EuroQoL (Eq-5D) ^{94,95}	Health-related quality of life	<10 minutes
Treatment Outcomes Profile ⁹⁶	A systematic method of measuring qualitative and quantitative progress to assess impact of treatment	<10 minutes
Symptom Checklist-90-Revised ⁹⁷	Self-assessment for a broad range of psychological problems	12 to 15 minutes
Brief Symptom Inventory ⁹⁸	Provides an overview of symptoms related to psychological problems and their intensity	8 to 10 minutes

5.0 Program Planning Timeline

The time it takes for each program to move through the entire planning and implementation process will vary considerably, depending upon local infrastructure, provincial or territorial regulations, funding, local context, and other factors. Thus, a universally applicable timeline is not possible to provide. However, based on other programs, a general range of 6–12 months should be considered a reasonable timeline for planning, implementing, and operationalizing a new iOAT program.

Each program will need to plan for and address the following: Funding approvals for the program; prescriber funding approval; prescriber hiring processes; site selection; community consultation and engagement; medication funding; staff hiring; staff orientation processes.

5.1 PROGRAM PLANNING TIMELINE

Although each program’s timeline and specific order may vary, the following steps must be completed:

1. Determine need for iOAT
2. Begin consultations
3. Determine model(s) of care to be offered
4. Begin negotiations with medication producer(s) and provincial funders
5. Procure space
6. Determine staffing model
7. Draft program rules
8. Draft pre-printed orders and/or protocols
9. Plan for program evaluation
10. Implement program
11. Assess program results

Program planners, administrators, and staff of existing iOAT programs have identified several lessons they have learned in the planning process, which may aid those undertaking the planning and implementation process. These lessons learned have been compiled and are available on the [CRISM website](#).

Appendices

APPENDIX 1: EVIDENCE SUPPORTING INJECTABLE OPIOID AGONIST TREATMENT FOR OPIOID USE DISORDER

Injectable Opioid Agonist Treatment in Other Jurisdictions

The United Kingdom has provided unsupervised prescription injectable diacetylmorphine for the treatment of OUD for over a century.^{21,32} Supervised prescription diacetylmorphine treatment has been available in Switzerland starting with a national clinical study in 1994²⁷ (followed by a large cohort study that ran from 1994 to 2000²⁸) and as a standard drug treatment since 1999.⁹⁷ In 2008, as part of a national referendum, 68% of Swiss voters supported the permanent institution of a legalized prescription diacetylmorphine program funded by national health insurance.⁹⁹ More recently, Germany, Denmark, and the Netherlands also adopted supervised prescription diacetylmorphine treatment for those with severe, treatment-refractory OUD.²¹ In these countries, diacetylmorphine is used for <1% to 12% of all patients engaged in treatment for OUD,^{21,63,64} and has been registered as a medicinal product by the National Medicine Evaluation Boards in the Netherlands¹⁰⁰ and Germany.¹⁰¹ The Comprehensive and Dedicated Injectable Opioid Agonist Treatment Program model has been widely applied in European jurisdictions,^m wherein patients receive comprehensive addictions care, with the aim of meeting as many of the patients' health and psychosocial needs as possible on-site. There are both stand-alone clinics and clinics co-located with (or very close to) other addictions and psychosocial services.²¹

Evidence Summary

Meta-analyses of clinical trials involving patients with long-term, treatment refractory heroin addiction have demonstrated the efficacy of diacetylmorphine in comparison to methadone in terms of reducing illicit heroin use, criminal activity, and involvement in sex work, as well as improving overall health and social functioning.^{11,12} These meta-analyses include a 2011 Cochrane Review which examined eight randomized controlled trials and found that supervised injection of diacetylmorphine, paired with flexible doses of methadone, was superior to oral methadone alone in retaining treatment refractory patients in treatment while helping reduce the use of illicit drugs.¹¹ The authors of

^m Switzerland, Germany, Denmark, and the Netherlands use this model. The UK's unsupervised take-home model and Spain's limited weekday clinics are exceptions.

the Cochrane review concluded that there is value in co-prescribing diacetylmorphine with flexible doses of methadone and that, due to the higher risk of adverse events, treatment with diacetylmorphine in clinical settings which ensure appropriate follow-up should be considered for those who have not benefited from oral agonist treatment.¹¹ In 2015, the lead investigators of iOAT treatment trials conducted a systematic review and meta-analysis on the efficacy of injectable diacetylmorphine, to complement the Cochrane Review.¹² Six randomized controlled trialsⁿ (in Switzerland, the Netherlands, Spain, Germany, Canada, and England) were identified and included in the analysis, which found greater reductions in illicit heroin use among individuals who received supervised injectable diacetylmorphine compared to those who received oral methadone treatment alone.¹² Further supporting the use of iOAT for those who have not benefitted from oral OAT, a 2017 evidence review undertaken and released by Public Health Ontario concluded that the available literature on iOAT demonstrates efficacy for iOAT over methadone in terms of treatment retention, reduction in illicit drug use, and reduction in criminal activities.¹⁰³

Although treatment with diacetylmorphine is a standard of care in a number of countries,²¹ it is considered an emerging treatment in Canada and, currently, can only be accessed through Health Canada's [Special Access Programme](#) or inclusion in Health Canada's [List of Drugs for an Urgent Public Health Need](#) in provinces that apply for it. Due to the restrictions on accessing diacetylmorphine, the Study to Assess Longer-term Opioid Medication Effectiveness (SALOME), a phase 3, double-blind randomized controlled trial conducted in Vancouver, BC, compared diacetylmorphine with injectable hydromorphone in a population of individuals with long-term, treatment-refractory OUD.¹⁹ After six months of treatment, researchers found that injectable hydromorphone was not inferior to injectable diacetylmorphine for long-term injection street opioid users not currently benefitting from available treatments.^o Both medications, delivered in identical conditions, have been shown to have positive outcomes such as high retention rates (over 77% intention to treat [ITT]; over 92% per protocol [PP] analysis), reduction of street opioid use (from daily to a few days per month), and reduction in illegal activities.¹⁹ Thus, in jurisdictions where diacetylmorphine is currently not available, or in patients where it is contraindicated or unsuccessful, hydromorphone provides an effective, licensed alternative.¹⁹

Treatment Duration

A loss of treatment benefit when prescription diacetylmorphine treatment was discontinued at a predetermined end date has been found in two post-randomized controlled trial observational cohorts.^{23,104} Both of these studies found an increase in street heroin use post-treatment end to levels

ⁿ These six studies were also included in the 2011 systematic review. The 2015 systematic review was restricted to injectable diacetylmorphine, which excluded one study on inhalable diacetylmorphine.²³ It also excluded a study which compared unsupervised diacetylmorphine treatment (treatment as usual) with oral methadone (experimental condition).¹⁰⁰

^o This study was a non-inferiority trial, which is a study design based on the assumption that a finding of non-inferiority indicates that the trial medication would prove superior to placebo in a placebo-controlled trial. Given that the results of the trial showed non-inferiority to diacetylmorphine, the assumption is made that hydromorphone would show the same (that is, non-inferior) effectiveness as diacetylmorphine when compared to methadone.¹⁹

comparable to that of the control group. One study found that 82% of those who completed the injectable arm and showed treatment response at 12 months deteriorated significantly by 14 months.²³ The other study, which followed up at 15 months, 3 months post-treatment termination, found that street heroin use had increased significantly in the experimental (methadone plus diacetylmorphine) group and that the difference between groups was no longer significant.¹⁰⁴ Another study compared individuals who voluntarily transitioned from injectable diacetylmorphine to oral methadone prior to the completion of a randomized controlled trial to those who were involuntarily transitioned at the end of the 12-month trial.¹⁰⁵ While both groups had reduced their heroin use compared to baseline at 24 months, the mean prior 30 days of illicit heroin use was higher in the involuntary group than the voluntary group, and the retention in treatment rate was significantly lower. Thus, the [iOAT Clinical Guideline](#) recommends that iOAT be provided as an open-ended treatment, in line with a recommendation from the World Health Organization that opioid agonist treatment be provided as an open-ended treatment.¹⁰⁶

Expanded Eligibility

The majority of clinical trials evaluating iOAT have restricted participation to individuals who have previously undergone oral OAT treatment; thus, the evidence base can be understood as supportive of iOAT for the treatment of patients who have not benefited from oral OAT. However, one large randomized trial comparing injectable diacetylmorphine with oral methadone included a subset of participants (n=107 of 1,015 total) with severe OUD but no previous experience with oral OAT.^{22,107} Study authors found that outcomes of diacetylmorphine treatment were similar whether individuals had prior oral OAT experience or not, and within the subset of participants with no prior OAT experience, diacetylmorphine was superior to methadone in reducing nonmedical heroin use and criminal involvement, and as effective as methadone in improving overall health and retaining individuals in treatment.¹⁰⁷ Clinical practice in British Columbia has also shifted to broader eligibility considerations, which includes past experience with appropriately dosed oral OAT while continuing to experience significant health and social consequences related to their OUD; multiple attempts at oral OAT without being able to achieve a therapeutic dose; or other circumstances and risks that indicate the individual may benefit from iOAT. In addition, some European jurisdictions have expanded their eligibility criteria beyond those who have tried and not benefitted sufficiently from oral OAT.

