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**Assessment**

- **Opioid use:** how long, amount, route, current use, last use, high risk behaviours, past treatments
- **Other drug use:** past and current use of alcohol, cocaine, amphetamines, hallucinogens, benzodiazepines, solvents, steroids, tobacco, prescription medications (gabapentin, quetiapine, bupropi-on)
- **Medical and psychiatric history:** including history of cardiac, respiratory and hepatic disease, mental illness, chronic pain, psychic trauma, and medications.
- **Social history:** housing, legal, relational, financial, employment, education, children, drug coverage, safety of driving
- **DSM-V criteria**
- **Risk of toxicity:** active heavy use of sedating substances (benzodiazepines, alcohol), age >60, severe respiratory disease, decompensated hepatic disease
- **Examination**
  - **Investigations:** UDS (prior to initiating MMT), blood borne pathogen tests (Hepatitis C, HIV, Hepatitis B + Hepatitis A immunity), pregnancy test (when warranted), ECG (if QT prolongation risk)
- **Collateral:** PMP profile, previous MMT provider, pharmacist
- **Treatment agreement:** reviewed and signed (includes risks, benefits, side effects, and alternative treatments)

**Initiation**

- **Collaboration:** notify PMP, share treatment agreement with pharmacist

**Starting dose:**
- **30 mg od:** if uncomplicated patient
- **20 mg od:** if high risk for toxicity
- **10 mg od:** if opioid naïve (release from incarceration with repeated past history of relapse upon release)

**Titration:** rapid titration up to 60 mg od (increase by 10 mg every three days, or 15 mg every five days). Patient assessed by the MMT prescriber before every dose increase.

**Consider providing access to Naloxone (Narcan®)**

Prompt administration of Naloxone (Narcan®) can be lifesaving in the event of opioid overdose. At the time of publication and in response to a nation-wide epidemic of opioid-related deaths, programs supporting naloxone administration by first-responders and appropriately trained bystanders are in a state of rapid expansion. Similarly, available forms of naloxone and prescribing requirements are changing, with some forms of naloxone now available over the counter and without prescription.

MMT prescribers are strongly encouraged to facilitate access and training in naloxone administration for MMT patients and those likely in a position to assist in the event of an overdose (e.g., family, friends and associates, roommates, etc.) Given methadone's long half-life in comparison to naloxone, it is particularly important to emphasize that naloxone administration must be accompanied by 911 activation and follow-up care in the nearest emergency department.
Stabilization

- **Titration**: increase by 10 mg every week as long as opioid withdrawal symptoms or opioid use persist. Patient description of withdrawal should be clear and specific. As the methadone dose increases, the intensity of withdrawal should diminish and/or the interval from the methadone dosing to the onset of withdrawal should lengthen.
  - Typical withdrawal symptoms include sweats, chills, leg pain or body aches, restlessness, irritability, nausea, abdominal cramps, vomiting, diarrhea, disrupted sleep
  - Some withdrawal symptoms are also side effects (nausea, sweats, disrupted sleep). These can be differentiated by defining the timing of symptom onset
  - Consider increasing the dose every two weeks for doses above 100 mg od

- **Dose limiting factors:**
  - Side effects: sedation, cognitive dysfunction
  - Benzodiazepine use: avoid increasing the methadone dose above 120 mg
  - QTc prolongation. Check QTc at methadone doses ≥ 150 mg od and at intervals thereafter

Maintenance

- Most patients stabilize at doses between 60 mg and 120 mg daily
- Patients should be assessed monthly (including UDS) once a stable dose has been reached
- Consult an experienced MMT prescriber if considering a dose above 150 mg od

Take-home doses

- **Eligibility**: MMT treatment for at least three months, social and psychiatric stability, two months without substance use, four consecutive weekly negative UDS immediately prior to providing take-home doses
- **Take-home agreement**: reviewed and signed (includes requirements of locked box and return of used bottles, understanding of methadone toxicity in opioid-naive people)
- **Schedule of take-home doses**: start at one or two take-home doses a week and increase gradually, no more frequently than monthly, to a maximum of six take-home doses a week or a maximum of five take-home doses (2 + 3) if UDS are not obtained randomly
- **Monitoring**: after take-home doses provided, four weekly UDS, followed by one UDS every two weeks for eight weeks. UDS can then be obtained monthly and randomly
- **Discontinuing take-home doses**: with substance use, social or psychiatric instability, incarceration, or evidence of diversion

Missed and vomited doses

- **Missed doses**:
  - During titration: must receive two consecutive lower doses immediately prior to receiving the new higher dose
  - One or two missed doses: no change
  - Three to four missed doses: cut dose by 50% or to 50 mg, whichever is higher, and increase back to the original dose (no more than 10 mg every three days)
  - Five or six missed doses: restart at 30 mg
and increase back to original dose (no more than 10 mg every three days)
- Seven or more missed doses: restart as new patient

• **Vomited doses:**
  - Replace 50% if vomited dose is witnessed within 15 minutes of receiving dose

### Relapses

- Relapses are an expected and common occurrence as with any chronic disease
- If the substance used is an opioid, consider a dose increase

• **Minor relapse:**
  - One or two uses, patient stops before regular use occurs
  - Ability to stop indicates control and solid recovery
  - Provide supportive therapy and validation of recovery
  - If receiving take-home doses, discontinue and reinstate after four weekly negative UDS and reinstate according to the schedule that take-home doses were provided initially

• **Major relapse:**
  - Daily or nearly daily use for a week or more
  - Provide motivation interviewing, counseling and/or referral to addiction services and self-help programs
  - If receiving take-home doses, discontinue and reinstate according to the protocol described in “take-home doses”

### Tapering

- **Right time:** review readiness for taper (no drug use and social stability for a year)
- **Right reason:** school, work, child or elder care (not financial pressure, convenience, or because someone else thinks its best)
- **Right way:** slow (5% every two to four weeks), hold dose or increase dose if significant withdrawal
- Many patients wanting to taper are not ready, do so for the wrong reasons, and taper too quickly
- Review with all patients the risk of relapse, and if there is a relapse, the risk of toxicity due to reduced tolerance, and the importance of using much less than the amount used before entering treatment
- Provide supportive counselling to patients tapering methadone
- Titrate dose back to previous stable dose if patient requests

### Urine Drug Screening

- Urine samples should be obtained randomly at least monthly with some strategy to reduce risk of tampering (temperature, specific gravity, pH, creatinine). If UDS cannot be obtained randomly, try to obtain weekly
- Methadone must be tested using the metabolite (EDDP)
- A tampered urine sample should be viewed as a positive urine test
- **Interpretation:** (see next page)
### Result
- **Methadone metabolite (EDDP)**
  - Patient not taking methadone
  - EDDP below the cutoff level for the testing system (false negative)
  - Patient provided someone else’s urine sample
  - Tester error
  - Possible responses:
    - Confirm with mass spectrometry
    - Discuss result with patient
    - Discontinue take-home doses
    - Repeat supervised UDS as soon as possible

- **Opioid positive**
  - Patient taking opioids because withdrawal symptoms not adequately controlled
  - Patient taking opioids to treat acute or chronic pain
  - False positive (cross-reactant)
  - Patient provided someone else’s urine sample
  - Tester error
  - Possible responses:
    - Discontinue take-home doses
    - Discuss result with patient
    - Increase methadone dose if taking opioid to prevent withdrawal
    - Manage acute pain with non-opioids if possible, or with controlled short-term opioids if necessary
    - Manage chronic pain with non-opioid therapy, refer to a physician with experience in pain/addiction medicine

- **Other substance positive**
  - Patient using substance
  - False positive (cross-reactant, most common with amphetamines)
  - Patient providing someone else’s urine sample
  - Tester error
  - Possible responses:
    - Discontinue take-home doses
    - Discuss result with patient
    - Offer substance use treatment
    - Confirm with mass spectrometry if patient denies use and the result effects treatment (e.g., patient trying to get take-home doses, patient getting take-home doses, child protection issues)
1. INTRODUCTION

This document has been prepared for the physicians of Nova Scotia as a roadmap for methadone maintenance therapy – that is, the use of methadone primarily as a maintenance treatment for opioid use disorder.

INTRODUCTION

Since the publication of the first edition of the Methadone Maintenance Treatment Handbook (“the MMT Handbook” or “the Handbook”) by the College of Physicians and Surgeons of Nova Scotia (CPSNS or “the College”), access to treatment for opioid addiction has expanded in Nova Scotia. However, there are still waitlists in all areas of the province, and the need for more MMT prescribers remains. CPSNS has taken a leadership role in establishing standards and best practices in this very complex area of practice. Methadone Maintenance Therapy (MMT) can be both life saving and fraught with danger. This document has been designed to assist both the experienced MMT prescriber with a focused practice in addiction medicine and the family physician who takes on this role as a component of a busy comprehensive family practice to meet a local need.

This revision of the first edition of the Handbook was necessary in view of many comments and concerns raised by MMT prescribers across the province, and in particular, MMT prescribers working in rural practices. This edition was undertaken to respond to these concerns. Also, to ensure that the standards and guidelines are evidence-based, safe, and in accordance with best practice, in addition to achievable, practical, and useful for all MMT prescribers, regardless of the context or location of their practice.

The first edition of this Handbook was developed and written by a working group consisting of Dr. Sonia Fairfield, Dr. John Fraser, Dr. Zac Fraser, Dr. Ramm Hering, Dr. Bill Lowe (former Deputy Registrar College of Physicians and Surgeons of Nova Scotia), and Ms. Bev Zwicker (Registrar, Nova Scotia College of Pharmacists). It was an adaptation of the College of Physicians and Surgeons of Ontario (CPSO) Methadone Maintenance Treatment Program Standards and Guidelines, with excerpts from the College of Physicians and Surgeons of British Columbia (CPSBC) Methadone Maintenance Handbook (2006).

HOW TO USE THIS HANDBOOK

The primary purpose of this Handbook is to maximize patient and community safety with respect to methadone maintenance therapy through the provision of evidence-based guidance. The authors have developed statements reflecting both best practices
(Guidelines) and standards of practice (Standards) for MMT prescribers.

**A Guideline is considered a recommended action or ‘best practice’ subject to the clinical context and judgment of the prescriber.**

Individual variation in practice may be appropriate where supported by evidence and sound medical judgment. When there is a deviation from a guideline or best practice, a clear explanation must be documented in the patient record, including at a minimum: the reasons for and appropriateness of the deviation; the expected benefits to the patients, and a consideration of any potential risks or harms.

**A Standard represents a minimum acceptable action for practice.**

Deviations from a Standard should occur only in the most exceptional circumstances and must be accompanied by a particularly thorough explanation in the patient record.

The ‘Quick Reference’ section of the Handbook is intended to provide readily accessible guidance to the practitioner in assessing the prospective MMT patient, prescribing MMT and addressing common clinical scenarios.

The various chapters of the Handbook contain more detailed information regarding various clinical circumstances and patient populations.

Where appropriate, chapters are prefaced by the relevant Standards and Guidelines.

The Appendices contain key contact information (accurate at the time of publication), additional quick-reference tables, patient information sheets and practice templates. Practitioners are invited to use or adapt these resources for practice.

In Nova Scotia, as a requirement for the renewal of a Health Canada methadone exemption for dependency, every MMT prescriber is required to undergo a periodic practice review based on the Guidelines and Standards defined in this Handbook.

### 1.1 History of MMT in the Treatment of Opioid Dependence

In the early 1900s in the United States, opioid dependence was treated in physicians’ offices with morphine. However, as the social issues associated with opioid dependence became increasingly apparent, the government of the day initiated behavioural treatment approaches at “narcotics farms” and other hospital-like settings that confined and committed addicts to abstinence and presumed recovery. Many of these programs proved costly and ineffective with high post-discharge relapse rates. Pharmacotherapy was a missing component.

During the Second World War, Bayer developed methadone, a long-acting pure mu-opioid receptor agonist, as an analgesic in Germany. It was considered to be a non-addictive alternative to morphine. In the 1940s, several studies conducted in the United Kingdom recognized
methadone as an efficacious treatment of heroin withdrawal symptoms. In the 1950s and 60s, opioid use became a serious concern in urban areas, resulting in dramatic increases in crime and death rates. Researchers and physicians became involved in trying to find a medical solution to opioid dependence.

In late 1963 and early 1964, Drs. Dole and Nyswander performed the first methadone study at The Rockefeller Institute for Medical Research in an attempt to develop a new pharmacotherapy for opioid dependence. In Canada, it is estimated that there are more than 80,000 regular illicit opioid users. The multisite OPICAN study, with a cohort of regular untreated illicit opioid users from seven Canadian cities surveyed from 2001 until 2005, provides evidence suggesting that heroin has become an increasingly marginal form of drug use among illicit opioid users in Canada, and that instead, prescription opioids in varying forms have become the predominant form of illicit opioid use. Between 1990 and 1994, there was a significant rise in individuals addicted to controlled-release oxycodone seeking treatment at the Centre for Addiction and Mental Health (CAMH). A chart review of CAMH’s new MMT admissions (1997-99) also revealed that 83% of patients had used prescription opioids with or without heroin. Experience in Nova Scotia suggests that the abuse of prescription opioids such as hydromorphone (Dilaudid/HydromorphContin) predominates in the population requiring treatment for opioid dependence.

Their research concluded that methadone prevented opioid withdrawal symptoms, blocked the euphoria of heroin, and decreased cravings in opioid-dependent individuals, thereby confirming that methadone was an efficacious maintenance medication for opioid dependence.

Meanwhile, it was actually a Canadian researcher, Dr. Robert Halliday from Vancouver, who set up what is believed to be the world’s first MMT program. Since that time, opioid agonist therapy with MMT has become an effective treatment option for opioid-dependent individuals worldwide. In many countries, including Canada, more people are seeking and receiving treatment with MMT.

In many countries, including Canada, more people are seeking and receiving treatment with MMT.
MMT is based on a harm reduction philosophy and represents one component of a continuum of treatment approaches for people with Opioid Use Disorder. MMT is a substitution therapy that allows for “return-to-normal” physiological, psychological and societal functioning.

Harm reduction includes a set of practical strategies that reduce the negative consequences of drug use, incorporating a spectrum of strategies from safer use, to managed use, to abstinence. This approach acknowledges that substance abuse is a complex, multifaceted disorder that is here to stay, but that some ways of using drugs are safer than others. According to the harm reduction philosophy, the ultimate goal of treatment is to reduce the harmful effects of drug use both to the individual and to the community. It incorporates a user-directed, non-judgmental, non-coercive approach to treatment, recognizing that drug users are the primary agents for reducing harmful behaviours, but that social inequalities (poverty, homelessness, class, racism, social isolation, past trauma, mental illness, gender discrimination, sexual orientation) affect an individual's capacity to change.  

Although methadone alone is an effective treatment of opioid use disorder, outcomes with MMT are improved with the addition of addiction counselling and support services.

Comprehensive MMT services can include the following:

- Routine medical care or support to obtain routine medical care
- Treatment for other substance use disorders
- Counselling and support
- Mental health services
- Education, health promotion, and disease prevention
- Linkages to other community-based services
- Outreach and advocacy

MMT is one possible treatment for opioid use disorder. For some people, MMT may continue for life, while others may be able to eventually discontinue MMT and remain abstinent while preserving the normal level of function they attained while on MMT. Each patient must be assessed, treated, and monitored on an individual basis. Successful outcomes through MMT require knowledge, experience, vigilance, and diligence on the part of the MMT prescriber, the patient, and all others involved in treatment.
1.2 Effectiveness of Methadone

Methadone has been extensively researched for safety and its efficacy to reduce morbidity and mortality in heroin-dependent patients.

MMT reduces morbidity and mortality associated with heroin addiction.\textsuperscript{10, 11, 12, 13, 14, 15, 16} One study found that patients were three times more likely to die without MMT than if they were maintained on treatment.\textsuperscript{17}

In addition, studies have shown that MMT can indirectly decrease mortality by decreasing the risk of HIV infection while on MMT.\textsuperscript{18, 19, 20, 21} A Cochrane review\textsuperscript{22} of 11 randomized clinical trials found that methadone was more effective than non-pharmacological treatments with respect to the outcomes of treatment retention and suppression of heroin use. The great majority of trials were with heroin users.

There is evidence that MMT reduces illicit opioid and other drug use.\textsuperscript{10, 11, 13, 15, 23} For example, an early trial found that compared to methadone, the control group was more than three times more likely to test positive for heroin use at a one-month follow-up after treatment.\textsuperscript{23} MMT also reduces other substance use. One large prospective study\textsuperscript{24} of methadone patients found a reduction in the use of cocaine, amphetamines, illegal methadone, sedatives, and cannabis at follow-up. MMT has been shown to reduce criminal activity\textsuperscript{25} and improve quality of life.\textsuperscript{26} Other factors associated with decreased drug use include counselling, adequate dosing, contingency management strategies (such as take-home doses), and harm reduction program orientation.\textsuperscript{27, 28, 29, 30, 31, 32, 33, 34, 35}

There are still few studies on the effectiveness of MMT for prescription opioid use disorder.

1.3 Pharmacology of Methadone

Methadone has ideal pharmacologic properties for a maintenance agent. Methadone is an oral long-acting synthetic opioid that effectively treats opioid dependence. It is primarily a mu-opioid receptor agonist, and when administered in an appropriate dose, it will prevent opioid withdrawal, reduce opioid craving, and block the euphoric effects of other opioids without producing euphoria or sedation. This enables patients to function normally (i.e., without impairment), and experience normal pain and emotional responses.

Knowledge of the pharmacology of methadone is important and will assist practitioners in avoiding problems associated with overdosing or relapse due to underdosing.

There is significant inter-individual variability in the pharmacology of methadone. In one study, the oral methadone dose required to achieve a plasma concentration of 250 ng/ml
in 70 kg patients (on no other medications), ranged from 55-921 mg a day. Methadone demonstrates incomplete and unpredictable cross-tolerance with other opioids.

The combination of inter-individual variability in methadone pharmacology and incomplete cross-tolerance with other opioids makes determining equianalgesic doses and predicting doses required to prevent opioid withdrawal very difficult, if not impossible.