Safety

Optimizing patient safety has been an important factor in the designation of iOAT as an alternative intervention when oral OAT has not been successful (in jurisdictions where iOAT is available), and in requiring doses to be administered in structured, supervised clinical settings. Any frequently administered injectable treatment is associated with higher risks of cutaneous and infectious complications compared to its equivalent oral formulation. In the context of iOAT, the more rapid onset of action and shorter duration to reach peak effects (including respiratory depression) achieved with injection rather than oral ingestion of high-dose, full agonist opioid medications must also be considered.

For this reason, and as emphasized throughout this document, iOAT should only be administered in designated clinical settings, with sterile supplies and in clean and safe conditions, and under supervision of qualified staff trained to intervene in the event of an adverse event or emergency. Further, while injectable treatment may confer higher risks of adverse effects than oral treatment, it is important to note that risks of injecting street drugs are considered to be significantly higher than injecting prescribed iOAT.

Studies in Europe and Canada have reported instances of significant respiratory depression events in people receiving injectable opioids, at an overall rate of about 1 in every 6000 injections, which is significantly lower than the risk present when injecting street heroin.¹² Each of these incidents was safely managed with appropriate resuscitation measures, which speaks to the necessity of injection being supervised by trained staff.¹² It should be noted that hydromorphone had significantly fewer adverse events and serious adverse events (SAEs) in the SALOME trial,¹⁹ thus diacetylmorphine may pose an increased risk of other adverse events (e.g., histamine reactions, seizures, and dose intolerances) compared to injectable hydromorphone¹⁹ and oral methadone.^{11,12} It is important to note that the majority of serious adverse events (SAEs) occur within a few minutes of receiving an injection;²² therefore, the recommended post-injection supervision period of 15 minutes, which would be required regardless of program type or treatment setting, would be sufficient to recognize and resolve the majority of SAEs. Additionally, the combination of prescription diacetylmorphine and flexible doses of oral methadone may have a protective effect against fatal overdose, as demonstrated by a non-statistically significant reduced mortality risk compared to oral methadone alone.^{11,12}

An additional concern with ongoing injection-based opioid agonist treatment is a heightened risk of infectious complications such as sepsis, osteomyelitis, cellulitis, and abscesses. When the skin is punctured (even with a sterile needle in a clinical setting), it provides a potential port of entry for bacteria or other microorganisms, particularly when the injections are being given multiple times per day (as is the case with diacetylmorphine and hydromorphone). With that said, the risk of infection and infectious sequelae in a sterile and supervised setting is only a fraction of the risk for those injecting street heroin. For example, in the 12-month NAOMI trial, two SAEs involving sepsis or other infections were reported, while three SAEs involving abscesses or cellulitis were reported, across a total of 89,924 injections.²⁰ In the SALOME trial, over the 180-day treatment period, 18 adverse events involving infectious complications were reported (14 cellulitis, 4 subcutaneous abscesses) over a total of 85,451 injections, which translates to 3.4% and 4.8% of all adverse events deemed related to injectable hydromorphone and diacetylmorphine treatment, respectively.¹⁰⁸ Although difficult to compare and more data is needed, this is compared to 6-12 month prevalence rates of skin and soft tissue infections in people who inject illicit drugs, which range from 6.9% to 37.3%.¹⁰⁹ Additionally, the risk of contracting a blood-borne illness (e.g., HIV or hepatitis C) is eliminated with the use of sterile equipment in a supervised setting.

In the majority of the studies on prescribed diacetylmorphine, nurses supervised patients' self-administration of medication and closely monitored patients to ensure their safety both before (e.g., no signs of intoxication) and after (e.g., no signs of over-sedation or respiratory depression) treatment

was administered. If a dose intolerance occurred after injection of the medication, supervision allowed for immediate onsite treatment, ensuring the safety of the patient; it is for this reason that supervised administration of iOAT is recommended rather than take-home dosing.^{11,12,108} Provision of injectable opioids under supervision also ensures the safety of the community by, for example, preventing diversion of a prescribed injectable opioid into the street for illicit use. While concern has been expressed over security, public safety, and potential for diversion from sites offering prescribed injectable opioids, findings after more than two decades suggest no negative effects for public safety.¹²

Cost Effectiveness

Studies in both Europe and Canada have found injectable diacetylmorphine treatment to be more cost-effective than oral methadone treatment, due to significant reductions in criminal activity and the costs associated.²⁹⁻³¹ Similarly, hydromorphone has been found to be more effective and less costly than oral methadone treatment, due to significant reductions in criminal activity and hospitalization and the associated costs.³² It should be noted that these cost savings rely on the effective negotiation of hydromorphone prices. In addition to cost effectiveness, data from British Columbia shows that individuals receiving injectable hydromorphone and diacetylmorphine gain more quality-adjusted life years (QALYs) than individuals receiving methadone (8.4 [95% CI=7.4–9.5] and 8.3 [95% CI=7.2–9.5] versus 7.4 [95% CI=6.5–8.3], respectively).³² This accords with data from Switzerland and the Netherlands showing cost effectiveness and increased QALYs per patient.^{21,31,1010}

APPENDIX 2: OPERATIONAL AND BUDGETARY CONSIDERATIONS

Each of the current models of care in operation have operational and budgetary requirements which include the physical space, storage and preparation, safety, compounding pharmacy, staffing, and security requirements. Many of these requirements are similar, while some vary with the specific infrastructure and setting of each. The requirements for each of the four models is laid out below.

Operational Requirements

Table 2: Operational Requirements

Requirements	All Models	Specific Models Only	Notes
Injection Area			
Private room with space for supervised injection		X	All models except hospital-based in which nurses administer the injectable medication
Table/bench space with surface that is fully cleanable (i.e., not wood)		X	
Seating that is easily moved and cleaned		X	
Model 1—Round table		X	
Model 2—Injection booths (If more than one injection booth, adequate lateral space between each patient)		X	
Mirrored tile or mirror in front of each injection space to enable supervision		X	
Space for monitoring post-injection		X	
Space for treatment if required in event of overdose		X	
Private space for conversation with social worker and others		X	Recommended, where possible
Storage area for patient’s belongings to prevent diversion		X	

Storage and Preparation	All Models	Specific Models Only	Notes
Storage area for tourniquets, Steri-Wipes, and needles of various gauges	X		
Secure area for storage and preparation of the medication that is not accessible to patients or outsiders	X		
Drug log tracking vials in and out, batch numbers, dose used, and disposal of any unused medication.	X		
Safety	All Models	Specific Models Only	Notes
Syringe disposal that enables syringes to be examined and counted prior to being placed in a destruction container	X		
Access to electronic recordkeeping method to record each prescription, dose, time, and variances such as pre-waste	X		
Monitoring system to ensure minimum of 3 hours between doses	X		
A system that enables 2 staff members to check inventory and witness any destruction of doses, as a safeguard against diversion	X		
Resuscitation equipment	X		
Compounding Pharmacy Requirements	All Models	Specific Models Only	Notes
Pharmacies wishing to compound injectable medications must comply with the National Association of Pharmacy Regulatory Authorities' (NAPRA) <i>Model Standards for Pharmacy Compounding of Non-Hazardous Sterile Preparations</i> ⁴⁸	X		
Staffing	All Models	Specific Models Only	Notes
Qualified health professionals or supervised trained staff for pre- and post-assessment, administration of correct dose, supervision of self-administered injections, and response to adverse events	X		
All pharmacy staff must be trained to follow the policies and procedures put in place, including clinical procedures if pharmacy is acting as a clinic		X	Pharmacy model only

A minimum of two pharmacy staff must be available at all times, to ensure an adequate response in the event of a dose intolerance		X	Pharmacy model only
Access to qualified health professionals and trained staff 7 days per week, 365 days per year	X		
Hours of operation must allow a minimum of 3 hours between dosing	X		
Peer workers and/or allied health worker for support and connection to community agencies and services	X		
Prescriber for regular assessments, dose adjustments, and transition to other medications	X		
Security Considerations	All Models	Specific Models Only	Notes
Supervision of self-administered injections to observe for diversion		X	All models except hospital-based in which nurses administer the injectable medication
Narcotic security tailored to setting and capacity (e.g., safe for storage in community, locked narcotic cupboard or closed loop medication system in hospital setting)	X		
Bolted down time-lock safes		X	Pharmacy model only
Maintenance of Daily Perpetual Inventory accounting for every milligram produced, wasted, lost in production, dispensed, pre-wasted, unused, waiting for destruction, and destroyed		X	Pharmacy model only
Monthly reports accounting for daily count of above to ensure proper reconciliation		X	Pharmacy model only
Controlled entry to the injection room (can be simple accompaniment from staff member)		X	All models except hospital-based in which nurses administer the injectable medication
Syringes must be accounted for post-injection and prior to client leaving facility	X		
Syringe labelling requirements of relevant regulatory bodies should be followed	X		
Optional: Syringes may be marked (for example, with a coloured sticker) to prevent program syringes being switched with externally sourced syringes for the purpose of diversion	X		

Budgetary Considerations

The delivery of iOAT requires a prescriber, medication, pharmacy support, a room where patients can self-administer the medication, and a qualified health professional or trained staff member supervised by a qualified health professional to supervise self-administration, additional psychosocial services or referral to such, and necessary supplies. Budgetary considerations will depend on the model of care, the number of patients served per day, and labour costs for any ancillary services delivered on-site. Because of the possible variation in costs due to number of patients, labour costs, and community contexts, the following provides budgetary considerations rather than projected costs.

The medication costs vary per dose. Coverage of hydromorphone and diacetylmorphine will have to be determined at the jurisdictional level. See [Cost and Coverage](#) for more information.

Operational considerations for each of the three models of care are outlined below.

1. A Comprehensive and Dedicated Injectable Opioid Agonist Treatment Program

Based on the operations of Crosstown Clinic in Vancouver, BC, it is estimated that the comprehensive and dedicated iOAT model of care would require 4.5 nurses for the clinic to operate for 12 hours a day, serving up to approximately 150 patients per day who attend at different, scheduled times. Those clinics licensed to provide diacetylmorphine in addition to hydromorphone will require certain logistical and security features that would need to be built into the overall budget (see [Obtaining and Storing Injectable Medications](#)).

Additional costs would include wages for clinic coordinator, physicians and/or nurse practitioners, social workers, counsellors, peer-workers, and other required staff, as well as non-labour costs. Non-labour costs include clinic security, equipment repair and maintenance, and medical and office supplies.

For those comprehensive and dedicated iOAT programs located in hospitals or other acute settings, labour costs can be significantly reduced through referral to ancillary services located in the hospital or other acute setting.

2. Integrated or Embedded Injectable Opioid Agonist Treatment Program

In the integrated or embedded setting, costs include dedicated injecting space, qualified health professionals or trained staff supervised by qualified health professionals for supervising self-administration, and physician and nursing care in a primary care setting until the patient has been stabilized. Some of the costs associated with the comprehensive and dedicated model of care can be offset through the co-location of this service with existing services, for example, clinic coordinator, non-labour costs, and any other service providers already located at that site.

3. Pharmacy-Based Injectable Opioid Agonist Treatment Program

In the pharmacy-based iOAT model, costs include dedicated injecting space, qualified health professionals or trained staff supervised by qualified health professionals for supervising self-administration, physician and nursing care in a primary care setting until the patient has been stabilized, medication costs, and pharmacy related costs.

4. Hospital-Based Injectable Opioid Agonist Treatment Program

In the hospital-based iOAT model, costs include dedicated injecting space, qualified health professionals or trained staff supervised by qualified health professionals for supervising self-administration, medication costs, and pharmacy related costs.

APPENDIX 3: SAMPLE TREATMENT AGREEMENT AND CONSENT

Injectable Opioid Agonist Treatment Agreement and Consent

Patient Information

Surname: _____ Given name(s): _____

Date of birth: _____ PHN: _____

Patient Agreement

I understand and agree that:

- I am being started on:
 - Hydromorphone for the treatment of opioid use disorder.
 - Diacetylmorphine for the treatment of opioid use disorder.
- While I am receiving hydromorphone/diacetylmorphine treatment, I will not obtain opioid prescriptions or other psychoactive medications (e.g., sleeping pills or pain medication) from other doctors, nurse practitioners, clinics, or elsewhere. If I need opioids for the treatment of acute pain, I will inform the prescriber that I am on iOAT and will agree to communication between this prescriber and my iOAT prescriber to help coordinate safety.
- For my safety, I give consent to my hydromorphone/diacetylmorphine prescriber to communicate with my pharmacist and any other physicians or nurse practitioners currently or previously involved in my care, and to check my province's prescription monitoring program.
- I will work with my treatment team to develop a treatment plan and set goals. We will review them regularly and change as needed.
- In addition to hydromorphone/diacetylmorphine, I can participate in counseling or peer-support groups and other programs as part of my treatment plan. My treatment team will give me information about the options and programs available in my community.
- My treating team may include some or all of the following: prescriber, nurses, social worker, pharmacist, and others. My treating team will work collaboratively and respectfully with me in planning treatment and providing care.
- I can expect confidentiality about my treatment from my treatment team and other health care providers. My personal information will not be shared except with other health care providers as I agreed to above. I understand that confidentiality will need to be breached if I am a danger to myself or others or if a child is at risk.
- I can decide if I want to continue, stop, or change my treatment plan at any time. I agree to make this decision with my prescriber.
- Hydromorphone/diacetylmorphine treatment will require multiple daily trips to the facility where I receive my medication, which may impact my work, school, or other responsibilities.
- If I do not attend the facility where I receive my medication for 3 consecutive doses or 1 day (number of missed doses may change once I am clinically stable), my prescriber and I will discuss the reasons for missed doses.
- I understand that missing more than 6 to 9 doses (3 days) may cause a loss of tolerance and may require that, for my safety, I take a lower dose until I stabilize.
- If I am assessed to be intoxicated during the pre-injection assessment, my dose will be postponed or withheld for my safety.
- I have discussed potential side effects and adverse events (seizure, overdose, constipation, pruritus [severe skin itching], hypogonadism [hormonal abnormalities that can lead to low testosterone levels, erectile dysfunction, and menstrual disturbances], and sleep apnea) associated with iOAT with my health care provider and we have agreed on plans to mitigate risk.
- I will not be cut off from treatment. If hydromorphone/diacetylmorphine is not providing the results expected, my prescriber will work with me to adjust my dosage, increase psychosocial supports, and/or explore other treatment options. If my prescriber can no longer provide care for me, they will refer me to another prescriber who can.

I understand that I am expected to:

- Provide urine for drug testing when asked.
- Provide urine samples at the clinic and that these samples are not to be altered. Urine samples that are cold or appear to have been altered will be treated as a serious issue and may affect my treatment plan.
- Avoid using alcohol or other drugs, such as prescription or over-the-counter opioid medications, sleeping pills, or tranquilizers. I understand that combining these medications with hydromorphone/diacetylmorphine can lead to overdose and other serious harms and may affect my treatment plan.
- Notify any health care provider that I receive care from that I am taking hydromorphone/diacetylmorphine for treatment of opioid use disorder.
- Notify my primary care provider if I become pregnant (if applicable).
I understand that I must inform my prescriber if I am pregnant, suspect I may be pregnant, or if I am planning a pregnancy.
- Treat staff and other patients with respect.

Patient-Identified Goals

- _____
- _____
- _____
- _____

Treating Team Agreement

I confirm that:

- This form has been reviewed in detail with the patient and they understand its content fully. This should be reviewed again when the patient is not in withdrawal.
- The patient was given time to ask questions and seek clarification before signing this document.
- The evidence for other treatment options was reviewed, and the patient agrees to hydromorphone/diacetylmorphine.
- Information and resources to support psychosocial treatment interventions and supports will be provided to the patient.
- The provincial prescription drug monitoring program was reviewed (where applicable) to identify other prescribed medications, and will be checked at each subsequent appointment.
- A treatment plan with clear goals was developed with the patient, and will be reviewed and documented regularly during treatment.

Consent

Patient’s signature: _____ Date: _____

Staff member’s signature: _____ Date: _____

APPENDIX 4: RESOURCES FOR REFERRAL

1. Resources for Care Teams

A variety of supplementary resources are available on the [CRISM website](#). These include:

- Example pre-printed orders
- Frequently asked questions for patients and their families
- Case studies
- An example treatment plan

2. Resources for Patients and People Who Use Drugs

[Opioids: A Survivor's Guide](#) is written by and for individuals on OAT in British Columbia.

If they are not already connected, some iOAT clients may benefit from connecting with peer and advocacy groups for people who use drugs.

British Columbia and Yukon

[Vancouver Area Network of Drug Users \(VANDU\)](#)

[SOLID \(Victoria\)](#)

[BC Association of People on Methadone \(BCAPOM\)](#)

[SALOME and NAOMI Association of Patients \(SNAP\)](#)

[Western Aboriginal Harm Reduction Society \(WAHRS\)](#)

[i2i Peer Support \(Sunshine Coast\)](#)

The Diverse Organization Providing Education and Regional Services (DOPERS; Langley and Surrey)

[BC/Yukon Drug War Survivors](#)

[The Coalition of Substance Users in the North \(CSUN\)](#)

[AIDS Network Kootenay Outreach and Support Society \(ANKORS\)](#)

[Substance Users Society Teaching Advocacy Instead of Neglect \(SUSTAIN; Powell River\)](#)

Alberta

[Alberta Addicts Who Educate and Advocate Responsibly](#)

[Alberta Community Council on HIV](#)

Ontario

[Toronto Drug Users Union](#)

[Drug Users Advocacy League Ottawa \(DUAL\)](#)

[The Community Addictions Peer Support Association \(CAPSA\)](#)

Quebec

[L'Association Québécoise pour la promotion de la santé des personnes utilisatrices de drogues \(AQPSUD\)](#)

[Méta d'Âme](#)

Nova Scotia

[Halifax Area Network of Drug Using People \(HANDUP\)](#)

National

[The Canadian Association of People Who Use Drugs \(CAPUD\)](#)

3. Resources for Family Members

[Family and Caregiver Resources](#) is a resource hub hosted by the BCCSU for family members and care-givers whose loved ones are living with an addiction or who have lost someone to addiction.