1.3.1 Bioavailability

Oral methadone is 80% bioavailable with a range of 36-100%. It is rapidly absorbed into plasma in 15-45 minutes. The peak plasma concentration and peak clinical effect occurs in 2.5-4 hours.

1.3.2 Distribution

Methadone has high lipid solubility and is 86% protein bound (range 81-97%). It is transported across the blood brain barrier efficiently, resulting in cerebrospinal fluid (CSF) concentrations, which are 73% of serum concentrations.

Methadone is present in breast milk, with infant exposure at 2.8% of the maternal dose. Methadone crosses the placenta and may cause physical dependency resulting in neonatal abstinence syndrome.

1.3.3 Metabolism

Methadone is extensively metabolized in the liver to pyrrolidines and pyrroline (via N-demethylation and cyclization), which are then excreted in urine and bile. EDDP is the most important metabolite of methadone. The amount of unchanged excreted methadone is variable and depends on the dose, the urine’s pH value, and the patient’s metabolism. Therefore, when monitoring methadone treatment using urine drug screening, it is important to measure the metabolite EDDP instead of methadone itself to avoid the variability of urine methadone detection. EDDP can be detected within four-six hours after methadone ingestion. It can be cleared by the body within two-three days after use.

Methadone metabolism is primarily a function of liver enzyme activity involving cytochrome P450 isoenzymes. The major isoenzyme involved is CYP-3A4, which has a 30-fold variable expression. There are many drugs that interact by inducing or inhibiting CYP-3A4 activity (see “Appendix A: Drug to Drug Interactions”). This can result in clinically significant changes in methadone activity. Genetic and environmental factors can also act on these enzymes leading to a high degree of variation of individual methadone responsiveness. Methadone has no active metabolites.

1.3.4 Elimination

Methadone has an extremely variable plasma half-life – averaging 24 to 36 hours but ranging from 4 to 90 hours. There is a 20-fold inter-individual variability in the plasma half-life. The clearance of methadone increases with chronic dosing, and the plasma half-life may be as long as 55 hours at the start of treatment, decreasing to 24 hours with chronic treatment. It takes about five days for methadone plasma levels to reach steady state.
As a result of its long half-life, methadone may accumulate leading to sedation and respiratory depression. This is particularly significant at the start of treatment when the half-life may be longer. As a result, dose increases need to occur slowly allowing the plasma levels to reach steady state before a further dose increase.41

With those infrequent patients in whom the methadone plasma half-life is less than 24 hours (“rapid metabolizers”), daily methadone dosing might not be sufficient to adequately prevent withdrawal symptoms for 24 hours. In these cases, twice daily dosing may be required.

Methadone has a biphasic elimination. The α-elimination phase (8-12 hours) correlates with the analgesic effects, and the β-elimination phase (30-60 hours) correlates with plasma levels which are subanalgescic but sufficient to prevent withdrawal. As a result, although methadone can be dosed once a day for opioid use disorder it usually has to be dosed two-three times a day for analgesia.37

Methadone is primarily excreted by the fecal route. There is little urinary elimination and methadone levels are not affected by renal insufficiency.37

1.3.5 Tolerance

Tolerance can rapidly be lost upon stopping methadone in as little as three days.

Cross-tolerance between methadone and other opioids is unpredictable. The rate of development of tolerance varies between individuals. Tolerance to the various effects of methadone develops at different rates. Tolerance to the euphoric effects develops quickly and may be interpreted by patients as being due to an inadequate dose. Tolerance to respiratory depression is less rapid in onset, and tolerance to the autonomic side effects is the slowest.
1.4 Professional Duties

**MMT prescribers are responsible for the following:**

1. Providing professional, respectful, non-judgmental, reliable, culturally competent, and trauma-informed services to patients
2. Ensuring safe continuity of care for their MMT patients during periods of absence or office closure
3. Providing appropriate notice should they close their MMT practice
4. Assisting patients in the transfer of care and relevant records in the event that a patient wishes to relocate to another geographic area or MMT prescriber
5. Providing or facilitating patient access to health and social services, such as counselling and primary health care (see “Appendix C: Resources”)
6. Remaining current in practices and standards for MMT and the treatment of opioid use disorder and other addictions
7. Communicating and collaborating with pharmacists and other care providers for the benefit of the patient
8. Reporting to the appropriate agency when certain situations exist, including:
   a. Child Protection Services. When there is evidence or suspicion that a child under the care of the patient is being harmed or is not being appropriately cared for.
   b. Emergency Mental Health Services. When there is evidence that the patient might kill themselves, might kill someone else, or can't take care of themselves.
   c. Law Enforcement. When there is evidence that the patient may seriously hurt or kill someone.
   d. Registry of Motor Vehicles. When the patient should not be allowed to drive because they are impaired as a result of substance use.
   e. Transport Canada. When there is evidence of impairment with a patient who occupies a position critical to transportation railway safety, a flight crewmember, an air traffic controller, or someone holding a Marine Medical Certificate. Certain types of transportation are regulated under federal legislation and in certain instances, the reporting of potential or existing employment-related safety hazards in the setting of a substance use disorder or its treatment is required by law.

1.4.1 Guiding Principles

- **Respect:** Guilt and shame about substance use and fear of being judged are major barriers to care. A respectful approach both acknowledges that change is a process and meets patients at their stages of change.
- **Informed choice:** All patients using substances are informed by their health-care providers of their choices and rights at all steps of the care process. Side effects of methadone treatment are described and discussed.
- **Working from strengths:** Strengths and protective factors of each patient, her/his family and community are recognized and enhanced.
- **Reducing harms:** Helping patients reduce the harms associated with substance use, such as facilitating access to general medical care, addressing homelessness, and providing other supports will improve outcomes.
INTRODUCTION

• **Addressing violence:** Understanding the impact of violence, including the high incidence of post-traumatic stress disorder (PTSD).

• **Culturally sensitive care:** Understanding cultural, racial and religious differences in the provision of methadone care.

• **Goal setting:** Respecting all goals for change in substance use along the continuum from reducing use to abstinence, using early intervention strategies, medical and psychological treatment and follow-up supports.

• **Teamwork:** All care team members, including the patient, share the decision-making, development, implementation, and monitoring of a single service plan.

1.5 **Inter-Professional Collaboration (IPC)**

1.5.1 **Physician-Pharmacist Collaboration and Communication**

Evidence shows that lack of communication between MMT prescribers and pharmacists has been the direct cause of many problems in patient care.42

To optimize patient care, the following communication between physicians and pharmacists is essential:

1. Determine at the outset of treatment whether a pharmacy provides MMT services and is accepting new MMT patients
2. Determine the hours available for methadone dispensing
3. Discuss how and under which circumstance the pharmacist is to contact the MMT prescriber
4. Develop means for the pharmacist to reach the MMT prescriber for urgent issues
5. Document and relay pertinent clinical information in a timely fashion (e.g., pregnancy, missed doses, aberrant behaviour, vomited doses, etc.)

Inter-professional collaboration is a principle supported by both CPSNS and the Nova Scotia College of Pharmacists (NSCP). The pharmacist and the physician play an important role in MMT. This can include joint development of policies and procedures to ensure continuity of patient care and secure custody and storage of methadone. Collaboration and regular communication between pharmacists and MMT prescribers can have positive impact on patient care and safety. The use of a treatment agreement between MMT prescribers and pharmacists is highly recommended (see “Appendix B: Sample MMT Prescriber Pharmacist Treatment Agreement Letter”).
1.6 Conclusion

**MMT saves lives and reduces violent and non-violent crime, drug use, and the transmission of HIV, Hepatitis C, and other diseases.**

The medical literature supports that MMT is a well-established and cost-effective treatment paradigm. The effectiveness of MMT is enhanced with contingency management and counselling.
2. MMT PRESCRIBERS AND PRACTICE SETTINGS

MMT is prescribed in different settings, using many different models of care.

OVERVIEW

MMT is prescribed in different settings, using different models of care such as: primary care, MMT-focused practices, community-based agencies, hospitals, withdrawal management units (WMU), residential addiction treatment centres, and correctional facilities. This section outlines the requirements of all MMT prescribers in these various practice settings.

STANDARDS

1. The MMT prescriber shall successfully complete the CAMH Opioid Dependence Treatment Core Course (or the equivalent at the discretion of the Registrar) prior to obtaining a methadone exemption.
2. The MMT prescriber shall complete eight hours of clinical training with a MMT mentor, approved by the CPSNS prior to obtaining a methadone exemption.
3. MMT prescribers must stay current in the field of methadone maintenance.

GUIDELINES

1. It is suggested that MMT prescribers successfully complete the full CAMH Opioid Dependence Certificate Program within three years of receiving an exemption.

2. Physicians in a solo MMT practice should maintain a collaborative relationship with other MMT prescribers.

There are two classes of Health Canada exemptions allowing licensed physicians to prescribe methadone in Canada – one for analgesia and one for dependency. Both exemptions are granted by Health Canada on the recommendation of the appropriate medical regulatory authority.

The Health Canada exemption for analgesia is intended for physicians who are treating chronic pain patients with methadone. Such physicians are advised to be familiar with the following document:

US Centers for Disease Control and Prevention’s (CDC) Guidelines for Prescribing Opioids for Chronic Pain

Many Nova Scotia physicians with exemptions for the use of methadone in analgesia have obtained the exemption for use in the care of a single patient with chronic pain. In such situations, the decision to initiate methadone for chronic pain is often made in consultation with a pain specialist.
A recommendation to Health Canada for approval of the exemption allowing physicians to prescribe methadone for dependency requires approval by the CPSNS Methadone Maintenance Support Program as part of the Health Canada application process (see “2.1 Obtaining a Health Canada Methadone Exemption for Dependency”).

2.1 Obtaining a Health Canada Methadone Exemption for Dependency

For an exemption to prescribe MMT, a physician must:
1. Hold a licence to practise medicine in Nova Scotia
2. Be in good standing with the CPSNS
3. Complete an application form and agree to practise in accordance with the CPSNS Methadone Maintenance Treatment Handbook 2nd Edition
4. Successfully complete the Opioid Dependence Treatment Core Course through CAMH
5. Complete eight hours of clinical training with a MMT prescriber approved by the CPSNS

For more information contact the CPSNS Methadone Maintenance Support Program: (902) 421-2216. The above conditions must be met in entirety for CPSNS to support a College member's application to Health Canada for a methadone exemption for dependency. An application from Health Canada to apply for an exemption can be found here. (See “Appendix C: Resources”).

The initial exemption is issued for three years, with a requirement for renewal every three years. Within each three-year renewal cycle, every MMT prescriber must have a practice review conducted by an experienced MMT prescriber. This review is designed to provide constructive feedback to the MMT prescriber both to maximize patient and community safety, and to support the MMT prescriber in their efforts to provide evidence-based methadone maintenance therapy in accordance with the Standards and Guidelines of the Handbook. It includes a review of selected patient files using a tool based on the Standards and Guidelines, and a discussion with the MMT prescriber to provide recommendations for practice improvement.

2.2 MMT prescriber Practice Settings

2.2.1 Primary Care MMT Practice

Family physicians may provide MMT in solo medical practice or group practices such as private medical clinics, hospital-based health clinics, and community-based health centers, including chronic care centers. Methadone prescribing may be integrated with the physician's medical practice or separate from it. Some MMT patients in Nova Scotia receive medical care as well as MMT from their primary-care physician. Some physicians in private practice provide psychotherapy as well as MMT and other medical services.

MMT based in primary practice has several advantages, such as being less stigmatizing and addressing previously unmet medical needs. However, patients may be required to travel to receive pharmacy, laboratory, and other specialized addiction and support services.
Group practices may have advantages over solo practice.

Research indicates that group practices may have better retention rates than solo practitioners and the integration of primary-care services within group practices is likely to lead to better outcomes for MMT patients.47

2.2.1.1 Solo Practitioners
Solo MMT practitioners, in both rural or urban settings, run the risk of practising MMT in isolation with few collaborative opportunities. It is encouraged for solo practitioners to maintain a collaborative MMT support network. This could include ongoing open communication with other local MMT providers, an MMT mentor, membership in the Atlantic Mentorship Network for Pain and Addiction (AMNPA) or MMT support through the Nova Scotia Prescription Monitoring Program (NSPMP). Ongoing yearly attendance at addiction and pain-related conferences is encouraged so as to network and keep current with MMT.

2.2.2 MMT-Focused Practice
MMT prescribers, whose practice is focused on methadone maintenance and substance use disorder, may be family physicians or Royal College of Physicians and Surgeons of Canada (RCPSC) specialists. Such physicians may have additional training or exam certification in addiction medicine and focus their clinical practices in MMT. Their practices may consist entirely or predominantly of MMT patients. MMT prescribers may have a separate practice, but may not have the capacity to provide primary care services to MMT patients. Patients may need to seek out primary care or psychosocial services in the community. In situations where the patient does not have immediate access to primary care, the MMT prescriber is encouraged to provide critical primary care until the patient obtains a primary care provider.

2.2.3 Community-Based MMT Practice
Community-based physicians may provide services through publicly funded, community-based clinics that integrate psychosocial care. Examples include HIV/AIDS services, mental health agencies, and clinics run by local public health departments.

These clinics often specialize in serving specific populations or issues such as HIV/AIDS, Hepatitis C, and marginalized, street-involved, or homeless populations. Many community-based clinics operate under a “harm-reduction” philosophy and involve a multi-disciplinary team in the patient’s care (i.e., social workers, nurses, case managers, dieticians, pharmacists).

These clinics usually offer a comprehensive MMT program that includes health and social supports. This “one-stop clinic” model saves time and expenses for the patient and addresses the patients’ quality-of-life issues. It also helps ensure better coordination and communication among the service providers.
2.2.4 Hospital and Corrections-Based MMT Practice

MMT prescribers in hospitals, and some residential addiction treatment centres, maintain patients on their community-based MMT program or may initiate MMT in some circumstances.

Hospital-based physicians providing care for MMT patients may apply for temporary methadone exemptions, one patient at a time, to manage admitted medical, surgical, and psychiatric patients. They may not have specialized knowledge of opioid use disorders (see section “14. Hospital-Based MMT”).

Correctional facilities manage many patients with opioid dependence and should provide MMT (see section “13. MMT in Federal/Provincial Correctional Facilities”).
3. OPTIONS OTHER THAN MMT FOR OPIOID DEPENDENCE

The main treatment options for opioid dependence are abstinence-based treatments and opioid agonist therapy (also known as opioid substitution/replacement therapy) with methadone or buprenorphine.

OVERVIEW

The main treatment options for opioid dependence are abstinence-based treatments and opioid agonist therapy (also known as opioid substitution/replacement therapy) with methadone or buprenorphine. MMT prescribers must be familiar with the indications, benefits, and risks of each option, in order to provide the safest and most effective treatment for their patients. This section briefly reviews options other than MMT. Physicians contemplating these options should consult with appropriate addiction treatment resources.

STANDARDS

1. The MMT prescriber shall inform the patient of all the treatment options to treat opioid dependence, including risks and benefits, so they may make an informed decision about the use of opioid agonist therapy prior to initiation.
2. As with any form of patient care, physicians prescribing substitution therapy for opioid dependence with buprenorphine must have the appropriate knowledge, skills and judgment to do so safely.

GUIDELINES

1. Physicians planning to prescribe buprenorphine should complete both the online CAMH buprenorphine CME course (or equivalent) and the CAMH Opioid Dependence Treatment Core Course.
2. The MMT prescriber should be familiar with the individual patient factors to be taken into consideration in the choice of buprenorphine for opioid dependence as an opioid agonist therapy.
3. The MMT prescriber should be familiar with the CAMH Buprenorphine/Naloxone for Opioid Dependence: Clinical Practice Guidelines.

Below is a link to an educational/training opportunity related to buprenorphine/naloxone providing information about the course including course schedule and registration details:


3.1 Abstinence-Based Treatments

Abstinence-based treatment may consist of medically supervised withdrawal from
opioids, followed by an inpatient or outpatient psychosocial treatment program, and/or 12-Step group participation (e.g., AA, CA, NA). While abstinence-based treatment is less effective than MMT, patients may prefer a trial of abstinence before committing to long-term opioid agonist therapy.48 (See “Appendix C: Resources” for a list of withdrawal management and addiction treatment facilities in Nova Scotia.)

Experience in Nova Scotia reveals that the proportion of people with opioid use disorder who successfully complete detoxification tends to be low, while the rates of relapse to opioid use following detoxification are relatively high.

According to a 2009 Cochrane Database review of MMT, methadone is an effective maintenance therapy intervention for the treatment of heroin dependence as it retains patients in treatment and decreases heroin use better than treatments that do not utilize opioid replacement therapy.22

Patients should be warned that after detoxification:
1. Their tolerance to opioids will go down, putting them at risk for overdose if they relapse to their usual opioid dose.
2. The emotional distress associated with opioid withdrawal may increase the risk of suicidal ideation.

MMT prescribers should take appropriate precautions to avoid these adverse outcomes.

3.1.1 Indications for Abstinence-Based Treatment

The following factors should be considered when determining the appropriateness of abstinence-based treatment:

Patient Preference
Many patients prefer a trial of detoxification first, as some view opioid agonist treatment as inconvenient and time-consuming.

Prior Sustained Response to Abstinence-Based Treatment
Patients may consider re-trying abstinence-based treatment if they previously maintained a long period of abstinence following psychosocial treatment.