[Moms Stop the Harm](#) is a network of Canadian families whose loved ones have died due to substance use or who hope for recovery.

[From Grief to Action](#) is a BC-based advocacy and support group for families and friends impacted by drug use.

[Niagara Area Moms Ending Stigma \(NAMES\)](#) is an advocacy and support group of parents and family members in the Niagara Region in Ontario who have lost loved ones to substance-related harms or are still dealing with addiction.

[Families for Addiction Recovery \(FARCanada\)](#) provides education and phone support across Canada for parents whose children (of all ages) are dealing with addiction.

[mums united and mandated to saving the lives of Drug Users \(mumsDU\)](#) is a coalition of Canadian mothers and fathers who have lost sons and daughters to a drug overdose and other drug related harms.

[Grief Recovery After a Substance Passing \(GRASP\)](#) is a grief and support group for individuals who have lost a loved one to substance-related harms, with chapters in [Alberta](#), [British Columbia](#), and [Ontario](#).

[Broken No More](#) provides online support groups for those who have lost loved ones to substance-related harms.

APPENDIX 5: FREQUENTLY ASKED QUESTIONS

Please note, these frequently asked questions (FAQ) are tailored to the target audience of this document (policy makers, clinical and operational leads in health authorities, team leaders, funders, and organizations that provide substance use disorder and addictions treatment and care). Additional FAQs tailored to patients and members of the public are available on the [CRISM website](#).

Do patients require continually escalating doses of iOAT?

In each of the randomized controlled trials, the recorded average dose was approximately half of the maximum daily dose. In addition, clinical experience at multiple iOAT programs in Vancouver, BC, and several European countries, indicates that, once patients reach an adequate dose to treat withdrawal and cravings, they tend to remain stable at that dose over time or gradually start to reduce their dose.

Should the public be concerned about iOAT programs causing security and public safety issues?

The findings of three randomized controlled trials investigating the impact of newly established iOAT clinics on crime in their communities in the Netherlands, UK, and Canada have indicated no negative effects on public safety and have observed growing local public support.

Why should my tax dollars go towards providing free iOAT?

Injectable opioid agonist treatment has been found effective for individuals who have not benefited from other treatment options for opioid use disorder. Economic evaluations have consistently found that the effective treatment of opioid use disorder reduces costs to society due to criminal involvement and a range of health care costs.

Is this just giving people free drugs?

Injectable opioid agonist treatment should be understood as one part of a continuum of care for individuals with an opioid use disorder. Depending on each patient's specific needs, this full complement of services, provided either on-site or through referral, may include supportive recovery housing, psychosocial treatment interventions and supports, primary care services, trauma therapy, and specialized services for women, youth, and Indigenous peoples. By stabilizing patients and providing a point of regular contact with health care services, iOAT clinics facilitate the establishment of necessary therapeutic relationships and routines, which support improvements in patients' health, social functioning, and quality of life.

Why do we need this? Can't people just take methadone or buprenorphine/naloxone?

While oral opioid agonist treatments (i.e., methadone, buprenorphine/naloxone [or Suboxone], and slow-release oral morphine) work well for some individuals with opioid use disorder, others are unable to stop or reduce use of illicit opioids and continue to experience significant harms related to illicit opioid use, including risk of fatal and non-fatal overdose.

Is the goal to transition people off of iOAT as quickly as possible?

This document recommends that treatment approaches be continually matched with individual patient needs and circumstances. Past research has shown that providing treatment with a pre-determined end date and/or making patients transition off of iOAT before they are ready has significant negative health consequences. When deemed appropriate by patient and care team, patients will be transitioned to other treatment approaches.

Aren't you just substituting one drug for another?

Individuals with opioid use disorder are physically dependent on opioids and will experience painful withdrawal symptoms (e.g., fevers and chills, diarrhea, and other flu-like symptoms) without some form of opioid. Opioid agonist treatment, whether oral or injectable, is designed to prevent withdrawal symptoms and manage cravings in addition to replacing ongoing potentially contaminated illicit opioids with safe, pharmaceutical-grade opioid agonists in safe and hygienic environments, thereby reducing the potential harms of IV drug use. This allows people to re-engage with the health care system and society rather than resort to drug-seeking and criminal behaviour to avoid withdrawal symptoms.

If someone has experienced multiple overdoses, are they a candidate for iOAT?

The considerations for eligibility in this guidance document were developed with flexibility to ensure that individual circumstances and clinical judgment inform the decision to prescribe iOAT to individuals with opioid use disorder when deemed appropriate by the care team. History of non-fatal overdose may be helpful for informing prescriber discretion, but should not be understood as an eligibility requirement, as such a requirement could unintentionally promote high-risk behaviour.

Is iOAT only for people who have tried oral OAT and not benefited?

Injectable opioid agonist treatment is generally considered for individuals with severe opioid use disorder who inject opioids and have continued to experience significant health and/or social consequences related to their opioid use disorder despite past experience or attempts with appropriately dosed oral OAT, multiple attempts at oral OAT without being able to achieve a therapeutic dose, or other circumstances and risks that indicate the patient may benefit from iOAT. Often, individuals receiving iOAT will also be prescribed supplementary oral OAT to bridge between doses.

Is injectable, long-acting naltrexone an option for severe opioid use disorder? Should it be tried before hydromorphone or diacetylmorphine?

Naltrexone is a different type of medication used for the treatment of opioid use disorder. Unlike opioid agonist treatments (e.g., hydromorphone, methadone), naltrexone is an opioid antagonist, meaning that it fully blocks the effect of opioids, but may not reduce cravings. Currently, oral naltrexone is available in Canada and may be used to prevent relapse to opioid use, although studies show poor

adherence to this medication. Injectable, long-acting naltrexone is only available in Canada through the Special Access Programme or inclusion on the [List of Drugs for an Urgent Public Health Need](#). The efficacy of injectable naltrexone in those with severe opioid use disorder, including those who have not benefitted sufficiently from oral OAT, is unknown. If a patient requests injectable naltrexone, the physician or nurse practitioner should assess the suitability of this treatment on a patient-by-patient basis. This treatment should not be required before iOAT is considered.

Is injection depot buprenorphine an option for severe opioid use disorder? Should it be tried before hydromorphone or diacetylmorphine?

Injection depot buprenorphine is currently only available in Canada through the Special Access Programme. The efficacy of injection depot buprenorphine for those with severe opioid use disorder, including those who have not benefitted sufficiently from oral OAT, is unknown. If a patient requests injectable depot buprenorphine, the physician or nurse practitioner should assess the suitability of this treatment on a patient-by-patient basis. This treatment should not be required before iOAT is considered.

What happens to patients on the program who continue to use fentanyl and other opioids on a regular basis?

Continued use of illicit opioids while on iOAT should be considered an indication to assess the patient and consider intensifying treatment. Intensification of treatment may include adding an evening dose of slow-release oral morphine or methadone, increasing an existing evening dose of slow-release oral morphine or methadone, increasing the dose of injectable medication, transferring to a more intensive model of care (for example, moving from a community health clinic to a comprehensive and dedicated iOAT model), or increasing psychosocial treatment interventions and/or supports.

If a patient is found to be intoxicated during the pre-assessment, their dose should be postponed or withheld. Repeated findings of intoxication in the pre-assessment should be treated as an indication to assess the patient and consider intensification of treatment, as outlined above.

What if patients want to attend for iOAT more often than three times per day?

Clinical experience has shown that, generally, patients do not want to attend more than three times per day. Attending multiple times per day is a substantial time commitment that can be disruptive to other life activities. Additionally, once patients are stabilized, they tend to attend less frequently, working with their prescriber to decrease the number of injections per day. In some jurisdictions, where high potency hydromorphone is not covered, additional injections may be needed to ensure that patients can receive their needed doses. In addition, certain models of care (for example, residential programs that also offer iOAT) may provide access to more doses per day, when clinically appropriate (for example, in jurisdictions where high potency hydromorphone is not covered).

If hydromorphone and prescription heroin are provided by the government, does that mean all drugs will be made available by the government?

Hydromorphone and diacetylmorphine are evidence-based treatments generally considered for patients with severe opioid use disorder who have not benefited from oral opioid agonist treatments or who have other circumstances and risks that indicate they would benefit. Other injectable opioids have not been empirically studied in this context and are not recommended for treatment of opioid use disorder at this time. Legalization or provision in any context other than the provision of hydromorphone and diacetylmorphine for the specific purpose of treating opioid use disorder is beyond the scope of this document.

Should iOAT prescribers have experience and the ability to prescribe methadone (in jurisdictions where not all prescribers can automatically prescribe methadone)?