Good Prognostic Factors
Patients may be more prepared for medically supported withdrawal followed by abstinence if they are highly motivated for change and opioid abstinence, and have good prognostic factors for recovery from addiction (i.e., socially stable, supportive social network, less than one year of addiction, no major psychiatric co-morbidity, not addicted to other drugs).49, 50, 51, 52, 53 (See section “12. Special Populations”)

3.1.2 Pharmacotherapy for the Symptomatic Treatment of Opioid Withdrawal

The most common drugs used to alleviate opioid withdrawal symptoms are alpha-adrenergic agonist (e.g., clonidine), and opioid agonists (e.g., methadone and buprenorphine). Buprenorphine tapering is substantially more effective than clonidine and other non-opioid treatments in reducing opioid withdrawal symptoms and retaining patients in treatment (See “Table 01: Withdrawal Management”).
## Options Other Than MMT for Opioid Dependence

### Table 01: Withdrawal Management

<table>
<thead>
<tr>
<th>Drug</th>
<th>Dose</th>
<th>Opioid Withdrawal Symptoms</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Buprenorphine</strong></td>
<td>Initial dose 4-8 mg a day sublingually</td>
<td>Most withdrawal symptoms</td>
</tr>
<tr>
<td></td>
<td>Increase by 2-4 mg a day until therapeutic dose (usual range 8-16 mg)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Inpatient: reduce by 2 mg every 1 to 3 days</td>
<td></td>
</tr>
<tr>
<td><strong>Methadone</strong></td>
<td>Outpatient: reduce by 2 mg every week</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• 20 mg loading dose</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• 3 hours after loading dose, add 5 mg every 3 hours until stable</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(maximum 40 mg in 24 hours)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Day 3 to 7, taper to zero</td>
<td></td>
</tr>
<tr>
<td><strong>Clonidine</strong></td>
<td>0.1 mg 1-2 tabs orally, twice daily to three times daily</td>
<td>Agitation, diaphoresis, and sympathetic overdrive</td>
</tr>
<tr>
<td><strong>Dimenhydrinate</strong></td>
<td>50 mg orally or rectally as needed</td>
<td>Nausea</td>
</tr>
<tr>
<td><strong>Ibuprofen</strong></td>
<td>200 mg 1-3 tabs orally, four times a day as needed</td>
<td>Myalgia</td>
</tr>
<tr>
<td><strong>Acetaminophen</strong></td>
<td>1 gm qid as needed</td>
<td>Myalgia</td>
</tr>
<tr>
<td><strong>Loperamide</strong></td>
<td>2 mg orally as needed (maximum 6 tabs a day)</td>
<td>Diarrhea stool</td>
</tr>
<tr>
<td><strong>Trazodone</strong></td>
<td>50-100 mg orally at night as needed</td>
<td>Insomnia</td>
</tr>
<tr>
<td><strong>Benzodiazepines</strong></td>
<td>At MMT prescriber’s discretion Caution: risk of respiratory depression and death</td>
<td>Anxiety</td>
</tr>
</tbody>
</table>
Cautions for use of clonidine:
1. Do not prescribe clonidine if blood pressure < 90/60, or if the patient is pregnant, on antihypertensives or has heart disease.
2. Warn patients about postural symptoms and drowsiness. Postural symptoms are dose-related, so be cautious with higher doses.
3. Warn about mixing with opioids, or having prolonged hot baths (both can cause hypotension).
4. Do not prescribe for longer than two weeks (rebound hypertension).

3.2 Buprenorphine Maintenance Treatment

Long-acting opioids used in the treatment of opioid dependence include buprenorphine and methadone. While this document focuses on the use of methadone, this section introduces the use of buprenorphine. The CAMH document Buprenorphine/Naloxone for Opioid Dependence: Clinical Practice Guidelines has been endorsed by the MMSP Committee of the CPSNS and is the recommended resource.

Buprenorphine/naloxone is a sublingual tablet that relieves withdrawal symptoms and cravings for 24 hours or more when administered in appropriate doses. Buprenorphine (a partial agonist), which is an effective therapy for opioid dependence, is combined with naloxone (an opioid antagonist), which is intended to limit intravenous misuse and the potential for diversion. The naloxone component of buprenorphine/naloxone has limited sublingual and oral bioavailability, and is inactive when is taken as prescribed.

While evidence suggests that buprenorphine is safer than methadone in the event of overdose because of its ceiling effect, buprenorphine is abused and can result in death due to overdose, particularly in combination with other sedating substances, such as alcohol or benzodiazepines. In addition, evidence suggests that buprenorphine may be less effective than methadone at retaining patients in treatment.

The maximum dose for buprenorphine (24 mg) is probably less effective than methadone at doses above 60 or 80 mg. Therefore, methadone may be more appropriate for patients who are dependent on large doses of opioids and who have failed at buprenorphine/naloxone treatment may be switched to methadone. Switching from methadone to buprenorphine is clinically more difficult.

Buprenorphine can be used for opioid dependence in situations where MMT has failed or where contraindications exist:
- Patients with prolonged QTc interval secondary to methadone treatment or any other cause
- Patients who are unable to tolerate methadone
- Patients who have failed methadone maintenance treatment
Initially assessing a patient’s suitability for MMT includes several important first steps.

**OVERVIEW**

Determining a patient’s suitability for MMT requires an initial assessment, including an appropriate history, identification of contraindications or risk factors to MMT, a focused physical examination and a urine drug screen. Once suitability for MMT is determined, the initial assessment proceeds with a discussion and review of treatment options and the risks and benefits of MMT, including a treatment agreement, and obtaining other appropriate investigations.

**STANDARDS**

1. The MMT prescriber shall establish that the patient meets the DSM V criteria for opioid use disorder prior to MMT initiation (see “Appendix D: Diagnostic Criteria for Substance Dependence”).
2. The MMT prescriber shall be knowledgeable of any potential risks for methadone toxicity prior to MMT initiation and manage the patient’s care accordingly.

**GUIDELINES**

1. The MMT prescriber should consider abstinence-based treatment and/or opioid substitution for withdrawal purposes for patients whose duration of opioid dependence is less than one year.
2. The MMT prescriber should consider MMT for patients only after a thorough assessment and discussion of risks and benefits and other treatment options.
3. The MMT prescriber shall ensure there has been a discussion with the patient about potential issues with methadone prior to MMT initiation (i.e., discussing side effects, risks, and difficulty withdrawing and tapering off of methadone).
4. The MMT prescriber shall obtain a patient profile through the Nova Scotia Prescription Monitoring Program (NSPMP) and shall register the patient in the NSPMP Methadone Program Monitoring Service.
5. The MMT prescriber should conduct and document a comprehensive patient history prior to initiating MMT in accordance with section “4.2”.
6. The MMT prescriber should conduct and document a focused physical examination prior to initiating MMT or within a reasonable amount of time (i.e., during the early induction phase).
7. If an initial UDS is positive for EDDP (see section “1.3.3 Metabolism”), the MMT prescriber should verify the source of methadone with the patient (such as non-prescribed or obtained by prescription in another province).

8. The MMT prescriber should request blood work (screening for HIV, and Hepatitis A, B, and C) during initiation or within a reasonable amount of time after initiation on MMT.

9. The MMT prescriber should assess for pregnancy in female patients of childbearing potential as appropriate, within a reasonable amount of time after initiation.

10. All physicians who wish to prescribe methadone should apply for eAccess through the Nova Scotia Prescription Monitoring Program.

11. The MMT prescriber should have a written treatment agreement signed by the patient and documented in the chart (see “Appendix E: Sample Methadone Maintenance Treatment Agreement” and section “4.1 Criteria for MMT”).

### 4.1 Criteria for MMT

The MMT prescriber should only consider MMT for patients after a thorough assessment and discussion about all treatment options.

The MMT prescriber should consider the following criteria for MMT prior to initiation:

1. Opioid use (a urine drug screen that is positive for opioids and supports the patient’s history). Be aware of the possibility of a false negative UDS, particularly if the tester uses immuno-assay technology, and the opioid used is synthetic (fentanyl, methadone, buprenorphine, meperidine), or semi-synthetic (oxycodone, hydromorphone) (See section “4.2.6.1 Initial Opioid Negative Urine”, section “6.1 UDS Techniques”, and “Appendix L: Urine Drug Screen Interpretation”).

2. Meets DSM V criteria for opioid substance use disorder (see “Appendix D: Diagnostic Criteria for Substance Dependence”).

3. No contraindications to MMT.

4. Agreement to terms and conditions of the MMT program.

### TABLE 02: CONTRAINDICATIONS

<table>
<thead>
<tr>
<th>Absolute Contraindications</th>
<th>Relative Contraindications</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Hypersensitivity to methadone</td>
<td>Use with caution in patients with:</td>
</tr>
<tr>
<td>• Significant respiratory compromise</td>
<td>• Paralytic ileus</td>
</tr>
<tr>
<td></td>
<td>• Cardiac conduction abnormalities</td>
</tr>
<tr>
<td></td>
<td>• Chronic conditions accompanied by hypoxia, hypercapnia, or decreased respiratory reserve</td>
</tr>
</tbody>
</table>
INITIAL PATIENT ASSESSMENT

Patients may be suitable candidates for MMT even if it was unsuccessful or discontinued in the past. The MMT prescriber should ensure that there has been a discussion with the patient about potential issues with methadone including side effects, risks, and difficulty of tapering off. Patients must be counselled about the risks of relapse if they stop methadone therapy, and the risks of toxicity and overdose due to reduced opioid tolerance if they relapse.

4.2 Assessing a Patient for MMT Initiation

There are a number of important areas to consider with regards to patient assessment for this population of patients (See “Appendix F: Sample Initial Patient Assessment Form”).

4.2.1 Addiction History

The addiction history should include all of the following:

- Sufficient information to ensure the patient meets the DSM V criteria for opioid use disorder prior to MMT initiation
- Identification of any potential risks for methadone toxicity prior to MMT initiation
- Pattern of use of all major drug classes (including amphetamines, cocaine, hallucinogens, benzodiazepines, cannabis, solvents, steroids, tobacco, and alcohol)
- Previous addiction treatment history and response
- High-risk behaviour such as needle sharing, commercial sex work, and driving while intoxicated
- Screening for behavioural addictions (see “Appendix G: Behavioural Addictions”)

Opioid tolerance is difficult to establish by history. If in doubt, it is safer to initiate on a lower dose. Lowered tolerance is more likely in patients who report non-daily opioid use, daily use of codeine, or daily use of oral opioids at moderate doses. Typically, patients who use opioids intranasally (i.e., snorting) have a lower tolerance than patients who inject opioids. Tolerance is lower in patients who have been abstinent from opioids for more than six days (e.g., patients who have been recently discharged from a correctional facility, withdrawal management centre, or treatment centre).

TABLE 03: PATIENT FACTORS THAT INCREASE RISK OF METHADONE TOXICITY

<table>
<thead>
<tr>
<th>High-Risk Patients</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Recent benzodiazepine use</td>
</tr>
<tr>
<td>• Use of other sedating drugs</td>
</tr>
<tr>
<td>• Alcohol-dependent patients and heavy alcohol consumers (binge drinkers)</td>
</tr>
<tr>
<td>• Over 60 years old</td>
</tr>
<tr>
<td>• Respiratory illnesses</td>
</tr>
<tr>
<td>• Taking drugs that inhibit methadone metabolism</td>
</tr>
<tr>
<td>• Lower opioid tolerance</td>
</tr>
<tr>
<td>• Decompensated hepatic disease</td>
</tr>
<tr>
<td>• Recent discharge from inpatient rehabilitation facility</td>
</tr>
<tr>
<td>• Recent incarceration</td>
</tr>
</tbody>
</table>
4.2.2 Medical History

- Any relevant current or past medical history
- Current or past medication use including non-prescription products
- Current or past hospitalizations and surgeries

4.2.2.1 Cardiovascular History

Careful screening for the risk of cardiac conduction abnormalities must be performed.

Particular attention must be paid to risk factors for Torsades de Pointes:

<table>
<thead>
<tr>
<th>Risk Factor</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Older age</td>
<td></td>
</tr>
<tr>
<td>Family history of long QT syndrome</td>
<td>Unexplained sudden death</td>
</tr>
<tr>
<td>Structural heart disease</td>
<td>Myocardial infarction, congestive heart failure, valvular disease, cardiomyopathy</td>
</tr>
<tr>
<td>Liver dysfunction</td>
<td></td>
</tr>
<tr>
<td>HIV infection</td>
<td></td>
</tr>
<tr>
<td>Low potassium level</td>
<td>On drugs that lower potassium (e.g., diuretics)</td>
</tr>
<tr>
<td>Low prothrombin level</td>
<td></td>
</tr>
<tr>
<td>On medications that inhibit Cytochrome P450 3A4</td>
<td>See “Appendix A: Drug to Drug Interactions”</td>
</tr>
<tr>
<td>Alcohol use</td>
<td></td>
</tr>
<tr>
<td>Cocaine use</td>
<td></td>
</tr>
<tr>
<td>On medications that prolong QTc</td>
<td>See “Appendix H: Medications that Cause Prolonged QTc Interval”</td>
</tr>
</tbody>
</table>

1 Table is adapted from: Methadone – associated QTc prolongation: A case report and review of the literature 51
While it seems to be dose-dependent, it is important to note that sudden cardiac death associated with methadone has been seen at dosages as low as 29 mg a day.

This means that arrhythmia can occur in dosages commonly used to treat addiction, and that dosage is just one consideration with regard to limiting arrhythmia risk. That said, high methadone doses have been associated with prolonged QTc interval, which can cause Torsades de Pointes (a potentially fatal ventricular arrhythmia). One study found that approximately 5% of patients on MMT had QTc > 500 msec – the value associated with increased mortality. All of these patients were on doses in excess of 120 mg.

4.2.2 Chronic or Recurrent Pain
The MMT prescriber should obtain information regarding past illness or injury resulting in chronic pain.

4.2.2.3 Blood-Borne Pathogens
The MMT prescriber should obtain information regarding history of serological testing for HIV, Hepatitis C, and immunity to Hepatitis A and B.

4.2.3 Psychiatric History
The MMT prescriber should obtain information regarding current and past psychiatric history and current mental status (cognitive function) including suicidal ideation. History of significant childhood or adult trauma.

4.2.4 Social History
The MMT prescriber should obtain information regarding social situations including housing, supports, transportation, child custody, legal problems, financial stability, partners’ drug-use history, pending incarcerations, access to a pharmacy that provides methadone, etc.

4.2.5 Focused Physical Examination
The MMT prescriber should conduct a focused physical examination prior to initiating MMT or within a reasonable amount of time (i.e., during the induction phase). Special attention should be given to signs of opioid withdrawal, malnutrition, jaundice, hepatosplenomegaly, cardiovascular and respiratory status, pupil size, needle tracks, and abscesses.

4.2.6 Urine Drug Screening (UDS)
Initial UDS facilitates objective corroboration of the patient history of opioid drug-use. Some particular UDS results need to be taken into consideration prior to MMT initiation. See section “6. Urine Drug Screening (UDS)” for additional information.

4.2.6.1 Initial Opioid Negative Urine
(see section “6.1 UDS Techniques”, and “Appendix L: Urine Drug Screen Interpretation”)
A patient may be appropriate for initiation on methadone even if their initial UDS is negative for opioids, if any of the following circumstances are met:

• The patient has signs and symptoms of obvious opioid withdrawal
OR
• The patient has obvious fresh track marks
OR
• The patient has been on previous MMT
  (discuss inconsistency with patient).

A urine drug screen may represent a false negative result in the context of active opioid addiction if:

a. The urine is screened using immuno-assay technology, and the opioid used is synthetic (fentanyl, methadone, meperidine, buprenorphine rarely test positive) or semi-synthetic (oxycodone detected 10% of the time, hydromorphone detected 70% of the time).

b. The opioid used is present in the urine sample, but its level is under the cut-off level of the tester being used (either immuno-assay or mass spectrometry). This can occur if the patient is using smaller amounts of opioid, or if they have not used in the two or three-day period prior to the test.

In the event of a negative initial UDS, the MMT prescriber shall:
1. Obtain corroborating information from a previous opioid prescribing physician and/or reliable agencies as well as NSPMP patient profile;
2. Consult with an experienced MMT prescriber if information is unavailable;
3. Send a urine sample for mass spectrometry confirmatory testing. (In the absence of strong objective clinical evidence in the setting of a negative initial UDS, a confirmatory test must be submitted. Please refer to section “6.4 Initial UDS”.)

4.2.6.2 Methadone-Positive Initial UDS
There are many patients who come for an initial assessment for MMT who have previously tried/used methadone that was not prescribed for them. With a positive initial UDS for EDDP (a methadone metabolite), it is important to document the patient's history of methadone use.

To avoid MMT duplication and toxicity, the MMT prescriber must obtain a patient drug profile from NSPMP to ensure that the patient is not receiving methadone from another MMT program.

4.2.7 Other Tests
In addition to UDS, the MMT prescriber should request appropriate screening blood work for HIV, Hepatitis A and B, Hepatitis C, and RPR during initiation or within a reasonable amount of time after initiation on MMT. In females of childbearing age, a urine pregnancy test should be done prior to initiating MMT when appropriate. Other relevant blood work may include BUN, creatinine, electrolytes, ALT, AST, GGT, ALP, serum albumin, and INR. Other relevant blood work can be ordered as indicated. Occasionally, patients refuse or will not comply with this directive. The MMT prescriber should discuss the concerns with the patient and document the discussion.

2 To determine the status of immunity to hepatitis A and B
INITIAL PATIENT ASSESSMENT

4.3 Documentation

MMT prescribers must clearly document in the patient’s chart the benefits derived from MMT, any side effects or complications, the methadone prescription provided, including dose, directions, and dispensing intervals, and the treatment plan that outlines how further benefits are to be achieved.

Download CPSNS Policy on the Content and Maintenance of Medical Records.

4.3.1 The Nova Scotia Prescription Monitoring Program (NSPMP)

Patients may not receive a prescription for methadone from more than one source at a time. For this reason, prior to initiating treatment, the MMT prescriber should contact NSPMP.

A current patient profile must be obtained and the patient should be enrolled in the NSPMP Methadone Program Monitoring Service. A current patient profile can be obtained either through the NSPMP eAccess web application or by contacting NSPMP directly. This service will provide the physician with a patient drug profile prior to initiating treatment. Also, NSPMP conducts weekly monitoring of patient profiles and advises physicians if the patient has obtained a monitored drug from other prescribers during the course of their treatment.

4.3.2 Treatment Agreement

Written treatment agreements (or “letters of understanding”) are documents that list the risks and benefits and the expectations of involvement in an MMT program. The use of treatment agreements in MMT programs has proven beneficial to both the patient and the MMT prescriber. A signed treatment agreement is documentation of informed consent (see “Appendix E: Sample Methadone Maintenance Treatment Agreement”).