This document recommends that all iOAT prescribers should have experience prescribing oral OAT. This ensures both significant experience in providing evidence-based treatments for opioid use disorder and the ability to prescribe supplementary oral OAT for individuals on iOAT. This reduces barriers to care and potential disruptions, which could occur if an individual has to see multiple prescribers to receive their medications.

Will patients who overdose on fentanyl-laced cocaine be offered iOAT?

Injectable opioid agonist treatment is indicated for patients with opioid use disorder who have not benefited from oral OAT. Stimulant users who do not have concurrent opioid use disorder would not be considered for iOAT. Due to the increasingly contaminated drug supply, there may be individuals who have experienced an opioid overdose who do not have opioid use disorder and the other indications for iOAT.

Glossary

Addiction treatment: In this document, addiction treatment refers to ongoing or continued care for substance use disorder(s) delivered by a trained care provider. For opioid use disorder, this could include evidence-based pharmacological treatment (opioid agonist or antagonist treatment), evidence-based psychosocial treatments, residential treatment, or combinations of these treatment options. Addiction treatment may be provided in outpatient or inpatient settings. In isolation, withdrawal management, harm-reduction services, low-barrier housing, and unstructured peer-based support would not be considered “addiction treatment.”

Cultural safety and humility: Cultural safety can be understood as an outcome in which people feel safe when receiving care in an environment free from racism and discrimination. It results from respectful engagement that seeks to address power imbalances that are inherent in the healthcare system. Cultural humility is a process undertaken to understand, through self-reflection, personal and systemic biases and to develop and maintain respectful processes and relationships based on mutual trust; it requires humbly acknowledging oneself as a learner when attempting to understand another person’s experience.^p

Diversion: Any non-intended or non-medical use of a prescribed opioid (including prescribed opioid agonist medication), or use by any individual other than the individual for whom it was prescribed.

Harm reduction: Policies and programs that aim to minimize immediate health, social, and economic harms (e.g., transmission of infectious disease, overdose mortality, criminal activity) associated with the use of psychoactive substances, without necessarily requiring a decrease in substance use or a goal of abstinence. Examples include needle and syringe exchange programs, take-home naloxone programs, supervised injection or consumption services, and outreach and education programs for high-risk populations.

Health care provider: A trained and qualified health care provider empowered to provide care related to iOAT, including supervision of medication administration and, in some jurisdictions and models of care, health care provider administered intramuscular or subcutaneous injection. May refer to doctors, nurse practitioners, Registered Nurses, Registered Psychiatric Nurses, Licensed Practical Nurses, and pharmacists.

2SLGBTQ+: Two-Spirit, lesbian, gay, bisexual, trans, queer, and other gender and sexually diverse individuals.

^p Definitions borrowed and lightly adapted from the [First Nation’s Health Authority](#).

Two-Spirit: A term used by some North American Indigenous societies to describe people with diverse gender identities, gender expressions, gender roles, and sexual orientations. Dual-gendered, or ‘two-spirited’ people have been and are viewed differently in different Indigenous communities.^q

Lesbian: A woman whose enduring physical, romantic, and/or emotional attraction is to other women. Some lesbians may prefer to identify as gay (adj.) or as gay women.^r

Gay: The adjective used to describe people whose enduring physical, romantic, and/or emotional attractions are to people of the same gender.^q

Bisexual: A person who has the capacity to form enduring physical, romantic, and/or emotional attractions to those of the same gender and those of another gender. People may experience this attraction in differing ways and degrees over their lifetime.^q

Trans: Trans is an umbrella term that describes a wide range of people whose gender and/or gender expression differ from their assigned sex and/or the societal and cultural expectations of their assigned sex.^q

Queer: An adjective used by some people, particularly younger people, whose sexuality is not heterosexual. Once considered a pejorative term, queer has been reclaimed by some 2SLGBTQ+ people to describe themselves; however, it is not a universally accepted term even within the 2SLGBTQ+ community.^q

Medical management: Medical management for opioid use disorder is medically focused, unstructured, informal counselling provided by the treating clinician in conjunction with pharmacological treatment. Medical management includes but is not limited to: performing health and wellness checks, providing support and advice, assessing motivation and identifying barriers to change, creating a treatment plan, fostering medication adherence, optimizing dosing, supporting treatment adherence and relapse prevention, and providing referrals to appropriate health and social services.

Mutual-support/peer-support programs: Support that is provided through a network of peers through meetings, open discussions of personal experiences and barriers to asking for help, sponsorship, 12-step programs, and other tools of recovery. Examples include Alcoholics Anonymous, Narcotics Anonymous, SMART Recovery, and LifeRing Secular Recovery.

Opioid agonist: Any substance that binds to and activates mu (μ) opioid receptors, providing relief from withdrawal symptoms and cravings in people with opioid use disorder, and pain relief if used for chronic pain management. Oral opioid agonists used for treating opioid use disorder include methadone, buprenorphine, and slow-release oral morphine. Injectable opioid agonists used for treating opioid use disorder include diacetylmorphine and hydromorphone.

q Definition borrowed and lightly adapted from Qmunity’s [“Queer Terminology from A to Q”](#)

r Definitions borrowed and lightly adapted from [GLAAD Media Reference Guide](#)

Opioid agonist treatment (OAT): Opioid agonist medications prescribed for the treatment of opioid use disorder. Opioid agonist treatment is typically provided in conjunction with provider-led counseling; long-term substance-use monitoring (e.g., regular assessment, follow-up, and urine drug tests); comprehensive preventive and primary care; and referrals to psychosocial treatment interventions, psychosocial supports, and specialist care, as required. In this document, OAT refers to long-term (>6 months) treatment with an opioid agonist medication that has an evidence base for use in the treatment of opioid use disorder. "Opioid agonist treatment (OAT)" is the preferred terminology, representing an intentional shift from the use of "opioid substitution treatment (OST)", "opioid maintenance treatment (OMT)", and "opioid replacement therapy (ORT)".

Buprenorphine: A long-acting synthetic opioid that acts as a partial mu (μ) opioid receptor agonist with a half-life of approximately 24 to 42 hours. Buprenorphine has a high affinity for the opioid receptor, but as a partial agonist has a lower intrinsic activity or effect at the opioid receptor compared to full agonist opioids. These pharmacological properties create a "ceiling" on opioidergic effects—including respiratory depression—at higher doses. Buprenorphine's high affinity for the opioid receptor also confers an antagonistic effect on other opioids; it preferentially binds to the receptor and displaces other opioids if they are present, which can cause precipitated withdrawal (see below). In Canada, buprenorphine is available in a combined formulation with naloxone (see below). Buprenorphine implant and depot injections were recently approved by Health Canada, but have not yet been added to provincial formularies.

Buprenorphine/naloxone: A 4:1 combined formulation of buprenorphine and naloxone, available as a sublingual tablet in Canada. Naloxone is an opioid antagonist with poor oral bioavailability when swallowed or administered sublingually, and is included to deter non-medical injection and insufflation. When buprenorphine/naloxone is taken as directed sublingually, the naloxone component has negligible effects and the therapeutic effect of buprenorphine predominates. However, if diverted for use via insufflation, subcutaneous, intramuscular, or intravenous routes, sufficient naloxone is absorbed to induce some withdrawal symptoms in physically dependent active opioid users. Buprenorphine/naloxone is generally taken once daily, but due to its favourable safety profile and pharmacological properties, it can also be prescribed at higher doses on alternate-day schedules.

Diacetylmorphine: A short-acting, semi-synthetic opioid, diacetylmorphine has a rapid onset of action and a short half-life. Injected diacetylmorphine avoids first-pass metabolism and crosses rapidly into the brain where it is deacetylated into an inactive 3-monoacetylmorphine and an active 6-monoacetylmorphine which is then deacetylated into morphine, which acts as a full mu (μ) opioid receptor agonist. Injectable diacetylmorphine is used as a treatment for severe opioid use disorder in Canada and several European jurisdictions.

Hydromorphone: A short-acting, semi-synthetic mu (μ) opioid receptor agonist. Due to regulatory barriers limiting access to diacetylmorphine, hydromorphone was studied as an alternative to diacetylmorphine for the treatment of severe opioid use disorder and found to be non-inferior.

Methadone: A long-acting synthetic opioid that acts as a full mu (μ) opioid receptor agonist. It has a half-life of approximately 24 to 36 hours and is well absorbed. In Canada, it is most frequently administered as an oral solution, generally given as a single daily dose. Methadone tablets are also available in a limited context (e.g., for travel) in some jurisdictions.

Slow-release oral morphine: A 24-hour slow-release formulation of morphine, a full agonist at the mu (μ) opioid receptor, that is taken orally once per day. In Canada, slow-release oral morphine is available as a capsule containing polymer-coated pellets (to slow absorption and release) of morphine sulfate. Its elimination half-life is approximately 11 to 13 hours. It is currently approved for pain management in Canada, and its use for treatment of opioid use disorder would be considered off-label.

Opioid antagonist: Medication that works by blocking opioid receptors, preventing the body from responding to opioids. Opioid antagonist medications may be used to rapidly displace opioid agonist molecules from receptors in an overdose situation (e.g., naloxone), or to facilitate continued abstinence from using opioid drugs (e.g., naltrexone). In Canada, naloxone is available in an intramuscular injection or intranasal spray (depending on availability), while naltrexone is available as an oral tablet taken once per day.