A treatment agreement should include:

- Patient and provider roles and responsibilities
- MMT program expectations and structure
- Doctor-patient confidentiality and exceptions
- Expectations of communication with other appropriate providers (e.g., pharmacist, treating primary care physicians, consultants)
- Descriptions of risks and benefits to patient
- General consent (e.g., access to patient charts for MMT quality improvement peer review of their MMT practice)

It is recommended that the MMT prescriber communicate his/her expectations with the pharmacist at pharmacies where their patient’s methadone is dispensed. This can be accomplished through one of the following:

a. A letter to the pharmacist outlining details of the treatment agreement along with expectations regarding missed doses or intoxication. This may also include the MMT prescriber’s contact information in case of emergency (see “Appendix B: Sample MMT Prescriber Pharmacist Treatment Agreement”)


Letter”), such as a methadone dispensing error in which the patient receives a significantly higher dose of methadone than prescribed.

b. A verbal discussion with the pharmacist outlining the details of the MMT prescriber treatment agreement with the MMT patient along with the MMT prescriber’s expectations regarding missed doses or intoxication. It may also include communicating the MMT prescriber’s contact information in case of emergency.

Pharmacists provide methadone to patients with substance use disorder in accordance with the Standards of Practice adopted by the Nova Scotia College of Pharmacists (NSCP). These standards align well with this document, and physicians can refer pharmacists to their standards posted on the NSCP website as needed.
Patients are at a high risk of death from methadone overdose in the first two weeks of MMT.

OVERVIEW

Patients are at a high risk of death from methadone overdose in the first two weeks of MMT. Prospective population studies from the UK and Australia have revealed that during the first two weeks of methadone treatment the crude mortality rate was 17 per 1000 person years.\textsuperscript{71, 72}

The risk of fatal methadone overdose during this time period is estimated to be 6.7 times higher than that of heroin addicts not in treatment, and 98 times higher than that of patients on maintenance doses of methadone in treatment for longer periods.\textsuperscript{73} A single day’s MMT dose can be lethal to non-tolerant individuals.\textsuperscript{74} The ratio between the maximum recommended initial dose (30 mg) and a potentially fatal single dose is exceedingly narrow compared to other medications.\textsuperscript{75, 76}

The prolonged half-life (as long as 55 hours in methadone-naïve individuals) and slow bioaccumulation of methadone accounts for its insidious onset of overdose. During dose increases, serum levels accumulate over several days even if the dose is kept the same. Therefore, a dose that is barely adequate on day one can be toxic by days three to five. This is particularly relevant during initiation on MMT. The patient may appear relatively alert during the day succumbing to an overdose during a nap or at night. Early signs of toxicity include ataxia, slurred speech, “nodding off,” and emotional liability.\textsuperscript{77}

Concurrent use of benzodiazepines, alcohol, and other sedating drugs substantially increases the risk of death from methadone toxicity. One study found evidence of polydrug use in 92% of methadone-related deaths.\textsuperscript{78}

For the purposes of this document, the use of methadone for the treatment of opioid use disorder consists of three distinct phases:

Phase 1: \textit{Induction}: the initial period of MMT (less than 60 mg daily) when the dose is increased safely but rapidly enough to minimize significant withdrawal symptoms

Phase 2: \textit{Stabilization}: the period during which the stable dose is being approached (usually 60 mg and above)

Phase 3: \textit{Maintenance}: the period during which a stable dose has been reached

The listing of the Standards and Guidelines below has been organized according to these three phases.
PHASE 1: Induction (dosing up to 60 mg a day)

STANDARDS

During the Induction Phase:
1. The MMT prescriber shall counsel the patient on strategies to minimize risks associated with methadone (including explaining the risks of diverted methadone).
2. The MMT prescriber shall ensure that the starting methadone dose for all patients is 30 mg or less and shall prescribe dose increases of no more than 10 mg every three days or 15 mg every five days.
3. The MMT prescriber shall ensure that the starting methadone dose for patients at higher risk for methadone toxicity is 20 mg or less and shall prescribe dose increases of no more than 5 mg every three days or 10 mg every five days.
4. The MMT prescriber shall ensure that the initial methadone dose during induction for new MMT patients who have been abstinent from opioids for seven or more days is 10 mg or less and shall prescribe dose increases of no more than 5 mg every three days during the induction phase (5 mg every five days recommended).
5. The MMT prescriber shall assess the patient before each dose increase and in-person at least weekly.

GUIDELINES

During the Induction Phase:
1. The MMT prescriber should avoid prescribing any sedating drugs. The MMT prescriber should also advise the patient to avoid any new sedating medications or drugs.
2. If the patient misses 1 dose, the same dose may be repeated and the dose should not be increased to the next dose level until 3 total doses and 2 consecutive doses immediately before the next dose increase has been given.
3. If the patient misses 2 consecutive doses, the dose should return to the previous dosage level for a minimum of 2 consecutive days before increasing to the current dosage again.
4. If the patient misses 3 or more consecutive doses, the MMT prescriber or pharmacist shall cancel all subsequent doses. The MMT prescriber should assess the patient in person, and restart the induction process at the original initial dose (10 to 30 mg).
5. For patients who are addicted to high daily doses of benzodiazepines, the MMT prescriber should either taper the benzodiazepine prior to MMT initiation or provide small, tapering doses of benzodiazepine during MMT initiation (in as small a dose as safely possible to avoid benzodiazepine withdrawal), preferably in a supervised setting and in consultation with an addiction medicine physician.
6. The MMT prescriber should identify and manage risk factors for increased QTC and Torsades de Pointes arrhythmias, and should obtain an ECG at time of induction for patients with these risk factors.

PHASE 2: Stabilization (active titration from 60 mg a day to the stable dose)

PHASE 3: Maintenance (stable methadone dose)

The standards and guidelines for Phase 2 and Phase 3 are the same.
DOSING DURING INDUCTION, STABILIZATION, AND MAINTENANCE

STANDARDS

During the stabilization and maintenance phases:
1. When the patient’s dose of methadone is still changing, the MMT prescriber shall see and assess the patient prior to each dose increase. The MMT prescriber shall increase the dose by no more than 10 mg every five days (10 mg every seven days recommended), depending on the patient’s cravings, opioid use, withdrawal symptoms, and underlying risk for toxicity.
2. The MMT prescriber shall order an ECG with a calculated QTc interval for patients at a dose of 150 mg and then again after every 30-50 mg dose increase.

GUIDELINES

During the stabilization and maintenance phases:
1. If a patient misses 3-4 consecutive doses, the MMT prescriber should reduce the dose by 50% or to a dose of 50 mg (whichever is higher). The dose can then be increased by no more than 10 mg every three days until the patient’s original maximum dose is reached.
2. If a patient has missed 5-6 consecutive doses, the MMT prescriber should reduce the dose to 30 mg a day. The dose can then be increased by no more than 10 mg every three days until the patient’s original maximum dose is reached.
3. If the patient misses 7 or more consecutive doses, the MMT prescriber should restart methadone at a maximum of 30 mg a day according to the induction protocol.
4. The MMT prescriber should assess patients weekly to monthly based on the recovery needs of the patient.
5. The MMT prescriber should consider reducing or tapering the dose of methadone if the patient reports sedation or other cognitive effects.
6. When considering a patient for a dose increase, the MMT prescriber should assess the patient for other conditions that are commonly confused with withdrawal symptoms.

Standards and Guidelines that Apply to all Phases

STANDARDS

1. On the methadone prescription, the MMT prescriber shall specify:
   • The total quantity of methadone written in numbers and words.
   • The daily dose mixed in orange drink crystals’ such as Tang © or other crystalline juice to a consistent final volume (100 ml recommended).
   • The days of the week that require witnessed ingestion.
   • Number of take-home doses (carries) per week authorized (when applicable).
   • Start and end dates.
2. The MMT prescriber shall ensure the reasons for all dosage adjustments are documented and should ensure doses are only increased after the patient has been assessed in-person, and it is determined that the patient is experiencing cravings and a constellation of withdrawal symptoms and/or ongoing opioid use.
GUIDELINES

1. If the patient has emesis after taking methadone, the MMT prescriber should only replace the dose if the emesis was witnessed by the pharmacist or staff. A witnessed vomited dose within 15 minutes of consumption can be replaced at 50% of the full dose.
2. Consideration should be given to replacing vomited doses for pregnant patients even if not witnessed.

5.1 Writing a Methadone Prescription

Safe dispensing of methadone begins with a well-written prescription. All prescriptions for methadone must be written on a NSPMP duplicate prescription pad. Collaboration and communication between the physician and the pharmacist help to enhance patient safety (see “Appendix I: Sample Methadone Prescriptions”).

On the methadone prescription, the MMT prescriber shall specify:
1. The total quantity of methadone in milligrams for the entire duration of the prescription, written in numbers and words (to help prevent tampering of prescriptions).
2. The daily dose mixed in orange drink crystals’ such as Tang © or other crystalline juice (the recommended final volume is 100 ml). This is consistent with the NSCP Standards of Practice for pharmacists, which includes a standardized 100 ml end volume to minimize compounding errors, to standardize the taste of a patient’s dose, and for consistency with practice in most of the other provinces.

Patients unable to tolerate the ingestion of 100 ml could receive their daily dose in a final volume of 50 ml. Patients pending surgery for any reason or “nothing by mouth” patients (NPO) should receive their daily dose in a final volume of 15 ml).
3. The days of the week that require witnessed ingestion.
4. The start and end date must be clearly written and followed by the physician and the pharmacist.
5. The number of take-home doses (or “carries”) per week, if applicable.

5.2 Strategies to Reduce Risks of Methadone

Methadone has demonstrated itself to be a substance with the potential to provide significant benefit as well as the potential to cause significant harm. The following should be practised to optimize the benefits while minimizing the risks:

Patient Education

Explain to the patient that it takes several weeks to reach the optimal dose of methadone, and that it is dangerous to try to relieve withdrawal symptoms with benzodiazepines, alcohol, or other opioids (including additional illicitly obtained methadone).

Advise the patient to:
1. Limit his or her driving or use of machinery after a dose increase, particularly in the first few hours after dosing.
2. Take the methadone dose in the morning during induction and stabilization, since the
risk of overdose is increased if it is consumed prior to sleeping.76

**Explain the risks of diverted methadone:**
- A single dose of methadone can be fatal.
- Patients are responsible for the safe storage of their methadone.

Whenever feasible (with the patient’s consent), a family member or significant other should be educated about the symptoms of overdose with clear instructions to seek urgent medical help at the first sign of toxicity. A patient information guide may be used to help explain the risks of and how to avoid methadone toxicity (see “Appendix J: Patient Guide on Methadone Overdose”).

**Consider providing access to Naloxone (Narcan®).**
Prompt administration of Naloxone (Narcan®) can be lifesaving in the event of opioid overdose. At the time of publication and in response to a nation-wide epidemic of opioid-related deaths, programs supporting naloxone administration by first-responders and appropriately trained bystanders are in a state of rapid expansion. Similarly, available forms of naloxone and prescribing requirements are changing, with some forms of naloxone now available over the counter and without a prescription.

MMT prescribers are strongly encouraged to facilitate access and training in naloxone administration for MMT patients and those likely in a position to assist in the event of an overdose (e.g. family, friends and associates, roommates etc.) Given methadone’s long half-life in comparison to naloxone, it is particularly important to emphasize that Naloxone administration must be accompanied by 911 activation and follow-up care in the nearest emergency department.

**Frequency of Visits**
Schedule patient visits at least once weekly during induction and with dose changes during stabilization. However, twice-weekly visits during the first two weeks of treatment are recommended, particularly if the patient is at increased risk for methadone toxicity. The MMT prescriber should inquire about sedation and other side effects at each visit. If there are concerns about sedation at a particular dose, the MMT prescriber should schedule an assessment of the patient two-six hours after the methadone dose.

**Take-Home Doses During Initial Titration**
Generally, no take-home doses should be granted during the first three months of treatment including weekend take-home doses, holiday take-home doses, or pharmacy closures. Accelerated take-home doses after two months of treatment may be considered under extraordinary circumstances (see section “7.3.4 Accelerated Take-Home Schedule”). In the case of pharmacy closure with no reasonable alternative access to witnessed dispensing, MMT prescribers should consider prescribing one weekend take-home dose only after four weeks on MMT and four consecutive weeks of negative UDS (see section “7.3.2 Weekend Take-Home Doses when Weekend Pharmacy Access is Limited”). If take-home doses are provided before three months of treatment, UDS should be obtained weekly during that period. During the first four weeks of treatment, in the case of pharmacy closures with no reasonable access to witnessed dispensing, it is preferable and safer for the patient to miss that day of methadone.
**Sedating Drugs**
Avoid initiating prescriptions for sedating drugs during the induction period and warn the patient to avoid using them without prior discussion with the MMT prescriber. Initiate these medications very cautiously during the stabilization phase. This includes benzodiazepines, non-benzodiazepine hypnotics, antipsychotics, antidepressants, dimenhydrinate (Gravol) and other sedating antihistamines. Even moderate, therapeutic doses of these drugs may increase the risk of overdose if they are initiated at the same time as methadone and the patient is not fully tolerant to their sedating effects. Patients should also be advised to avoid alcohol, especially during MMT induction.

**Benzodiazepine Users**
Benzodiazepine abuse and dependence are common in opioid-dependent individuals. As with opioids, it is difficult to accurately judge a patient’s benzodiazepine use and tolerance; therefore, benzodiazepine tapering (while difficult on its own) can be very complicated and potentially unsafe when attempted with methadone initiation. In situations where patients are addicted to high doses (50 mg of diazepam equivalent per day) (see “Table 05: Benzodiazepine Equivalent Doses”), the MMT prescriber should consider tapering to a lower dose prior to methadone initiation. This should be done only after careful assessment of the potential risks of delayed MMT induction, including the patient leaving treatment. Patients using lower doses should be monitored closely during induction. If benzodiazepine tapering during induction is considered, it should be carried out in a medically supervised setting. Patients taking high dose benzodiazepines at the time of methadone induction should be considered high risk and started at the lowest safe dose (usually 20 mg a day) and titration should be slower (5 mg every three days or 10 mg every five days). Once stabilization on methadone is achieved, a benzodiazepine tapering schedule should be started. Consultation with an addiction medicine physician is advised. Tapering off benzodiazepines should be initiated as soon as clinically appropriate. (See section “10.3.2 Sedative-Hypnotics Including Benzodiazepines”)

### TABLE 05: BENZODIAZEPINE EQUIVALENT DOSES

<table>
<thead>
<tr>
<th>BENZODIAZEPINE</th>
<th>APPROXIMATE ORAL EQUIVALENT DOSE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>LONG ACTING</strong></td>
<td></td>
</tr>
<tr>
<td>Chlordiazepoxide</td>
<td>10 mg</td>
</tr>
<tr>
<td>Clorazepate</td>
<td>7.5 mg</td>
</tr>
<tr>
<td>Diazepam</td>
<td>5 mg</td>
</tr>
<tr>
<td>Flurazepam</td>
<td>10 mg</td>
</tr>
<tr>
<td><strong>INTERMEDIATE ACTING</strong></td>
<td></td>
</tr>
<tr>
<td>Alprazolam</td>
<td>0.5 mg</td>
</tr>
<tr>
<td>Bromazepam</td>
<td>3 mg</td>
</tr>
<tr>
<td>Clobazam</td>
<td>0.25 mg</td>
</tr>
<tr>
<td>Clonazepam</td>
<td>0.25 mg</td>
</tr>
<tr>
<td>Lorazepam</td>
<td>1 mg</td>
</tr>
<tr>
<td>Nitrazepam</td>
<td>5 mg</td>
</tr>
<tr>
<td>Oxazepam</td>
<td>15 mg</td>
</tr>
<tr>
<td>Temazepam</td>
<td>15 mg</td>
</tr>
<tr>
<td><strong>SHORT ACTING</strong></td>
<td></td>
</tr>
<tr>
<td>Triazolam</td>
<td>0.25 mg</td>
</tr>
</tbody>
</table>
DOSING DURING INDUCTION, STABILIZATION, AND MAINTENANCE

Baseline ECG
As part of the initial assessment, the MMT prescriber should identify risk factors for Torsades, such as heart disease, family history of sudden cardiac death, or concurrent use of medications that affect QTc interval (see “Table 04: Risk Factors for QTc Prolongation in Patients on Methadone” and “Appendix H: Medications that Cause Prolonged QTc Interval”). Patients with known risk factors for Torsades should have an ECG upon initiation of methadone.

Communication with the Pharmacist
Written treatment agreements and regular verbal communication about the patient’s clinical presentation to both providers and pharmacists may enhance patient safety (see “Appendix B: Sample MMT Prescriber Pharmacist Treatment Agreement Letter”). It is recommended that the MMT prescriber communicate any high risk situations to the pharmacists, particularly risk of QTc prolongations.

Intoxication or Sedation at the Pharmacy
If the patient appears sedated or intoxicated at any phase of MMT, the pharmacist should be instructed not to dispense the methadone and to alert the MMT prescriber.

5.3 Clinical Criteria for Dose Adjustment
The MMT prescriber should consider increasing the methadone dose if the patient has cravings and opioid withdrawal symptoms, and/or ongoing opioid use (see “Appendix K: Sample Methadone Maintenance Clinical Note”). Withdrawal symptoms vary between patients.

Opioid withdrawal peaks at two-three days after the last use. Physical symptoms largely resolve by five-ten days, although psychological symptoms can continue for weeks or months.

Serious complications of withdrawal include miscarriage, premature labour, suicide, relapse, overdose due to loss of tolerance, and cardiac events in patients with unstable cardiac disease.