Opioid use disorder (OUD): A problematic pattern of opioid use leading to clinically significant impairment or distress that meets the DSM-5 Diagnostic Criteria for Opioid Use Disorder. Opioid use disorder includes the use of synthetic and/or naturally derived opioids, whether prescribed or illegally obtained. The DSM-5 terminology represents a deliberate shift away from DSM-IV terminology of “opioid abuse” or “opioid dependence,” which may be considered pejorative and/or stigmatizing, to describe this condition.

Psychosocial supports: Non-therapeutic social support services that aim to improve overall individual and/or family stability and quality of life, which may include community services, social and family services, temporary and supported housing, income-assistance programs, vocational training, life-skills education, and legal services.

Psychosocial treatment interventions: Structured and/or manualized treatments delivered by a trained care provider that incorporate principles of cognitive behavioural therapy, interpersonal therapy, motivational interviewing, dialectical behaviour therapy, contingency management, structured relapse prevention, biofeedback, family and/or group counselling. Psychosocial interventions may include culturally specific approaches such as traditional healers, elder involvement, and Indigenous healing ceremonies.

Recovery: A process of change through which individuals improve their health and wellness, live a self-directed life, and strive to reach their full potential.⁵

⁵ Borrowed from the Substance Abuse and Mental Health Administration’s [“SAMHSA’s Working Definition of Recovery: 10 Guiding Principles of Recovery”](#)

Relapse: May be defined differently by each person, however, a general definition would include a re-emergence of or increase in severity of opioid use disorder symptoms and/or harms related to opioid use following a period of stability.

Stabilization: Stabilization will be patient-specific, depending on each patient’s circumstances and needs and how they change over time. Patients’ DSM-5 diagnoses, physical and mental health comorbidities, and social determinants of health (e.g., poverty, homelessness) should be identified at baseline and tracked over time. Stabilization includes clinical stabilization (e.g., lack of cravings, improved sleep quality and duration, and overall wellbeing) as well as psychosocial stabilization (e.g., integrating new activities, re-connecting with family, and attaining safe housing).

Trauma: Trauma can be understood as an experience that overwhelms an individual’s capacity to cope. Trauma can result from a series of events or one significant event. Trauma may occur in early life (e.g., child abuse, disrupted attachment, witnessing others experience violence, or neglect) or later in life (e.g., accidents, war, unexpected loss, violence, or other life events out of one’s control). Trauma can be devastating and can interfere with a person’s sense of safety, sense of self, and sense of self-efficacy. Trauma can also impact a person’s ability to regulate emotions and navigate relationships. People who have experienced trauma may use substances or other behaviours to cope with feelings of shame, terror, and powerlessness.

Intergenerational trauma: The transmission of historical oppression and unresolved trauma from caregivers to children. The concept of intergenerational or historical trauma was developed by Indigenous peoples in Canada in the 1980s to explain the cycle of trauma they were seeing in their communities due to the residential school system, loss of culture, and colonization more broadly. May also be used to describe the emotional effects, adaptations, and coping patterns developed when living with a trauma survivor.

Trauma-informed practice: Health care and other services grounded in an understanding of trauma that integrate the following principles: trauma awareness; safety and trustworthiness; choice, collaboration, and connection; strengths-based approaches, and skill-building. Trauma-informed services prioritize safety and empowerment and avoid approaches that are confrontational.

Treatment refractory: Refers to opioid use disorder which has been treated with standard first-line pharmacological treatments, with the individual experiencing insufficient benefit and/or continuing to use illicit opioids and experiencing poor physical and mental health as well as poor social integration. It should be noted that there has been an intentional shift away from the use of “treatment refractory,” as it may inadvertently perpetuate stigma against individuals with opioid use disorder. This document uses this term, when necessary, to reflect its use in the scientific literature. However, substance use disorders are known to be chronic, relapsing conditions which may require multiple treatment approaches across the lifespan, thus rendering such a term and concept otherwise moot.

References

1. 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. 10.1111/j.1360-0443.2010.03140.x
2. Haber PS, Demirkol A, Lange K, Murnion B. Management of injecting drug users admitted to hospital. *The Lancet*. 2009;374(9697):1284-1293. [http://dx.doi.org/10.1016/S0140-6736\(09\)61036-9](http://dx.doi.org/10.1016/S0140-6736(09)61036-9)
3. Martins SS, Sarvet A, Santaella-Tenorio J, Saha T, Grant BF, Hasin DS. Changes in US lifetime heroin use and heroin use disorder: prevalence from the 2001-2002 to 2012-2013 National Epidemiologic Survey on Alcohol and Related Conditions. *JAMA Psychiatry*. 2017;74(5):445-455. 10.1001/jamapsychiatry.2017.0113
4. Special Advisory Committee on the Epidemic of Opioid Overdoses. National report: Apparent opioid-related deaths in Canada. Ottawa: Public Health Agency of Canada; 2019. <https://infobase.phac-aspc.gc.ca/datalab/national-surveillance-opioid-mortality.html#AORD>.
5. The Canadian Centre on Substance Abuse and the Canadian Community Epidemiology Network on Drug Use. *Deaths Involving Fentanyl in Canada, 2009-2014*. 2015. <http://www.ccsa.ca/Resource%20Library/CCSA-CCENDU-Fentanyl-Deaths-Canada-Bulletin-2015-en.pdf>.
6. Nosyk B, Marsh DC, Sun H, Schechter MT, Anis AH. Trends in methadone maintenance treatment participation, retention, and compliance to dosing guidelines in British Columbia, Canada: 1996-2006. *J Subst Abuse Treat*. 2010;39(1):22-31. 10.1016/j.jsat.2010.03.008
7. Stein BD, Gordon AJ, Sorbero M, Dick AW, Schuster J, Farmer C. The impact of buprenorphine on treatment of opioid dependence in a Medicaid population: recent service utilization trends in the use of buprenorphine and methadone. *Drug and Alcohol Dependence*. 2012;123(1-3):72-78. <http://dx.doi.org/10.1016/j.drugalcdep.2011.10.016>
8. Rosenthal RN, Lofwall MR, Kim S, et al. Effect of buprenorphine implants on illicit opioid use among abstinent adults with opioid dependence treated with sublingual buprenorphine: a randomized clinical trial. *JAMA*. 2016;316(3):282-290. 10.1001/jama.2016.9382
9. Mattick RP, Breen C, Kimber J, Davoli M. Methadone maintenance therapy versus no opioid replacement therapy for opioid dependence. *The Cochrane database of systematic reviews*. 2009;3.
10. 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. 10.1002/14651858.CD002207.pub4
11. Ferri M, Davoli M, Perucci CA. Heroin maintenance for chronic heroin-dependent individuals. *Cochrane Database of Systematic Reviews*. 2011(12). 10.1002/14651858.CD003410.pub4
12. Strang J, Groshkova T, Uchtenhagen A, et al. Heroin on trial: systematic review and meta-analysis of randomised trials of diamorphine-prescribing as treatment for refractory heroin addiction. *The British Journal of Psychiatry*. 2015;207(1):5-14. 10.1192/bjp.bp.114.149195
13. World Health Organization. WHO Model List of Essential Medicines. 19th ed: World Health Organization; 2015. http://www.who.int/medicines/publications/essentialmedicines/EML_2015_FINAL_amended_NOV2015.pdf?ua=1.

14. Timko C, Schultz NR, Cucciare MA, Vittorio L, Garrison-Diehn C. Retention in medication-assisted treatment for opiate dependence: a systematic review. *Journal of addictive diseases*. 2016;35(1):22-35. 10.1080/10550887.2016.1100960
15. Reisinger HS, Schwartz RP, Mitchell SG, et al. Premature discharge from methadone treatment: patient perspectives. *Journal of psychoactive drugs*. 2009;41(3):285-296.
16. Magura S, Nwakeze PC, Demsky S. RESEARCH REPORT Pre- and in-treatment predictors of retention in methadone treatment using survival analysis. *Addiction*. 1998;93(1):51-60. 10.1046/j.1360-0443.1998.931516.x
17. Hser YI, Saxon AJ, Huang D, et al. Treatment retention among patients randomized to buprenorphine/naloxone compared to methadone in a multi-site trial. *Addiction*. 2014;109(1):79-87. 10.1111/add.12333
18. 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. 10.1037/a0037550
19. Oviedo-Joekes E, Guh D, Brissette S, et al. Hydromorphone compared with diacetylmorphine for long-term opioid dependence: a randomized clinical trial. *JAMA Psychiatry*. 2016;73(5):447-455. 10.1001/jamapsychiatry.2016.0109
20. Oviedo-Joekes E, Brissette S, Marsh DC, et al. Diacetylmorphine versus methadone for the treatment of opioid addiction. *New England Journal of Medicine*. 2009;361(8):777-786. doi:10.1056/NEJMoa0810635
21. Strang J, Groshkova, T, Metrevian, N. New heroin-assisted treatment: recent evidence and current practices of supervised injectable heroin treatment in Europe and beyond. In: European Monitoring Centre for Drugs and Drug Addiction, ed. Luxembourg: European Monitoring Centre for Drugs and Drug Addiction; 2012.
22. Haasen C, Verthein U, Degkwitz P, Berger J, Krausz M, Naber D. Heroin-assisted treatment for opioid dependence: randomised controlled trial. *The British Journal of Psychiatry*. 2007;191:55-62.
23. van den Brink W, Hendriks VM, Blanken P, Koeter MW, van Zwieten BJ, van Ree JM. Medical prescription of heroin to treatment resistant heroin addicts: two randomised controlled trials. *BMJ (Clinical research ed)*. 2003;327(7410):310.
24. March JC, Oviedo-Joekes E, Perea-Milla E, Carrasco F. Controlled trial of prescribed heroin in the treatment of opioid addiction. *J Subst Abuse Treat*. 2006;31. 10.1016/j.jsat.2006.04.007
25. Strang J, Metrebian N, Lintzeris N, et al. Supervised injectable heroin or injectable methadone versus optimised oral methadone as treatment for chronic heroin addicts in England after persistent failure in orthodox treatment (RIOTT): a randomised trial. *The Lancet*. 2010;375(9729):1885-1895. [http://dx.doi.org/10.1016/S0140-6736\(10\)60349-2](http://dx.doi.org/10.1016/S0140-6736(10)60349-2)
26. Demaret I, Quertemont E, Litran G, et al. Efficacy of heroin-assisted treatment in Belgium: a randomised controlled trial. *European Addiction Research*. 2015;21(4):179-187.
27. Perneger TV, Giner F, del Rio M, Mino A. Randomised trial of heroin maintenance programme for addicts who fail in conventional drug treatments. *BMJ : British Medical Journal*. 1998;317(7150):13-18.
28. Rehm J, Gschwend P, Steffen T, Gutzwiller F, Dobler-Mikola A, Uchtenhagen A. Feasibility, safety, and efficacy of injectable heroin prescription for refractory opioid addicts: a follow-up study. *The Lancet*. 2001;358(9291):1417-1420. [http://dx.doi.org/10.1016/S0140-6736\(01\)06529-1](http://dx.doi.org/10.1016/S0140-6736(01)06529-1)

29. Nosyk B, Guh DP, Bansback NJ, et al. Cost-effectiveness of diacetylmorphine versus methadone for chronic opioid dependence refractory to treatment. *CMAJ: Canadian Medical Association journal = journal de l'Association medicale canadienne*. 2012;184(6):E317-328. 10.1503/cmaj.110669
30. Byford S, Barrett B, Metrebian N, et al. Cost-effectiveness of injectable opioid treatment v. oral methadone for chronic heroin addiction. *The British journal of psychiatry: the journal of mental science*. 2013;203(5):341-349. 10.1192/bjp.bp.112.111583
31. Dijkgraaf MG, van der Zanden BP, de Borgie CA, Blanken P, van Ree JM, van den Brink W. Cost utility analysis of co-prescribed heroin compared with methadone maintenance treatment in heroin addicts in two randomised trials. *BMJ (Clinical research ed)*. 2005;330(7503):1297.
32. Bansback N, Guh D, Oviedo-Joekes E, et al. Cost-effectiveness of hydromorphone for severe opioid use disorder: findings from the SALOME randomized clinical trial. *Addiction*. 2018;113(7):1264-1273. 10.1111/add.14171
33. Mead N, Bower P. Patient-centredness: a conceptual framework and review of the empirical literature. *Soc Sci Med*. 2000;51(7):1087-1110.
34. Harm Reduction International. What is harm reduction? A position statement from Harm Reduction International. <https://www.hri.global/what-is-harm-reduction>
35. BC Centre on Substance Use. *Supervised Consumption Services: Operational Guidance*. BC Centre on Substance Use; n.d.
36. 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. 10.1001/jamapsychiatry.2015.2132
37. Kingston REF, Marel C, Mills KL. A systematic review of the prevalence of comorbid mental health disorders in people presenting for substance use treatment in Australia. *Drug and alcohol review*. 2017;36(4):527-539. 10.1111/dar.12448
38. Roberts NP, Roberts PA, Jones N, Bisson JI. Psychological therapies for post-traumatic stress disorder and comorbid substance use disorder. *The Cochrane database of systematic reviews*. 2016;4:CD010204. 10.1002/14651858.CD010204.pub2
39. Canadian Public Health Association. What Are the Social Determinants of Health? n.d.; <https://www.cpha.ca/what-are-social-determinants-health>. Accessed September 17, 2018.
40. World Health Organization—Commission on Social Determinants of Health. *Closing the gap in a generation: health equity through action on the social determinants of health. Final Report of the Commission on Social Determinants of Health*. Geneva: World Health Organization; 2008.
41. Hankivsky O, Christoffersen A. Intersectionality and the determinants of health: a Canadian perspective. *Critical Public Health*. 2008;18(3):271-283. 10.1080/09581590802294296
42. 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. 10.1186/1471-2458-11-20
43. 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.

44. 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. 10.1037/1099-9809.10.3.287
45. 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. <https://doi.org/10.1016/j.jsat.2005.11.009>
46. 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.
47. BC Harm Reduction Strategies and Services. Respectful Language and Stigma: Regarding People Who Use Substances. Toward the Heart; 2017. <http://towardtheheart.com/assets/uploads/1502392191GWLgQDb5w5GlajwRuiq4lPoSyhSoMkp3T7rL5ml.pdf>.
48. Canadian HIV/AIDS Legal Network. "Nothing About Us Without Us"—Greater, Meaningful Involvement of People Who Use Illegal Drugs: A Public Health, Ethical, and Human Rights Imperative. Toronto, ON 2005. <http://www.aidslaw.ca/site/wp-content/uploads/2013/04/Greater+Involvement+-+Bklt+-+Drug+Policy+-+ENG.pdf>.
49. Bardwell G, Kerr T, Boyd J, McNeil R. Characterizing peer roles in an overdose crisis: preferences for peer workers in overdose response programs in emergency shelters. *Drug and Alcohol Dependence*. 2018;190:6-8. <https://doi.org/10.1016/j.drugalcdep.2018.05.023>
50. Bardwell G, Anderson S, Richardson L, et al. The perspectives of structurally vulnerable people who use drugs on volunteer stipends and work experiences provided through a drug user organization: opportunities and limitations. *International Journal of Drug Policy*. 2018;55:40-46. <https://doi.org/10.1016/j.drugpo.2018.02.004>
51. 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. 10.1016/j.drugpo.2013.07.001
52. 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. 10.1016/s0140-6736(10)62353-7
53. 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. 10.1136/bmj.f174
54. 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. 10.1371/journal.pone.0003351
55. 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. 10.1111/j.1360-0443.2009.02837.x
56. 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. 10.1111/j.1360-0443.2011.03515.x

57. 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. 10.1016/j.drugalcdep.2014.10.012
58. 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. 10.1111/add.13326
59. 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. 10.1016/j.drugalcdep.2010.07.023
60. 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.
61. 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. 10.1007/bf02351502
62. 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. 10.1111/j.1360-0443.2007.01818.x
63. Federal Institute for Drugs and Medical Devices. Report on the Substitution Register. 2017; https://www.bfarm.de/EN/FederalOpiumAgency/SubstitutionRegister/Report/_node.html. Accessed June 14, 2017, 2017.
64. Nordt C, Vogel M, Dey M, et al. One size does not fit all-evolution of opioid agonist treatments in a naturalistic setting over 23 years. *Addiction.* 2018. 10.1111/add.14442
65. Office Fédéral de la Santé Publique. *Traitement avec prescription d'héroïne (HeGeBe) en 2009 et 2010.* Swiss: Office Fédéral de la Santé Publique; 2011.
66. National Association of Pharmacy Regulatory Authorities. Model Standards for Pharmacy Compounding of Non-Hazardous Sterile Preparations. Ottawa, Canada 2015. <https://napra.ca/general-practice-resources/model-standards-pharmacy-compounding-non-hazardous-sterile-preparations>.
67. Government of Canada. Health Canada to propose regulatory change to enable consideration of applications under the Special Access Programme to facilitate treatment of chronic relapsing opioid dependence. 2016; <https://www.canada.ca/en/health-canada/news/2016/05/health-canada-to-propose-regulatory-change-to-enable-consideration-of-applications-under-the-special-access-programme-to-facilitate-treatment-of-chronic-relapsing-opioid-dependence.html>.
68. Ministry of Justice. *Narcotic Control Regulations.* 2017. https://laws-lois.justice.gc.ca/eng/regulations/C.R.C.,_c._1041/.
69. Health Canada. Government of Canada approves new treatment options for opioid use disorder and supports research, treatment and harm reduction projects in Ontario. 2019; <https://www.canada.ca/en/health-canada/news/2019/05/government-of-canada-approves-new-treatment-options-for-opioid-use-disorder-and-supports-research-treatment-and-harm-reduction-projects-in-ontario.html>. Accessed July 16, 2019.
70. Sandoz Canada Inc. Prescribing Information. Boucherville, QC 2019. https://pdf.hres.ca/dpd_pm/00050892.PDF.