TABLE 06: OPIOID WITHDRAWAL SIGNS AND SYMPTOMS

<table>
<thead>
<tr>
<th>Physical Symptoms</th>
<th>Psychological Symptoms</th>
<th>Physical Signs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Muscoskeletal pain</td>
<td>Restlessness</td>
<td>Lacrimation</td>
</tr>
<tr>
<td>Headache</td>
<td>Dysphoria</td>
<td>Rhinorrhea</td>
</tr>
<tr>
<td>Abdominal cramps</td>
<td>Irritability</td>
<td>Dilated pupils</td>
</tr>
<tr>
<td>Nausea</td>
<td>Fatigue</td>
<td>Abdominal tenderness</td>
</tr>
<tr>
<td>Chills</td>
<td>Drug craving</td>
<td>Sweating</td>
</tr>
<tr>
<td>Hot flashes</td>
<td>Insomnia</td>
<td>Piloerection</td>
</tr>
<tr>
<td>Electric or uncomfortable feeling</td>
<td>Anxiety</td>
<td>Tachycardia</td>
</tr>
<tr>
<td>Yawning</td>
<td></td>
<td>Hypertension</td>
</tr>
</tbody>
</table>
A patient on an inadequate dose of methadone will describe a characteristic set of symptoms.

The symptoms appear a certain number of hours after the methadone dose, typically withdrawal symptoms will start the six-eight hours after the dose during induction and gradually start later and later as the dose is increased until they are only present before the next dose.

Alternative explanations for symptoms suggestive of withdrawal should be sought if the patient:
- Gives an inconsistent or a vague history of withdrawal symptoms
- Has one isolated symptom (such as insomnia or nausea)
- Advises the onset of symptoms is not related to the time of the dose
- Has been taking a stable dose for months and suddenly complains of withdrawal (see below)

A dose might be considered acceptable if the patient sleeps comfortably at night and only has mild withdrawal symptoms on awakening (such as sweating, yawning, or rhinorrhea) which are tolerable to the patient.

5.3.1 Conditions commonly misinterpreted as withdrawal

The clinician should elicit a clear history of opioid withdrawal in order to increase the methadone dose, including both the constellation of withdrawal symptoms and the timing of onset of those symptoms. Conditions which can be misinterpreted as opioid withdrawal should be considered carefully, particularly in situations when either withdrawal symptoms do not appear to be significantly decreasing with dose increases, or the methadone dose exceeds 100 mg.

Conditions which can be misinterpreted as opioid withdrawal include:

**Side effects:** Some side effects are also withdrawal symptoms, such as sweating, nausea, and disrupted sleep. Side effects and withdrawal symptoms can usually be differentiated from each other through careful history taking, including the timing of the symptom and the presence of other symptoms consistent with withdrawal. Side effects start around the peak of methadone blood levels, about three hours after dosing, whereas withdrawal symptoms occur maximally at the trough, just before the next dose. Opioid withdrawal almost always consists of a constellation of symptoms. One symptom in isolation, such as disrupted sleep, is not usually indicative of withdrawal, and requires consideration of other possible explanations.

**Diversion:** Patients may exaggerate or fabricate withdrawal symptoms in order to have an increase in the methadone dose. If they are getting take-home dosing, the extra methadone not required for withdrawal management can then be diverted without causing withdrawal in the patient.

**Chemical coping:** Patients may use methadone to relieve symptoms other than withdrawal, including anxiety, insomnia, pain, or depression. Typically a patient who is chemically coping will return three-four months after a dose increase reporting that they need another increase, as tolerance will have
DOSING DURING INDUCTION, STABILIZATION, AND MAINTENANCE

developed to the symptom they are treating. This condition can be diagnosed through a careful history, and managed by finding an appropriate treatment for the complaint.

**Intoxication (“the nod”):** Patients may exaggerate or fabricate withdrawal symptoms because they desire a higher methadone dose in order to reach a state of emotional numbness, commonly referred to as “the nod.” This feeling is often the desired effect when using intravenous opioids. Although difficult to detect in the office setting, as the patient often visits the clinician prior to the onset of “the nod,” intoxication can be suspected either through reports of sedation or cognitive dysfunction from reliable third parties, including most importantly the pharmacist and addiction counselor, or through arranging a visit four-six hours after the methadone dose.

**Rapid metabolism of methadone:** In some patients, methadone may have a half-life shorter than 24 hours (sometimes referred to as rapid metabolizers). In these cases, no matter how high the dose is, patients continue to have withdrawal symptoms within 24 hours of ingesting their dose. Where available, peak and trough methadone blood levels might be useful in defining this condition. In these cases, the dose of methadone may have to be provided twice a day, generally only when the patient is eligible for take-home doses.

**Pseudo normalization:** Patients may request a dose increase weeks or months after a previous dose increase, stating that the methadone is “not working” any longer. They may describe having more energy, or feeling “more normal,” after a dose increase and are looking for more methadone to regain that feeling. These are not withdrawal symptoms and the methadone dose should not be increased.

**Other substance withdrawal:** Withdrawal symptoms from other drugs may mimic opioid withdrawal.

5.3.1.1 Insomnia and Sedation
Insomnia can be a challenging symptom to manage in the context of methadone therapy. Insomnia is a common withdrawal symptom, but it can also represent a primary sleep disorder (including day-night reversal), or it can be related to other conditions. If insomnia is not accompanied by other withdrawal symptoms, or if it does not improve with dose increases, other causes should be considered. Depression, anxiety, and the use of alcohol and cocaine are common causes of insomnia in the opioid dependent population. If insomnia persists after the patient is on a stable dose of methadone and sleep hygiene counselling has failed, medication can be considered. Trazodone or other non-benzodiazepine hypnotics are the treatments of choice.

Daytime sedation may result from inadequate nighttime sleep, whether due to opioid withdrawal, sleep disorder, or other drug use, or it may be a side effect due to a dose of methadone that is too high.

5.3.2 Documentation for Dose Adjustments

At visits where the dose is adjusted, the MMT prescriber should document clearly the reasons for the dose adjustment including:
1. Constellation of withdrawal symptoms
2. Timing of withdrawal symptoms (i.e., the
number of hours after methadone ingestion)

3. Ongoing drug use and timing of drug use:
   a. Opioid use at the end of the day may indicate inadequate methadone dose.
   b. Use of alcohol or benzodiazepines may indicate the need for caution in dose adjustments.

5.4 Induction Phase

The overall goal of the induction phase is to initiate MMT safely, while at the same time, increase the dose quickly enough to provide adequate reduction in withdrawal symptoms to retain patients in treatment.

5.4.1 Dosing During Induction Phase

Most patients in the induction phase are experiencing only partial relief of withdrawal symptoms, and they often continue to use opioids sporadically.

Dose increases during the induction phase should take place only after an in-person assessment by the MMT prescriber and for patients who are experiencing cravings, ongoing opioid use, and/or a cluster of opioid withdrawal symptoms.

MMT prescribers should assess patients at least once weekly during induction.

Because methadone has a long half-life (24 to 36 hours), dose changes take about five days to reach steady state and have its full effect. As a result, MMT prescribers should generally wait at least five days for dose adjustments. However, during induction, when the methadone dose is still very low and opioid withdrawal symptoms are usually persistent, treatment retention is critical. During this period, the MMT prescriber is trying to balance dose changes that are frequent enough to keep patients in treatment, but at intervals long enough to be safe (i.e., reduce the risk of drug accumulation). As a result, it is recommended that dose increases during induction usually occur about every three days until a dose of 60 mg is reached. At 60 mg and above, the pace of dose increases needs to slow down because the risk of drug accumulation becomes a greater concern than withdrawal symptoms affecting treatment retention. After reaching a dose of 60 mg a day, the frequency of doses increases should be changed to no more frequently than every five days (but every seven days is recommended).

(See “Table 07: Dosing During Induction Phase”)
DOSING DURING INDUCTION, STABILIZATION, AND MAINTENANCE

TABLE 07: DOSING DURING INDUCTION PHASE

Induction dosing

<table>
<thead>
<tr>
<th>Patient factors</th>
<th>Maximum increase</th>
<th>Recommended increase</th>
</tr>
</thead>
<tbody>
<tr>
<td>No risk and no recent abstinence</td>
<td>10 mg every 3 days OR 15 mg every 5 days</td>
<td>10 mg every 3 days</td>
</tr>
<tr>
<td>Higher risk for methadone toxicity</td>
<td>5 mg every 3 days OR 10 mg every 5 days</td>
<td>5 mg every 3 days</td>
</tr>
<tr>
<td>Recent abstinence from opioids (≥7 days)</td>
<td>5 mg every 3 days</td>
<td>5 mg every 5 days</td>
</tr>
</tbody>
</table>

5.5 Stabilization Phase

Dose increases during the stabilization phase should be preceded by an in-person MMT prescriber assessment and should only be given if the patient is experiencing cravings, ongoing opioid use, and/or a cluster of opioid withdrawal symptoms (see section “5.3 Clinical Criteria for Dose Adjustment”). The MMT prescriber should assess the patient prior to each dose increase during this phase.

5.5.1 Dosing During Stabilization Phase

TABLE 08: DOSING DURING STABILIZATION PHASE

<table>
<thead>
<tr>
<th>Patient factors</th>
<th>Maximum increase</th>
<th>Recommended increase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dose between 60 mg and 100 mg</td>
<td>10 mg every 5 days</td>
<td>10 mg every 7 days</td>
</tr>
<tr>
<td>Dose over 100 mg</td>
<td>10 mg every 7 days</td>
<td>10 mg every 14 days</td>
</tr>
</tbody>
</table>
5.6 Maintenance Phase: The Optimal Methadone Dose

The optimal maintenance dose of methadone will relieve withdrawal symptoms, block opioid-induced euphoria, and reduce opioid cravings for 24 hours, without causing sedation or other significant side effects. With experience, the MMT prescriber can reach this dose for the majority of their patients within 8-12 weeks of initiating MMT. The usual dose range for most MMT patients is 60-120 mg. A 2009 meta-analysis reported that doses of methadone between 60-120 mg and individualization of doses are associated with better retention in MMT.

Once a stable dose of methadone has been reached, as indicated by the absence of withdrawal symptoms and the reduction or elimination of opioid use, it is usually not necessary to increase the dose any further over time. Dose increases may be necessary with metabolic changes, such as in pregnancy, or after the introduction of a medication which reduces the effect of methadone (see “Appendix A: Drug to Drug Interactions”). Patients may request a dose increase due to psychosocial stressors, but in the absence of withdrawal symptoms, an increase would not be indicated. Patients may also claim that increased activity has reduced the methadone effect, but there is no clear physiologic basis for this claim. As with all medications, the MMT prescriber must seek a dose which maximizes positive outcomes, measured by treatment goals, retention, risk reduction, and reduced substance use, and minimizes complications, such as respiratory depression, cognitive dysfunction, sleep apnea and cardiac arrhythmias.

5.6.1 Doses Below 60 mg

There is evidence that methadone doses of 60-120 mg are more effective in reducing heroin use and retaining patients in treatment than doses below 60 mg. However, maintenance doses below 60 mg may be appropriate for patients who have no unauthorized opioid use, report no significant withdrawal symptoms or cravings, or are at high-risk for methadone toxicity.

5.6.2 Doses Above 120 mg

5.6.2.1 Risks of High Methadone Doses

Methadone has several complications that may be dose-related, including sedation, cognitive dysfunction, QTc prolongation, overdose, and sleep apnea.

High methadone doses are associated with prolonged QTc interval, which can cause Torsades, a ventricular arrhythmia. Other risk factors for Torsades include: use of cocaine and other stimulants, heavy alcohol consumption, cardiomyopathy, previous MI or valvular abnormalities, a family history of long QTc syndrome, liver dysfunction, electrolyte disturbances, and medications that affect methadone levels or the QTc interval (see “Appendix H: Medications that Cause Prolonged QTc Interval” and also “4.2.2.1 Cardiovascular History”).

5.6.2.2 Assessment and Monitoring

Methadone can sometimes cause sedation or cognitive dysfunction that may not be apparent in the prescriber’s office. The MMT prescriber should inquire about whether the patient, the pharmacist, or the patient’s family has observed cognitive effects such as “nodding off,” lethargy, or diminished concentration or memory.
DOSING DURING INDUCTION, STABILIZATION, AND MAINTENANCE

In addition to a baseline ECG at induction for patients with risk factors for Torsades de Pointes, an ECG should be done on patients whose dose is 150 mg or greater, and then repeated after every 30-50 mg increase in dose.

5.6.2.3 Management of High Doses

A trial of tapering is indicated for patients who report sedation or cognitive dysfunction when on high doses. Clinical experience suggests that gradual tapering of 20-40 mg is tolerated well, and patients often report that they feel more alert and energetic.

The patient should be closely monitored if the QTc interval is elevated (Women >460 msec and Men >440 msec). If the QTc interval is between 450-500 msec, other possible causes for the prolongation should be sought (e.g., other QT prolonging medications) and addressed. If the QTc interval is over 500 msec, consulting with an experienced MMT prescriber or cardiologist, reducing the methadone dose, modifying risk factors, and considering alternative treatments, such as buprenorphine, should all be considered.

5.7 Missed Doses

Missed doses may indicate a variety of problems, including relapse to alcohol or other drug use. Therefore, the MMT prescriber should reassess the patient’s clinical stability. The reasons for the missed doses should always be discussed with the patient and documented in the clinical records. Pharmacists should report missed doses to the MMT prescriber in a timely fashion.

A clinically significant loss of tolerance to opioids may occur within as little as three days without methadone.

5.7.1 Missed Doses During Induction Phase

Before proceeding to the next dose level during the induction phase, patients must have met both of these requirements:
• At least three total days at the current dose
• At least two consecutive days at the current dose on the two days immediately preceding the dose increase

If 2 consecutive doses are missed, the dose should be dropped down by 10 mg and then given for two consecutive days before increasing the dose again.
If 3 consecutive doses are missed at any time during the induction phase, the pharmacist should cancel the prescription until the MMT prescriber can reassess the patient. The patient must be reassessed in-person by the MMT prescriber and restarted at 30 mg or less for three days.

Collaborative communication between the MMT prescriber and pharmacist is essential if the patient misses any doses during induction. The pharmacists should be advised to contact the MMT prescriber if the patient misses any doses.

See “Table 09: Management of Missed Doses”

5.7.2 Missed Doses During Stabilization, and Maintenance Phase

If 3 or more consecutive doses are missed during the stabilization or maintenance phases, the prescription should be cancelled. The patient must be reassessed by the MMT prescriber to obtain a new methadone prescription.

During the period of re-stabilization after missed doses, when doses are increasing every three days, in-person assessments are not required with every dose change. Weekly in-person visits are recommended during this period. When the patient has missed seven days or more, and is being restarted according to the induction protocol, in-person assessments are required for dose changes as described in section “5.4.1 Dosing During Induction Phase”.
DOSING DURING INDUCTION, STABILIZATION, AND MAINTENANCE

### TABLE 09: MANAGEMENT OF MISSED DOSES

<table>
<thead>
<tr>
<th>Phase of Treatment</th>
<th>Missed doses</th>
<th>Action/Dose change</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Induction</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 day missed</td>
<td>Resume same dose</td>
<td>Before proceeding to the next dose level, patients must have both: 1. At least three total days at the current dose, and 2. At least two consecutive days at the current dose immediately before the dose increase</td>
</tr>
<tr>
<td>2 days missed</td>
<td>Reduce the dose by 10mg for two consecutive days before increasing the dose again.</td>
<td></td>
</tr>
<tr>
<td>3 or more days missed</td>
<td>Restart the induction process at the initial dose (10-30mg)</td>
<td></td>
</tr>
<tr>
<td><strong>Stabilization and Maintenance</strong></td>
<td>1 or 2 days missed</td>
<td>Provide usual dose</td>
</tr>
<tr>
<td>3 or 4 days missed</td>
<td>Restart at 50% of the dose or 50 mg, whichever is higher</td>
<td></td>
</tr>
<tr>
<td>5 or 6 days missed</td>
<td>Increase dose by no more than 10 mg every three days until the original dose is reached</td>
<td></td>
</tr>
<tr>
<td>7 days or more missed</td>
<td>Restart at 30 mg.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Increase dose by no more than 10 mg every three days until the original dose is reached</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Restart MMT as a new patient according to the induction protocol</td>
<td></td>
</tr>
</tbody>
</table>
5.8 Split Doses

Split dosing is occasionally used during the management of pregnancy, and chronic pain (see section “10.1.5.1 Methadone for Analgesia” and section “12.2.4.2 Dose Adjustments During Pregnancy”).

5.9 Vomited Doses

When a patient reports that they have vomited their dose, that dose should not automatically be replaced.

Best practice recommends not replacing the dose unless the vomiting was witnessed by a health professional on the MMT team. The patient should contact the MMT prescriber (or the pharmacist may do so if they have witnessed the incident) and provide him or her with as much information as possible about the incident (i.e., time the dose was taken, time of vomiting, etc.).

MMT prescribers can authorize replacement doses by sending a written authorization to the pharmacy (requires a new NSPMP duplicate prescription). This authorization stays with the original prescription for the duration of the dispensing and storage requirements. It is difficult to completely empty the stomach by emesis, therefore it’s important to note that the repeated dose replacements can lead to overdose.

A witnessed vomited dose within 15 minutes of consumption can be replaced at 50% of the full dose.

The underlying causes of vomiting should be addressed. In patients with underlying medical considerations (e.g., cancer or HIV or pregnancy), the MMT prescriber may decide to prescribe a replacement dose even if the pharmacy or clinic staff did not observe emesis. If nausea is consistently experienced, patients should be encouraged to stay at the pharmacy for at least 15 minutes after consumption.

5.9.1 Vomiting in Pregnancy

The risk to the fetus associated with vomited doses are high. For this reason, replacing vomited doses at a maximum of 50% of the full dose should be considered even if not witnessed. If emesis is a problem during pregnancy, the patient should stay in the pharmacy for 15 minutes after dosing to be observed for vomiting.
6. URINE DRUG SCREENING (UDS)

Urine Drug Screening (UDS) is one tool to verify a patient’s self-reported substance use, assess response to MMT, and determine suitability for take-home doses.

OVERVIEW

Urine Drug Screening (UDS) is one tool to verify a patient’s self-reported substance use, assess response to MMT, and determine suitability for take-home doses.

Addiction is characterized by periods of abstinence and relapse, and UDS monitoring can assist in detecting periods of relapse and improving effective management. UDS combined with a patient’s self-reported drug use are more accurate than either alone. Providing take-home doses to methadone patients with drug-free UDS is an effective strategy for reducing opioid and other drug use (contingency management).

STANDARDS

1. The MMT prescriber shall obtain and interpret UDS tests for routine screening of opioids (including methadone), cocaine, amphetamines, and benzodiazepines for the purpose of monitoring and managing the patient.
2. The MMT prescriber shall obtain and interpret a UDS prior to MMT initiation.
3. The MMT prescriber shall obtain and interpret weekly UDS for four weeks prior to and for four weeks following acquisition of take-home doses (see section “6.5.1 UDS Collection Schedule with Take-Home Doses” and “7.2 Take-Home Doses: Criteria” and “7.3”).

GUIDELINES

1. The MMT prescriber should consider tandem mass spectrometry testing (if available) if the patient uses substances that are difficult to detect with immunoassays (e.g., fentanyl, amphetamines), if the patient disputes the test results, or if there is an unexpected result and the patient faces serious consequences for a positive test (e.g., loss of take-home doses, child custody).
2. The MMT prescriber should monitor the UDS collection to minimize the risk of receiving a tampered urine sample, using strategies such as witnessed collection or supervised collection, including temperature monitoring, measurement of pH, creatinine, or specific gravity.
3. The MMT prescriber should conduct UDS on a random schedule. If a random schedule is not possible, then a fixed schedule should be conducted on a weekly basis.
4. The MMT prescriber should consider the variables involved in UDS interpretation, such as detection times, drug thresholds, false positives, false negatives, and measuring active metabolites (see “Appendix L: Urine Drug Screen Interpretation”).
5. The response to positive UDS should be non-punitive, and should assist the development of a treatment plan that promotes patient recovery.
6. The MMT prescriber should order UDS at a minimum of once monthly for all
patients on methadone maintenance with the exception of long-term MMT patients who have consistently negative UDS, as described in the next guideline.

7. The MMT prescriber may order random UDS every two months for patients who have had consistently negative monthly UDS for one year. After one year of consistently negative random UDS every two months, the MMT prescriber may order random UDS every three months. When random UDS are ordered every two or three months, UDS should also be ordered at regularly scheduled appointments.

8. The MMT prescriber should take into consideration treatment benefits, as well as the effect on treatment retention and cost, where weekly (rather than monthly or bi-weekly) UDS is used during the maintenance phase.

9. Providing a tampered urine sample or failure to attend for a requested UDS within 48 hours should be handled in the same fashion as if the UDS is positive.

6.1 UDS Techniques

There are two methods for UDS - immunoassay and tandem mass spectrometry. Immunoassay is rapid, practical, and inexpensive. It can be performed in the laboratory or point-of-care (dipstick). Immunoassay uses a labeled antigen, which competes with the drug being tested to bind with an antibody. The amount of labeled antigen-antibody is inversely proportional to the drug present. Immunoassay generally detects drug classes (usually morphine for opioids and diazepam for benzodiazepines). This results in lower specificity for opioid screening.

Synthetic opioids (e.g., meperidine, fentanyl, and methadone) and some semi-synthetic opioids (e.g., oxycodone and buprenorphine) are not usually detected with a general opioid immunoassay test. Specific opioid immunoassays are available and should be used to detect these substances. Some semi-synthetic opioids (e.g., hydromorphone) are usually detected by general opioid immunoassays, but not always, therefore if a false negative is suspected, a hydromorphone specific immunoassay could be used or a urine sample should be sent for tandem mass spectrometry testing.

**Immunoassay tests can produce false positive results due to cross-reactants, particularly with amphetamines.**

Tandem mass spectrometry separates specimens into component molecules and identifies and measures unique structural features. It detects specific drugs with high sensitivity (99%) and specificity (99%). It is more expensive and time-consuming, and is generally used to confirm an unexpected result from immunoassay or a result that may have significant consequences for the patient (e.g., loss of take-home doses, notification of child protection services).

6.2 Urine Tampering/Substitution

Urine tampering can occur through dilution, ingestion of certain drugs (e.g., diuretics, sodium bicarbonate, salicylates), adulteration
of the urine (e.g., drain cleaner, bleach, soap, ammonia, lemon juice, hydrogen peroxide), and urine substitution. The validity of a urine sample should be ensured by either directly witnessing the collection of urine or by supervising the collection using the techniques below. A tampered urine is considered the same as a positive urine and should be managed in the same way (see sections “6.3 UDS Interpretation and Response” and “7.5.1 Suspending Take-Home Doses for Relapse to Drug Use”).

**TABLE 10: METHODS OF TAMPERING AND MONITORING PROCESS**

<table>
<thead>
<tr>
<th>Methods of Tampering</th>
<th>Safeguards</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Through dilution, ingestion of certain drugs such as:</strong></td>
<td>Not wearing heavy clothing or carrying bags</td>
</tr>
<tr>
<td>• Diuretics</td>
<td>A temperature strip on the container or a temperature measurement device (32-38°C)</td>
</tr>
<tr>
<td>• Sodium bicarbonate</td>
<td>Blue dye in toilet bowl</td>
</tr>
<tr>
<td>• Salicylates</td>
<td>If uncertain of first sample, requesting a second sample</td>
</tr>
<tr>
<td><strong>Adulteration of the urine with:</strong></td>
<td>The measurement of:</td>
</tr>
<tr>
<td>• Drain cleaner</td>
<td>• pH (4.5 to 8)</td>
</tr>
<tr>
<td>• Bleach</td>
<td>• Specific gravity (1.002 to 1.020)</td>
</tr>
<tr>
<td>• Soap</td>
<td>• Urine creatinine</td>
</tr>
<tr>
<td>• Ammonia</td>
<td>(&lt; 2 to 3 mmol/liter non-physiologic)</td>
</tr>
<tr>
<td>• Lemon juice</td>
<td>Pre-labelled containers</td>
</tr>
<tr>
<td>• Hydrogen peroxide</td>
<td>Turning off hot water supply</td>
</tr>
<tr>
<td><strong>Urine substitution</strong></td>
<td>Witnessed collection</td>
</tr>
</tbody>
</table>

Safeguards:
- Blue dye in toilet bowl
- If uncertain of first sample, requesting a second sample
- The measurement of:
  - pH (4.5 to 8)
  - Specific gravity (1.002 to 1.020)
  - Urine creatinine (< 2 to 3 mmol/liter non-physiologic)
- Pre-labelled containers
- Turning off hot water supply
- Witnessed collection
6.2.1 Method of Collection

Urine for drug screens should ideally be collected in the office (witnessed or supervised). Collection of urine drug screens at a community laboratory is not recommended as the integrity of the urine sample cannot be guaranteed. The patient’s identity must be confirmed at the time of urine collection. The following safeguards may be taken to minimize the risk of urine tampering:

**Clothing**
Patients must divest themselves of coats, jackets, other bulky clothing, backpacks and bags, all of which must be left outside the bathroom.

**Sample Temperature**
Hot water supply may be turned off in the bathroom. Patients should be provided with a pre-labelled container and a staff member should record the temperature of the urine sample immediately.

**Witnessed Collection**
It is usually sufficient that urine be collected in a supervised fashion according to the process listed above, but, witnessed urine collection may occasionally be deemed necessary to ensure the authenticity of the sample. In these cases, patients should provide the urine sample while in the presence of an appropriate clinic staff member.

6.3 UDS Interpretation and Response

The process of interpreting UDS results requires consideration of detection times, test thresholds, metabolites being measured, and circumstances that cause false positive and false negative results.

False positive results can occur when a cross reactant produces a positive result with immunoassay testing. This is particularly common with amphetamines, but can occur with other substances (see “Appendix L: Urine Drug Screen Interpretation”). False positive results can occur when a consumed opioid metabolizes into another opioid (morphine is a metabolite of codeine and hydromorphone is a metabolite of morphine), and the metabolite is detected. False negative results can occur when a synthetic or semi-synthetic opioid and/or certain benzodiazepines (clonazepam and lorazepam) are present, but not detected due to the limitation of the immunoassay test. False negative results can also occur when a substance is present, but at a level which is below the cut-off value. All methods of urine drug testing, including both immunoassay and tandem mass spectrometry, have cut-off values below which the presence of a substance is considered negative. This is to prevent false positive reports in situations where the level of a substances measured is so low as to render the test unreliable, or, in the case of immunoassay tests in work-place contexts, to prevent false positive results due to cross-reactants.

The response to UDS results should be non-punitive. A positive test can assist in developing a treatment plan with the patient. Patient management combined with counselling and support is essential in helping patients quickly recover from a relapse and in preventing it from becoming sustained.
URINE DRUG SCREENING (UDS)

The MMT prescriber should ensure that the benefit from increasing frequency of required urine drug screening be balanced with potential negative consequences on the patient’s work and family obligations.

6.4 Initial UDS

Initial UDS results should confirm the presence of opioids and, ideally, identify the patient’s primary opioid of abuse. Either an opioid-class or an opioid-specific immunoassay may be used. If an opioid-class immunoassay is used and fails to identify a patient’s specific opioid or current opioid use, it may be sufficient to initiate a patient on methadone if there is strong clinical evidence that the patient is opioid-dependent, as defined by the following conditions:

- The patient has signs and symptoms of obvious opioid withdrawal.
- The patient has obvious track marks.
- The patient has been on previous MMT and is at imminent risk of relapse.
- The patient has been dependent in the past and is at imminent risk of relapsing (e.g., recent release from incarceration).

When the initial UDS does not identify a patient’s specific opioid or current opioid use, the MMT prescriber should:

1. Obtain corroborating information from a previous opioid-prescribing prescriber and/or reliable agencies, as well as NSPMP patient profile.
2. Consider a consultation with an experienced MMT prescriber.
3. Address this inconsistency with the patient and conduct a more thorough assessment to confirm a diagnosis of opioid use disorder prior to initiating MMT.

4. In the absence of strong objective clinical evidence in the setting of a negative initial UDS, a confirmatory test must be submitted. Please refer to section “4.2.7 Other Tests”.

6.5 UDS Collection Schedule

During induction and stabilization, UDS should be obtained monthly, at a minimum. Consideration should be given to obtaining UDS at each MMT prescriber visit. A random collection schedule is preferred over a fixed schedule (UDS obtained at patient visits) to minimize the possibility of patients avoiding drug use detection by timing their drug use according to the UDS schedule. During the maintenance phase when the patient is not receiving take-home doses, UDS should be obtained monthly, at a minimum. During the maintenance phase, after a patient has had consistently negative monthly UDS for one year, the frequency of random UDS can be reduced to every two months. After a patient has had consistently negative random UDS every two months for one year, the frequency of random UDS can be reduced to every three months. When random UDS are ordered every two or three months, UDS should also be ordered at regularly scheduled appointments. When a patient is being considered for take-home doses or receiving take-home doses, UDS should preferably be performed randomly according to section “6.5.1 UDS Collection Schedule with Take-Home Doses”. See “Table 11”.

47
<table>
<thead>
<tr>
<th>Prescribing Phase</th>
<th>UDS Schedule</th>
</tr>
</thead>
</table>
| Induction         | At least monthly random tests  
Recommended: at each MMT prescriber visit |
| Stabilization     | At least monthly random tests  
Recommended: at each MMT prescriber visit |
| Maintenance       | At least monthly random tests  
Weekly, if not random |
|                   | Maintenance, has had one year of negative monthly random UDS” |
|                   | UDS schedule is: “random tests at least every two months,  
plus UDS at scheduled visits” |
|                   | UDS schedule is: “random tests at least every 3 months.  
Maintenance, has had one year of negative random UDS every 2 months, plus UDS at scheduled visits |
| Before take-home doses | Four consecutive weeks of random tests immediately  
before providing take-home doses. If obtaining UDS randomly significantly increases the risk of dropping out of treatment, UDS may be obtained at weekly office visits (see sections “6.5.1” and “7.3.1”) |
| After take-home doses | Four consecutive weeks of random tests, followed by four consecutive random tests every two weeks, then random monthly tests (or weekly, if not randomly). If obtaining UDS randomly significantly increases the risk of dropping out of treatment, UDS may be obtained at weekly office visits (see sections “6.5.1” and “7.3.1”) |
URINE DRUG SCREENING (UDS)

More frequent UDS (more than once a month) is more likely to detect sporadic drug use, and in some patients may facilitate more accurate self-disclosure and better patient management.

When determining a UDS schedule, the MMT prescriber should consider the balance between the potential benefits of more frequent UDS and the potential risks, including interference with the patient’s work or family obligations and the costs of the test. When a patient is notified of urine drug screen requirement, they should normally be expected to provide the sample within 48 hours. The usefulness of UDS after 72 hours notification is limited as this exceeds the window of detection (usually about 72 hours). MMT prescribers’ responses to the patient’s inability to provide a UDS within the required time period should be based on clinical judgement.

If the patient demonstrates signs suggestive of relapse, the MMT prescriber should increase the frequency of UDS to weekly for as long as the signs are present.

6.5.1 UDS Collection Schedule with Take-Home Doses

Take-home doses are an essential component of long-term success for patients during the maintenance phase. If take-home doses are being considered, more frequent UDS are initially required to confirm abstinence from drug use, as ongoing drug use increases the risk of diversion and irresponsible management of take-home doses.

Prior to acquisition of take-home doses, a minimum of four consecutive weeks of documented negative UDS tests, preferably random, should be obtained. After take-home doses have started, a minimum of four additional consecutive weekly UDS tests, preferably random, should be obtained. The frequency of UDS may then decrease to twice a month for two months, and thereafter to a minimum of once a month.

As the detection times for many substances are three to four days after use, random collection is preferred when ordering weekly tests (prior to providing take-home doses) in order to reduce the chances of timing drug use to avoid detection. However, it is recognized that for some patients, random UDS may pose a significant burden to the patient, to the degree that they may drop out of treatment. This is particularly true for patients in rural areas where travel distances and times may be substantial. In these situations, if the risk of treatment drop-out appears greater than the risk of methadone diversion, UDS may be obtained on scheduled office visits rather than...
randomly. If UDS are obtained on scheduled visits, the following processes should be followed:

1. In-person assessments by the MMT prescriber on the days the patient provides the urine sample. This applies to the four-week periods before and after providing take-home doses, and the subsequent two month period of twice monthly UDS.
2. The day of the week on which appointments are scheduled for office visits and UDS should vary from week to week as much as possible.
3. Over the course of the four-month period during which UDS are obtained during scheduled office visits, some samples should be obtained randomly.
4. UDS should be obtained randomly once monthly tests are ordered.

If the patient has a positive UDS, the take-home doses should be discontinued immediately (see section “7.5.1 Suspending Take-Home Doses for Relapse to Drug Use”). The loss of take-home doses in response to a positive UDS is not done to punish the patient, but rather to reduce the risk of methadone diversion in the community.
7. TAKE-HOME DOSES

Take-home doses are key to the success of MMT.

OVERVIEW

Take-home doses are key to the success of MMT. Controlled trials have demonstrated that MMT patients markedly reduce their use of heroin and cocaine when given take-home doses contingent upon drug-free UDS.\textsuperscript{94, 95, 96, 97, 98} There is strong evidence that methadone take-home doses contingent on drug-free UDS prevent the decline in treatment outcomes over time, and are an effective strategy for reducing opioid and other drug use (contingency management).\textsuperscript{99, 100, 101, 102, 103} Surveys and observational studies have found that patients strongly value take-home doses, and treatment retention rates are lower in clinics with restrictive take-home policies.\textsuperscript{104, 105, 106}

STANDARDS

1. The MMT prescriber shall NOT prescribe take-home doses if:
   a. The patient has an unstable or untreated mental illness (including active addiction) or cognitive impairment.
   b. The patient continues to use drugs (including alcohol in a risky fashion, cocaine, amphetamines, non-prescribed opioids, or benzodiazepines).
   c. The patient is not able to safely store the methadone.
   d. There is reasonable evidence that the patient is diverting methadone.
   e. The patient does not understand the risks of methadone diversion, such as in the case of cognitive impairment.

2. Patients will not be eligible for take-home doses while taking benzodiazepines unless there are exceptional circumstances as outlined in (see section “7.7 Take-Home Doses for Patients on Benzodiazepines or Opioids”).

3. Take-home doses shall not be provided to patients with alcohol use disorder of any severity.

4. When prescribing take-home doses, the MMT prescriber shall ensure that patients understand how to store their methadone securely, that they understand the risks of diverted methadone, and that they agree never to give or sell their dose to others.

5. The MMT prescriber should not prescribe take-home doses before three months in the MMT program (see the next three standards for unique exceptions).