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.
72. Jackman M, and McRae, A. *Medical Decision-Making and Mature Minors*. The Royal College of Physicians and Surgeons of Canada; 2013. <http://www.royalcollege.ca/rcsite/bioethics/cases/section-1/medical-decision-making-mature-minors-e>.
73. 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. 10.3109/10826080802494800
74. AAP Committee on Substance Use and Prevention. Medication-Assisted Treatment of Adolescents With Opioid Use Disorders. *Pediatrics*. 2016;138(3):e20161893.
75. Sharma B, Bruner A, Barnett G, Fishman M. Opioid Use Disorders. *Child and Adolescent Psychiatric Clinics*. 2016;25(3):473-487. 10.1016/j.chc.2016.03.002
76. Palis H, Marchand K, Guh D, et al. Men's and women's response to treatment and perceptions of outcomes in a randomized controlled trial of injectable opioid assisted treatment for severe opioid use disorder. *Subst Abuse Treat Prev Policy*. 2017;12(1):25. 10.1186/s13011-017-0110-9
77. Oviedo-Joekes E, Guh D, Brissette S, et al. Effectiveness of diacetylmorphine versus methadone for the treatment of opioid dependence in women. *Drug Alcohol Depend*. 2010;111(1-2):50-57. 10.1016/j.drugalcdep.2010.03.016
78. Oviedo-Joekes E, Marchand K, Guh D, et al. History of reported sexual or physical abuse among long-term heroin users and their response to substitution treatment. *Addictive behaviors*. 2011;36(1):55-60. <https://doi.org/10.1016/j.addbeh.2010.08.020>
79. Boyd J, Collins AB, Mayer S, Maher L, Kerr T, McNeil R. Gendered violence and overdose prevention sites: a rapid ethnographic study during an overdose epidemic in Vancouver, Canada. *Addiction*. 2018;113(12):2261-2270. 10.1111/add.14417
80. American Society of Addiction Medicine. *Substance Use, Misuse, and Use Disorders During and Following Pregnancy, with an Emphasis on Opioids*. 2017 <https://www.asam.org/advocacy/find-a-policy-statement/view-policy-statement/public-policy-statements/2017/01/19/substance-use-misuse-and-use-disorders-during-and-following-pregnancy-with-an-emphasis-on-opioids>.
81. Uchtenhagen A. The role and function of heroin-assisted treatment at the treatment system level. *Heroin Addiction and Related Clinical Problems*. 2017;19(2):17-24.
82. Jun JH, Fairbairn N. Integrating injectable opioid agonist treatment into a drug treatment court program: a case study. *Substance Abuse*. 2018:1-11. 10.1080/08897077.2018.1485129
83. Kouyoumdjian FG, Calzavara LM, Kiefer L, Main C, Bondy SJ. Drug use prior to incarceration and associated socio-behavioural factors among males in a provincial correctional facility in Ontario, Canada. *Canadian journal of public health = Revue canadienne de sante publique*. 2014;105(3):e198-202.
84. Bozinoff N, DeBeck K, Milloy MJ, et al. Utilization of opioid agonist therapy among incarcerated persons with opioid use disorder in Vancouver, Canada. *Drug Alcohol Depend*. 2018;193:42-47. 10.1016/j.drugalcdep.2018.09.003

85. Kendall PR, Pearce M. Drug testing in Canadian jails: to what end? *Canadian journal of public health = Revue canadienne de sante publique*. 2000;91(1):26-28.
86. Merrall EL, Kariminia A, Binswanger IA, et al. Meta-analysis of drug-related deaths soon after release from prison. *Addiction*. 2010;105(9):1545-1554. 10.1111/j.1360-0443.2010.02990.x
87. Marsden J, Gossop M, Stewart D, et al. The Maudsley Addiction Profile (MAP): a brief instrument for assessing treatment outcome. *Addiction*. 1998;93(12):1857-1867.
88. Cacciola JS, Alterman AI, Habing B, McLellan AT. Recent status scores for version 6 of the Addiction Severity Index (ASI-6). *Addiction (Abingdon, England)*. 2011;106(9):1588-1602. 10.1111/j.1360-0443.2011.03482.x
89. McLellan AT, Cacciola JC, Alterman AI, Rikoon SH, Carise D. The Addiction Severity Index at 25: origins, contributions and transitions. *The American journal on addictions / American Academy of Psychiatrists in Alcoholism and Addictions*. 2006;15(2):113-124. 10.1080/10550490500528316
90. Darke S, Ward J, Hall W, Heather N WA. *The Opiate Treatment Index (OTI) Researcher's Manual*. Sydney, Australia: National Drug and Alcohol Research Centre; 1991.
91. Marsden J, Stewart D, Gossop M, et al. Assessing client satisfaction with treatment for substance use problems and the development of the Treatment Perceptions Questionnaire (TPQ). *Addiction Research*. 2000;8(5):455-470. 10.3109/16066350009005590
92. Larsen DL, Attkisson CC, Hargreaves WA, Nguyen TD. Assessment of client/patient satisfaction: development of a general scale. *Eval Program Plann*. 1979;2(3):197-207.
93. Perreault M, Pawliuk N, Veilleux R, Rousseau M. Qualitative assessment of mental health service satisfaction: strengths and limitations of a self-administered procedure. *Community mental health journal*. 2006;42(3):233. 10.1007/s10597-005-9028-1
94. EuroQol—a new facility for the measurement of health-related quality of life. *Health policy (Amsterdam, Netherlands)*. 1990;16(3):199-208.
95. Brooks R. EuroQol: the current state of play. *Health policy (Amsterdam, Netherlands)*. 1996;37(1):53-72.
96. Marsden J, Farrell M, Bradbury C, et al. Development of the treatment outcomes profile. 2008;103(9):1450-1460. doi:10.1111/j.1360-0443.2008.02284.x
97. Derogatis L. *Symptom Checklist 90-R: Administration, scoring and procedures manual*. Minneapolis, MN1994.
98. Derogatis L. *Brief Symptom Inventory (BSI) 10. Administration, scoring, and procedures manual*. Minneapolis (MN): NCS Pearson. Inc; 2001.
99. Hallam C. Heroin assisted treatment: the state of play. *International Drug Policy Consortium Briefing Paper*. 2010:14.
100. Fischer B, Oviedo-Joekes E, Blanken P, et al. Heroin-assisted treatment (HAT) a decade later: a brief update on science and politics. *Journal of Urban Health : Bulletin of the New York Academy of Medicine*. 2007;84(4):552-562. 10.1007/s11524-007-9198-y
101. Verthein U. Diamorphine treatment in Germany. Paper presented at: International Symposium on Supervised Injectable Opioid Assisted Treatment; May 26, 2017, 2017; Vancouver, BC.
102. Hartnoll RL, Mitcheson MC, Battersby A, et al. Evaluation of heroin maintenance in controlled trial. *Arch Gen Psychiatry*. 1980;37(8):877-884.

103. Ontario Agency for Public Health Protection and Promotion (Public Health Ontario), Leece P, Tenanbaum M. *Evidence Brief: Effectiveness of supervised injectable opioid agonist treatment (sIOAT) for opioid use disorder*. Toronto, ON 2017.
104. Demaret I, Quertemont E, Litran G, et al. Loss of treatment benefit when heroin-assisted treatment is stopped after 12 months. *Journal of Substance Abuse Treatment*. 2016;69:72-75. <http://dx.doi.org/10.1016/j.jsat.2016.06.005>
105. Oviedo-Joekes E, Guh D, Marchand K, et al. Differential long-term outcomes for voluntary and involuntary transition from injection to oral opioid maintenance treatment. *Subst Abuse Treat Prev Policy*. 2014;9:23. 10.1186/1747-597x-9-23
106. World Health Organization. *Atlas on substance use (2010): Resources for the prevention and treatment of substance use disorders*. World Health Organization; 2010. http://www.who.int/substance_abuse/activities/atlas/en/.
107. Haasen C, Verthein U, Eiroa-Orosa FJ, Schafer I, Reimer J. Is heroin-assisted treatment effective for patients with no previous maintenance treatment? Results from a German randomised controlled trial. *Eur Addict Res*. 2010;16(3):124-130.
108. Oviedo-Joekes E, Brissette S, MacDonald S, et al. Safety profile of injectable hydromorphone and diacetylmorphine for long-term severe opioid use disorder. *Drug & Alcohol Dependence*. 2017;176:55-62. 10.1016/j.drugalcdep.2017.02.021
109. Larney S, Peacock A, Mathers BM, Hickman M, Degenhardt L. A systematic review of injecting-related injury and disease among people who inject drugs. *Drug and Alcohol Dependence*. 2017;171:39-49. <https://doi.org/10.1016/j.drugalcdep.2016.11.029>
110. Gutzwiller F, Steffen T. *Cost-Benefit Analysis of Heroin Maintenance Treatment*. Basel, Switzerland 2000. 10.1159/isbn.978-3-318-00432-8