6. \textbf{During the first four weeks of MMT, not prescribing a dose on Sunday is preferred to providing a take-home dose.}
The MMT prescriber shall only prescribe a weekend take-home dose after four weeks in MMT if the patient meets all the following conditions:
   a. Lives in a community that does not have a pharmacy that is open on a weekend day (for example Sunday).
   b. Has no hospital available for weekend dispensing.
   c. Has had four consecutive weeks of negative UDS.
   d. Does not have transportation to a pharmacy in a different community.
   e. None of the conditions in Standard 1, above is present.
7. The MMT prescriber shall only prescribe an accelerated take-home schedule after two months if:
   a. There is good reason to believe that prolonged daily dispensing is likely to cause the patient to drop out of treatment AND;
   b. None of the conditions in Standard 1, above, is present.
8. The MMT prescriber shall only prescribe take-home doses that are exceptions to the take-home dose schedule if:
   a. The patient is able to safely store the medication and has good insight for take-home dose safety issues.
   b. The patient is emotionally stable and displays good judgment to recognize the risks for methadone misuse or diversion.
   c. None of the conditions in Standard 1, above, is present. (See section “7.4 Take-Home Doses in Exceptional Circumstances”)
9. Prior to providing take-home doses, a minimum of four consecutive weeks of documented negative random UDS tests shall be obtained. After take-home doses have started, a minimum of four additional consecutive weeks of negative random UDS shall be obtained. The frequency of UDS may then decrease to twice a month for two months, and thereafter a minimum of once a month. If obtaining UDS randomly results in significant risk of treatment drop-out, UDS may be obtained on scheduled office visits in accordance with section “6.5.1 UDS Collection Schedule with Take-Home Doses”. and section “7.3.1 First Take-Home Dose”
10. On the day the MMT patient picks up their take-home doses, the ingestion of dose for that day must be witnessed.
11. The MMT patient shall return all take-home dose bottles to the pharmacy before receiving the next take-home doses.
12. The MMT prescriber should prescribe a maximum of 6 take-home doses per week. If UDS are not ordered randomly, then the MMT prescriber shall prescribe a maximum of 5 take-home doses per week, split into 2 and 3 take-home doses.
13. The MMT prescriber shall discontinue all take-home doses immediately in the case of any of the following:
   a. The patient has a relapse to substance use.
   b. The patient has a positive UDS, or there is strong evidence that the patient has provided a tampered UDS sample.
   c. There is strong evidence that the patient has diverted their methadone dose.
   d. The patient reports lost or stolen methadone doses.
   e. There is strong evidence that the patient is not consuming their methadone as prescribed (i.e., taking doses early).
   f. The patient has missed three or more days of methadone.
   g. The patient has become homeless or has unstable housing, and can no longer safely store their methadone.
   h. The patient is actively suicidal, cognitively impaired, psychotic, or is otherwise at high risk for misuse of their methadone dose.
   i. The patient has recently been released from a correctional institution.
14. The MMT prescriber shall not reinstate take-home doses within the first month for a patient who has been recently released from a correctional institution (see Section “7.5.2 Suspending Take-Home Doses for Reasons Other than Drug Use”).
TAKE-HOME DOSES

GUIDELINES

1. Prior to prescribing the first take-home dose, the MMT prescriber should instruct the patient to show a locked box that will be used for the safe storage of take-home doses to clinic or pharmacy staff member.

2. The MMT prescriber should have a written Take-Home Dose Agreement signed by the patient and documented in the chart (see “Appendix M: Take-Home Dose Agreement”).

3. The MMT prescriber should not prescribe take-home doses to patients who refuse consent to communicate with their opioid or benzodiazepine prescriber.

4. The MMT prescriber should ensure the first take-home dose is prescribed only after the patient has been in the program for three months, and the patient has had at least two months without substance use, as determined by history and UDS. The MMT prescriber should prescribe additional take-home doses by one of the two following protocols:
   - **Option A:** Starting with 1 take-home dose per week increasing at a rate of no more than 1 additional take-home dose per week every four weeks, to a maximum of 6 take-home doses per week. Each additional take-home dose should be prescribed only after the patient has had at least four additional weeks without substance use.
   - **Option B:** Start with 2 daily take-home doses on consecutive weekend days. After a further eight weeks free of substance use, take-home doses are provided twice a week (1 take-home dose of three consecutive days and 1 take-home dose of two consecutive days with intervening witnessed doses). After an additional 12 weeks free of substance use, take-home doses can be increased to 6 take-home doses a week.

5. In the accelerated schedule, the MMT prescriber may prescribe the first take-home dose after two months on MMT, after at least four consecutive weeks of negative UDS, and subsequent increase in take-home dose at a rate of no more than 1 extra take-home dose per week, every two-four weeks, to a maximum of 6 take-home doses per week.

6. Take-home doses should not be prescribed to accommodate pharmacy closures. The MMT prescriber should prescribe the weekend dose at an alternate pharmacy if the patient’s regular pharmacy is closed on a weekend day. The MMT prescriber should contact the two pharmacies to ensure they can coordinate safe once-daily dispensing.

7. MMT prescribers working in communities without a pharmacy open seven days per week should consider negotiating with the local hospital to provide weekend dispensing.

8. The MMT prescriber may give exceptional take-home doses on compassionate grounds for patients who have a personal or family crisis and are not yet eligible for take-home doses. The patient should be clinically stable and low-risk for diversion, and should have been on MMT for at least two months. A maximum of six days of take-home doses should be given at a time.

9. The MMT prescriber may give exceptional take-home doses for well documented and sound personal reasons (work or vacation) for patients who have been on MMT for two months, have negative UDS for four weeks and are at or approaching a stable methadone dose. A maximum of 6 take-home doses should be given at a time.
10. Extended take-home doses may be given for documented work or vacation plans for patients who are clinically stable if a local pharmacy cannot be found. The patient must have not had drug use for one year and must be receiving 3-6 take-home doses per week. A maximum of 13 days of take-home doses may be given at a time. The MMT prescriber should ensure that the previous take-home dose level is resumed after the period of exceptional take-home dose.

11. For patients receiving take-home doses, the MMT prescriber should consider increasing the frequency of UDS (i.e., weekly) if the patient is suspected of relapse, but the evidence is not strong.

12. During a brief relapse to any drug use, the MMT prescriber should suspend all take-home doses until restabilization has been demonstrated via negative UDS for at least four consecutive weeks of negative UDS. Take-home doses can then be reinstated at a rate of 1 take-home dose per week to 1 take-home dose per month depending on demonstrated abstinence and the severity of the relapse.

13. During a longer relapse of greater than one month or with any significant clinical instability, the MMT prescriber should suspend all take-home doses until restabilization has been demonstrated via negative UDS for at least two months (including at least four consecutive weeks of negative UDS immediately prior to reinstatement of take-home doses). Once clinical stability has been re-established the take-home doses may be reinstated at a rate consistent with “Schedule A” or “Schedule B” (see section “7.3”).

14. For patients who have tampered with their UDS in an attempt to conceal a relapse or who have failed to provide a sample within the time requested, the MMT prescriber should respond in the same manner as to a relapse to drug use, and cancel take-home doses immediately. Take-home doses should not be reinstated until stability can be re-established objectively through at least four consecutive weeks of negative UDS and other measures of clinical stability (see section “7.5.1 Suspending Take-Home Doses for Relapse to Drug Use”).

15. When take-home doses are discontinued, the MMT prescriber should consider reducing the daily observed methadone dose if there is suspicion that the patient may not have been taking the full take-home dose, as the patient may have reduced tolerance.

16. The MMT prescriber may reinstate take-home doses at their previously acquired level after one month of daily witnessed ingestion for patients who remain clinically stable without drug use, and had take-home doses cancelled only due to:
   a. Missed doses
   b. Being incarcerated for a short period of time (less than three months)
   (see section “7.5.2 Suspending Take-Home Doses for Reasons Other than Drug Use”)

17. The MMT prescriber may decide to restrict take-home doses indefinitely if there has been proven or suspected diversion. A second opinion with another MMT prescriber should be considered before reinstituting the take-home dose.
7.1 Take-Home Doses: Risks

7.1.1 Diversion

To reduce the risk of diversion and the associated societal harms, the MMT patient must have witnessed ingestion of the methadone dose on the day they pick up their take-home doses.

Regularly ensuring that the patient is able to tolerate their dose of methadone also eliminates the risk of overdose that could occur if a patient had not actually been taking their full methadone dose and were abruptly expected to take their full methadone dose (such as upon hospitalization or incarceration) in a daily witnessed fashion. This requirement is in line with well-established best practices in the field of addiction medicine.

Diversion of take-home doses is a serious public health problem. The use of methadone for analgesia has increased sharply in the US, with a sevenfold rise from 1997 to 2004. This has been accompanied by a 17-fold increase in methadone-related deaths.

The risk of diversion and accidental or intentional misuse increases in patients who:

- have suicidal ideation or cognitive impairment, or;
- are homeless, living in a shelter, or transiently housed, or;
- are actively addicted to alcohol, cocaine, benzodiazepines, or other drugs.

The risks involved with the last group are twofold. Firstly, patients may sell their methadone to obtain another substance, such as cocaine. The diverted methadone may then be consumed by someone who is either opioid naïve or who has significantly less opioid tolerance, resulting in a high risk of overdose death. Secondly, if the patient is actively using high doses of alcohol or benzodiazepines, the risk of accidental overdose is significantly increased.

7.1.2 Locked Box

To increase the safety of storing methadone at home, patients should be required to use locked boxes.

Before take-home doses are prescribed, the MMT prescriber should ask patients to bring in a locked box to demonstrate to the MMT prescriber or the pharmacist that they are able to store methadone safely. Storing take-home doses of methadone in a locked box is intended to minimize the possibility of accidental or intentional ingestion of methadone by individuals who are naïve to methadone. This is particularly important for patients who have children, adolescents, or young adults living at home. The Methadone Maintenance Treatment Services: Standards of Practice for Community Pharmacies in Nova Scotia (NSCP) requires that pharmacies collaborate and cooperate with MMT prescribers in providing consistent messaging and procedures with respect to locked boxes.
7.2 Take-Home Doses: Criteria

Take-home doses are an essential component of long-term success for patients during the maintenance phase.

The criteria for determining appropriateness for take-home doses are based on patient and community safety, and on clinical stability, where clinical stability can be defined by:

- Stable dose of methadone (with allowances for occasional dose increases or when tapering)
- No recent drug or risky alcohol use
- Compliance with treatment directives, including a signed Take-Home Dose Agreement
- Stable housing
- Emotional stability and good insight into take-home dose safety issues
- Capability to be reached in a timely fashion for notification of requirement for UDS (typically being accessible by telephone)

Collaborative communication with the pharmacist will facilitate and provide information about the patient’s daily clinical presentation and stability.

Prior to prescribing take-home doses, the MMT prescriber should carefully explain the risks of methadone diversion or misuse, lethality, and the patient’s responsibility to store and use their take-home doses safely.

It must be stressed to the patient that the average daily dose of methadone may result in death if taken by a person not tolerant to opioids. Single dose overdose cases resulting in death have been reported with methadone doses as low as 40 mg in non-tolerant patients (NSCP).

If take-home doses are being considered, more frequent UDS are required initially to confirm abstinence from drug use which could increase the risk of diversion of or irresponsible handling of take-home methadone doses. (see section “6.5.1 UDS Collection Schedule with Take-Home Doses”)

A written take-home dose agreement is highly recommended (see “Appendix M: Take-Home Dose Agreement”).

7.3 Take-Home Dose Acquisition Schedules

7.3.1 First Take-Home Dose

Patients are eligible for their first take-home dose if they meet the criteria for clinical stability and prior to take-home dose acquisition the patient has had at least three months in MMT and two months without substance use, as determined by history and UDS.

Prior to acquisition of take-home doses, a minimum of four additional consecutive weeks of random negative UDS tests should be obtained. After acquisition of take-home doses have started, a minimum of four additional consecutive weeks of random negative UDS should be obtained. The frequency of UDS may then decrease to twice a month for a minimum of two months and then to a minimum of once a month.

As the detection times for many substances are three to four days after use, random
TAKE-HOME DOSES

collection is preferred when ordering weekly tests (prior to providing take-home doses) in order to reduce the chances of timing drug use to avoid detection. However, it is recognized that for some patients, random UDS may pose a significant burden to the patient, to the degree that they may drop out of treatment. This is particularly true for patients in rural areas where travel distances and times may be substantial. In these situations, if the risk of treatment dropout appears greater than the risk of methadone diversion, UDS may be obtained on scheduled office visits rather than randomly. If UDS are obtained on scheduled visits, the following processes should be followed:

1. In-person assessments by the MMT prescriber on the days the patient provides the urine sample. This applies to the four-week periods before and after providing take-home doses, and the subsequent two-month period of twice monthly UDS.
2. The day of the week on which appointments are scheduled for office visits and UDS should vary from week to week as much as possible.
3. Over the course of the four-month period during which UDS are obtained during scheduled office visits, some samples should be obtained randomly.
4. UDS should be obtained randomly once monthly tests are ordered.

7.3.2 Weekend Take-Home Doses when Weekend Pharmacy Access is Limited

Some communities do not have a pharmacy that is open on weekend days, forcing patients to travel to a pharmacy in a different community. This can be disruptive and costly, and it may cause some patients to drop out of treatment. Yet, any take-home dose in the first few weeks of MMT can be hazardous; unstable patients may take the extra take-home dose(s) early, putting them at high risk for toxicity. Providing take-home doses before the patient has been in MMT for four weeks is considered too risky. During this period, if there are no other alternative dispensing possibilities, it is safer for both the patient and the community to provide daily methadone from Monday to Saturday, with no Sunday dose.

In an attempt to promote treatment retention while reducing the risk of toxicity, the guideline allows for a weekend take-home dose after only four consecutive weeks of negative UDS for patients who do not have access to a pharmacy on a weekend day. If the patient’s regular pharmacy is closed on a weekend day (such as Sunday), an alternate pharmacy should be used. The MMT prescriber should collaboratively communicate with both pharmacies to coordinate shared dosing to confirm that the patient has not missed the previous dose at the other pharmacy.

MMT prescribers who work in communities without a weekend pharmacy are encouraged to arrange weekend dispensing with their local hospital.

7.3.3 Subsequent Take-Home Dose Acquisition

Subsequent increases in take-home doses occur no more often than every four weeks with evidence of clinical stability according to one of the following schedules:
Option A: Starting with 1 take-home dose/week increasing at a rate of no more than 1 additional take-home dose per week every four weeks, to a maximum of 6 take-home doses per week. Each additional take-home dose should be prescribed only after the patient has had at least four additional weeks without substance use.

Option B: Start with 2 daily take-home doses on consecutive weekend days. After a further eight weeks free of substance use take-home doses are provided twice a week (1 carry of three consecutive days and 1 carry of two consecutive days with intervening witnessed doses). After an additional 12 weeks free of substance use, take-home doses can be increased to 6 take-home doses a week.

In cases where UDS are not ordered randomly, the patient should be given a maximum of five take-home doses per week, two take-home doses provided on one day and three on another (e.g., Monday and Thursday pick up days). Occasional dose adjustments/increases may occur during take-home dose acquisition provided the patient is clinically stable.

7.3.4 Accelerated Take-Home Schedule

Patients who have regular work, full-time educational programs, or family commitments may find it difficult to attend the pharmacy daily, causing them to drop out of MMT. These patients may receive take-home doses at an accelerated rate if they are at lower risk for misuse of their take-home doses, (i.e., they are clinically stable, are not currently addicted to other substances, and do not have active mental illness). The first accelerated take-home dose may be given after two months, with one additional weekly dose every two weeks. Patients should have at least four consecutive weeks of negative UDS prior to receiving their first take-home dose and then continue to have negative UDS as they increase the number of take-home doses. Only a minority of MMT patients will likely require accelerated take-home doses.

7.4 Take-Home Doses in Exceptional Circumstances

MMT patients sometimes request take-home doses due to family crisis or vacation. Alternative arrangements to dispense daily methadone at a pharmacy in another community, or arrangements for another MMT prescriber to see the patient in another community should be exhausted before allowing exceptional take-home doses.
TAKE-HOME DOSES

Before prescribing take-home doses for exceptional circumstances, the MMT prescriber should attempt to verify the patient’s personal or family crisis (with corroborating information from a third party) or travel plans, particularly if the MMT prescriber does not know the patient well or is unsure about the patient’s reliability. The MMT prescriber may choose to communicate with the pharmacist to get corroborating information regarding recent patient stability in preparation for “exceptional take-home dose.” The previous take-home dose level should be resumed after the period of exceptional take-home dose. See “Table 12”

In a situation where the patient is clinically stable, and receiving three-six days of take-home doses per week, exceptional extended take-home doses may be given in the case of travel for work or vacation, but only if a local pharmacy at their destination cannot be found. The patient should provide documentation of travel plans. The maximum number of take-home doses that may be given at a time in such exceptional situations is 13. The previous take-home dose level should be resumed after the period of exceptional take-home doses.

TABLE 12: CRITERIA FOR PRESCRIBING EXCEPTIONAL TAKE-HOME DOSES

<table>
<thead>
<tr>
<th>IF:</th>
<th>Then:</th>
</tr>
</thead>
<tbody>
<tr>
<td>The patient has been on MMT for at least two months and is not yet eligible for any take-home doses, but is stable and is low risk for diversion as measured by self-report, UDS, and social indicators.</td>
<td>Give take-home doses on compassionate grounds only (e.g., a personal crisis). Give no more than six days of take-home doses at a time.</td>
</tr>
<tr>
<td>The patient has been on MMT for at least two months, has negative UDS for at least four weeks, and is at, or approaching, a stable methadone dose.</td>
<td>Give take-home doses for sound personal reasons only (e.g., vacation/holidays, family matters). Give no more than six days of take-home doses.</td>
</tr>
<tr>
<td>The patient has not had drug use for 12 months, is clinically stable, and is receiving 3-6 take-home doses per week and a local pharmacy cannot be found.</td>
<td>Give up to a 13 days of take-home doses for travel, work, or vacation purposes. If more than 13 days of take-home doses is required, a second opinion with another MMT prescriber is suggested.</td>
</tr>
</tbody>
</table>
7.5 Suspending Take-Home Doses

7.5.1 Suspending Take-Home Doses for Relapse to Drug Use

Take-home doses should be immediately discontinued if patients have had ANY relapse to drug use (including non-prescribed opioids, cocaine, amphetamines, benzodiazepines, and alcohol in a risky fashion).

Relapse to drug use may be determined either by patient report or UDS results. If the patient denies drug use in the context of a positive UDS, take-home doses should be suspended and, if possible, the urine sample should be sent for confirmatory testing using Mass Spectrometry.

A tampered or missed UDS should be considered a positive UDS. If the patient has tampered with their UDS or failed to provide a urine sample in a timely manner in an attempt to conceal a relapse, the MMT prescriber should respond in the same manner as to a relapse to drug use, and cancel take-home doses immediately.

7.5.2 Suspending Take-Home Doses for Reasons Other than Drug Use

The MMT prescriber should strongly consider suspending take-home doses if the patient consumes take-home doses early, or reports lost or stolen take-home doses even one time. Some patients, especially those with mental health issues or addiction recovery needs, may benefit from increased structure of observed dosing at the pharmacy, and therefore decreased take-home doses.

Patients for whom there is strong evidence of diversion should have their take-home doses restricted indefinitely, as there is no reliable method to prevent diversion if their take-home doses are reinstated.

Take-home doses should also be cancelled in patients who no longer have stable housing, have missed three or more days of methadone (except in unavoidable circumstances such as hospitalization), or have a mental illness that places them at significant risk for misuse of take-home doses. Because patients who have been incarcerated are often clinically unstable on release, they should have daily witnessed ingestion of methadone in the first month after discharge from a correctional institution even if they had take-home doses prior to their incarceration. Once clinical stability has been re-established, the take-home doses may be reinstated at rate consistent with “Schedule A” or “Schedule B” (see section “7.3 Take-Home Dose Acquisition Schedules”).

7.6 Reinstatement of Take-home Doses

The rate of reinstating take-home doses should reflect patient disclosure, urine drug screening results, and other indicators of clinical stability or instability. Take-home doses should not be reinstated until stability can be re-established objectively through at least four consecutive weeks of negative tests.

In patients who have had a brief relapse and whose clinical stability is not significantly
compromised, take-home doses may be restarted after restabilization has been demonstrated through at least four consecutive weeks of random negative UDS. Take-home doses should be reinstated in a step-wise fashion up to the previously achieved level at a rate of 1 take-home dose per week to 1 take-home dose per month depending on the reliability of the patient, demonstrated abstinence, and the severity of the relapse. For example, if a clinically stable patient receiving take-home doses has a positive UDS for cocaine, and claims that they used only once, and subsequent weekly UDS are negative for cocaine, this could be considered a brief relapse and take-home doses could be reinstated after four weeks of negative UDS.

In patients who have had a longer relapse (greater than one month) or have any significant loss of clinical stability, take-home doses may be resumed only after at least two months of stability as demonstrated by negative UDS. At least four consecutive weeks of random negative UDS immediately prior to reinstatement of take-home doses should be obtained. Once clinical stability has been re-established, the take-home doses may be reinstated at a rate consistent with “Schedule A” or “Schedule B” (see section “7.3 Take-Home Dose Acquisition Schedules”). If obtaining UDS randomly results in significant risk of treatment drop-out, UDS may be obtained on scheduled office visits in accordance with section “6.5.1 UDS Collection Schedule with Take-Home Doses” and section “7.3.1 First Take-Home Dose”.

In situations where take-home doses were suspended because the patient missed 3 or more doses or because the patient was incarcerated for a short period of time (less than three months), take-home doses may be reinstated at the previous level after one month of daily witnessed ingestion. In either case, the take-home doses should only be reinstated if the patient remains clinically stable and is not using drugs.

7.7 Take-Home Doses for Patients on Benzodiazepines or Opioids

Providing take-home doses to patients taking benzodiazepines or opioids is generally not recommended. Take-home doses may be considered for clinically stable patients who are prescribed benzodiazepines or opioids only in specific special circumstances, such as:

- opioids prescribed for acute pain, or recommended by a pain specialist for chronic pain
- benzodiazepines recommended by a treating psychiatrist or neurologist

When providing take-home doses to patients prescribed benzodiazepines or opioids, the following conditions should be met:

1. The patient has a medical or psychiatric diagnosis that is currently stable and warrants the use of the benzodiazepine or opioid.
2. The specialist recommending benzodiazepine or opioid treatment is aware that the patient is prescribed methadone and is aware of the risks involved.
3. The therapeutic dose of the benzodiazepine or opioid is low to moderate.
4. The patient has not shown signs of benzodiazepine or opioid misuse or toxicity.
5. The patient provides consent for the MMT prescriber to discuss their management with their opioid or benzodiazepine prescriber.
6. The benzodiazepine or opioid is dispensed at the same interval as the methadone.
7. The patient meets all other criteria for take-home dose eligibility.

The MMT prescriber should not prescribe take-home doses to patients who refuse consent to contact the opioid or benzodiazepine prescriber.

When considering providing take-home doses to a patient prescribed benzodiazepines or opioids, the MMT prescriber should consider consulting with an experienced MMT prescriber.

The MMT prescriber should periodically attempt to taper the benzodiazepine or opioid (see section “10.3.2 Sedative-Hypnotics Including Benzodiazepines”), particularly if the dose is high (i.e., daily equivalent of diazepam 50 mg per day or morphine 200 mg per day).

The MMT prescriber should consider tapering the methadone if there is a strong possibility that the patient is misusing the prescribed benzodiazepine or opioid or the combination of medications appears unsafe. The MMT prescriber should contact the non-MMT prescriber if there is an imminent risk of harm.

7.8 Thirteen-Day Take-Home Doses for Work Commitments

In exceptional circumstances, some patients who are on 6 take-home doses, and who have work schedules that make it difficult to go to the pharmacy for weekly dispensing may benefit from extended 13-day take-home doses.

All the following criteria must be met to regularly prescribe 13-day take-home on doses:
1. The MMT prescriber consults with an experienced MMT prescriber.
2. The patient has a documented history of 6-day take-home doses and clinical stability (no positive UDS) for a minimum of one year.
3. There have been no past reported mishaps with lost or stolen carries.
4. The methadone dose is 120 mg or less (resulting in a maximum total amount of 1560 mg taken home).

These patients may be prescribed a maximum of 13 take-home doses with one witnessed ingestion prior to each dispensing.
8. VOLUNTARY TAPERING OFF METHADONE AND INVOLUNTARY WITHDRAWAL FROM MMT

Voluntary tapering off methadone is most likely to be successful if the patient has been abstinent from illicit substances for a substantial period of time, does not have current or untreated psychiatric co-morbidity, has strong social supports, and is engaging in counselling.109

OVERVIEW

Voluntary tapering off from methadone is most likely to be successful if the patient has been abstinent from illicit substances for a substantial period of time, does not have current or untreated psychiatric co-morbidity, has strong social supports and is engaging in counselling. Ideally the period of abstinence from illicit substances should be at least one year. A patient's stability (i.e., the presence of stable housing, relationships, and finances) should be an important consideration in the decision to undertake voluntary withdrawal. Generally, patients who have been in MMT for two or more years will have better outcomes when tapering off methadone than those who start the tapering process before two years of treatment.

The patient should have a major role in deciding the rate of the taper in voluntary tapering.

Patients frequently request more rapid tapering than their MMT prescriber may recommend, and it is important that MMT prescribers explain the dangers (primarily relapse risk) of rapid tapering. Involuntary withdrawal is sometimes necessary for violent or criminal behaviour, which results in safety risks or ineffectiveness of methadone treatment.

Voluntary Withdrawal

STANDARDS

1. The MMT prescriber should counsel the patient about the loss of opioid tolerance and the risk of toxicity if they relapse to opioid misuse.

GUIDELINES

1. The MMT prescriber should determine if the patient requesting a methadone taper is a good candidate for a successful methadone withdrawal, and discuss the risks and benefits of withdrawal.

2. For voluntary tapers, the rate of the taper should be patient-driven, even if the patient desires a more rapid taper than recommended. The MMT prescriber should recommend a dose reduction schedule of 5% of the daily dose every two-four weeks.
3. The taper should be slowed, stopped, or reversed at patient request (i.e., the patient experiences dysphoria, cravings, or withdrawal symptoms, or relapses to opioids or other drugs).

4. The MMT prescriber should see the patient regularly during the taper to assess the patient’s mood and withdrawal symptoms, and to provide supportive counselling.

5. The MMT prescriber should offer to follow the patient for a few months after completion of the taper and offer to restart methadone if requested.

Involuntary Withdrawal

STANDARDS

1. Once involuntary tapering has begun, all methadone doses must be daily witnessed ingestion.

2. The MMT prescriber should counsel the patient about the loss of opioid tolerance and the risk of toxicity if they relapse to opioid misuse.

GUIDELINES

1. The MMT prescriber may involuntarily withdraw a patient from MMT if any of the following behaviours occur within the context of their treatment in a manner that affects the MMT prescriber patient relationship:
   • The patient has been threatening or disruptive
   • The patient has exhibited criminal behaviour
   • The patient is repeatedly non-adherent with safety related parts of the treatment agreement
   • There is evidence that the patient’s overall risk on MMT is equal to, or higher, relative to their risk if they were not on MMT

2. Immediate discontinuation of methadone without taper is possible in cases of extreme violence (e.g., threatening with a weapon).

3. The MMT prescriber should explain the reasons for involuntary withdrawal and offer to transfer the patient to another MMT prescriber if appropriate and available.

4. If a transfer is not feasible, the MMT prescriber should assist the patient in seeking alternate care (e.g., an abstinence-based program).

5. For an involuntary taper, it is recommended that the MMT prescriber decrease the methadone dose at a rate of 5-10 mg every three-seven days until a dose of 50 mg is achieved. Below 50 mg, the rate of decrease should be no more than 5 mg every three-seven days.

6. The MMT prescriber should encourage the patient to engage with another health care professional or addiction treatment program for counselling and support.

8.1 Voluntary Withdrawal

Patient-centered tapering has reasonably good success rates when undertaken in the context of medical and social stability as outlined below. It is not uncommon for patients to request withdrawal before they are clinically and socially stable. It is important to explore a patient’s motivation in requesting withdrawal
before it is medically indicated because often other reasons can influence the request (e.g., financial instability, family pressures, apprehension about a pending incarceration, etc.). A pre-tapering questionnaire has been found to be a useful tool in determining readiness for methadone tapering (see “Appendix N: Sample Tapering Readiness Questionnaire”). In one study, 46% of subjects remained abistent after an average of 2.4 years post-MMT.\textsuperscript{110} More recent experience suggests a success rate that varies widely. In one review of patients who entered voluntary detoxification programs, the abstinence rate was between 22% and 48%.\textsuperscript{111} Success rates are higher for patients who have been on MMT for two years or more.\textsuperscript{112, 113, 114}

As all patients will have some degree of withdrawal while tapering, particularly at lower doses, it is important to counsel patients about the risks of relapse. It is essential that patients are aware that their tolerance to opioids decreases as their methadone dose is lowered, and that if they do relapse, there is a high risk of overdose. Patients must be informed that they should use much less opioid than they did prior to starting MMT if they relapse during or after tapering.

**Factors leading to success in voluntary tapering are:**
- Long-standing abstinence from drugs of abuse
- No current mental illness
- A supportive social network including the development of supportive relationships of non-users
- Stable housing, finances, and relationships
- Resolution of legal issues and no connection to the drug culture
- Development of non-chemical coping skills
- Optimized physical health

**The rate of the taper should be negotiated with the patient and should be patient-driven. Voluntary withdrawal should be stopped or reversed at the patient’s request for any reason.**

Typical reasons for stopping or reversing a taper will include withdrawal symptoms, social destabilization, or relapse of substance use. In general, slow tapers are more successful than rapid tapers.\textsuperscript{115} A typical tapering schedule is 5% of the remaining dose over the course of any four-week interval. The optimal rate at which tapering can be accomplished is highly variable between patients. It is important to regularly monitor withdrawal symptoms, cravings, substance use, and any other adverse effects through the course of the taper. The taper should be adjusted whether by interval and/or increment accordingly. Particular attention should be paid to fetal and maternal wellbeing if tapering during pregnancy.

Tapering will likely trigger withdrawal symptoms, therefore overall stability, support, and counselling are very important.
Patients should not be penalized for unsuccessful tapering from MMT.

8.2 Involuntary Withdrawal

8.2.1 Indications for Involuntary Withdrawal

The decision to involuntarily withdraw a patient from MMT should be documented in detail. The decision to initiate involuntary withdrawal should be based on reliable information with due consideration of the source. The decision to withdraw a patient from MMT involuntarily should take into account the associated significant risk of mortality following the withdrawal.

Possible indications for involuntary withdraw include:

- Threats to staff members or others
- Disruptive behaviour at the clinic or site where the methadone is being prescribed or dispensed that has not been modified after being addressed
- Violent behaviour towards a staff member or others
- Criminal behaviour at the site where methadone is prescribed or dispensed
- Non-compliance with patient treatment agreement and program expectations that results in a significant safety risk
- Attempts at diversion of methadone
- High-risk for methadone overdose and attempts to reduce risk have failed. For example, the patient continues to use high doses of benzodiazepines or alcohol, has shown signs of sedation or has required medical treatment for an overdose, and refuses appropriate interventions
- Ineffectiveness of methadone maintenance treatment, where there is no improvement in inappropriate use of opioids (e.g., there has been no reduction in the use of intravenous opioids), and where it is evident that there has been no harm reduction. It is generally accepted that in order for a MMT prescriber to justify the prescription of any medication, there must be a discernible and quantifiable benefit to the patient. For this reason, best practice requires the MMT prescriber to identify and document objective benefits for each patient being prescribed methadone throughout the treatment program.

Patients who are involuntarily withdrawn can be considered for readmission to MMT at a future date. Each MMT clinic or practice should have a policy outlining the requirements for readmission to MMT.
8.2.2 Process for Involuntarily Withdrawing a Patient from Methadone

Once involuntary tapering has begun, all methadone doses must be daily witnessed ingestion. The MMT prescriber should decrease the methadone dose at a rate of 5-10 mg every three-seven days until a dose of 50 mg is achieved. Below 50 mg, the rate of decrease should be no more than 5 mg every three-seven days. The MMT prescriber may use pharmacotherapy in the final one-two weeks of the decrease to relieve withdrawal symptoms.

The MMT prescriber should encourage the patient to engage with another health care professional or addiction treatment program for counselling and support.

When accepting a patient in transfer that who has been involuntarily discharged, the new MMT prescriber must perform an updated comprehensive biopsychosocial assessment and physical examination with appropriate laboratory investigations and create a treatment plan that takes into account all the previous MMT prescriber’s treatment concerns.

Recommendations to effectively end the doctor-patient relationship where MMT is being provided are as follows:

1. If possible, arrange a transfer to another MMT prescriber.
2. Communicate your decision clearly to the patient. This should include the details of a tapering schedule and the expected end date of their methadone prescription.
3. Involuntary tapering may begin while the patient is searching for another MMT prescriber. Once an appointment for transfer is confirmed, involuntary tapering should be stopped at the current dose until the patient enters the new methadone program.
4. Provide the patient with reasonable help to find another MMT prescriber.
5. Have the patient sign acknowledgement that he/she is aware of the MMT termination or send the patient a registered letter, confirming termination with a return receipt requested, and keep a copy in the medical record.
6. In extreme circumstances related to the safety of the staff or MMT prescriber or others, a patient may be discharged without tapering.
For more information on ending a MMT prescriber-patient relationship, download CPSNS: *Ending the Physician-Patient Relationship*.

MMT patients who feel that they have been wrongfully dismissed can contact CPSNS with their concerns. If there are indications that a formal complaint is required, the matter can be referred to the professional conduct department of the College. The potential for dispute will be reduced if the MMT rules are made clear at the commencement of treatment.
9. COUNSELLING AND CASE MANAGEMENT

Methadone programs should include a comprehensive biopsychosocial approach, in addition to providing methadone, to help patients address the challenges they face during the process of their therapy.

OVERVIEW

Most methadone patients struggle with a number of challenges, such as poverty; inadequate housing; lack of education; exposure to violence; poor nutrition; serious physical or mental health problems; interpersonal conflicts with self, family, and friends; inability to secure and maintain employment; and involvement with the criminal justice system. These problems do not disappear just because the patient receives a daily dose of methadone. Methadone programs should incorporate a comprehensive biopsychosocial and spiritual approach to help patients cope with their problems. When counselling is integrated into methadone maintenance programs, there is evidence of reduction in other drug use. It is important for MMT prescribers not to adopt the perception that counselling is a task to be taken on exclusively by other staff or caregivers. All MMT prescribers share in this significant responsibility as part of their overall mission to facilitate treatment and, ultimately, recovery.

GUIDELINES

1. The MMT prescriber shall provide counselling to willing patients or refer them to counselling services in the community while on MMT.

2. The MMT prescriber shall regularly assess a patient’s psycho-social functioning.

3. The MMT prescriber should assess goals of MMT at least annually.

9.1 Treatment Team

Collaborative practice in MMT is considered best practice. Ideally, the MMT patient should have access to a team that includes physicians, nurses, nurse practitioners, pharmacists, social workers, addiction services, psychologists, case managers, and peer support workers. Although all settings and communities may not have access to every one of these health care providers, the MMT treatment team (at minimum MMT prescriber and pharmacist) can strive to achieve the best possible outcomes through a collaborative, inter-professional approach.

9.2 The MMT Prescriber’s Role

To assist the patient in meeting treatment goals, MMT prescribers must establish trusting, therapeutic relationships with their patients. MMT prescribers need to create non-judgmental, collaborative environments in which patients feel safe to discuss their
concerns. If positive relationships do not develop, the methadone maintenance program may have reduced benefit. Once constructive relationships have been established, MMT prescribers should work with patients to identify aspects of each patient’s life that could be changed or modified to benefit the patient. These treatment goals should be chosen by the patient, not the MMT prescriber. Many appropriate treatment goals are not necessarily focused on drug-using behaviour. For example, patients may wish to move to better or safer housing, improve their general health, enroll in training programs, learn better communication skills, learn relaxation techniques, or improve the quality of their personal relationships.

After goals have been identified, MMT prescribers should work with patients to develop treatment plans to meet these goals. This progress should be monitored and documented. Depending on each patient’s circumstances, MMT prescribers should ideally work in collaboration with addiction services counsellors (see “Appendix C: Resources”), or may refer patients to independent counselling agencies or self-help groups such as Alcoholics Anonymous (AA) or Narcotics Anonymous (NA).

Many other specialized resources may be available to aid methadone patients. MMT prescribers are expected to familiarize themselves and work in collaboration with community resources, such as addictions services, with the full spectrum of services available to their patient population through their local health authorities. They are also encouraged to refer their MMT patients to appropriate community treatment programs, support groups, and counsellors. Whatever resources are chosen, MMT prescribers should be aware of the issues each patient is attempting to address and what progress has been made. This information should be incorporated into the patient’s treatment plan.

The most important element of treatment is ensuring that the patient is engaged in the treatment, rather than the particular therapeutic model employed or the details of the treatment.

9.3 Case Management

Case management is defined as “a process that includes the designation of a primary worker whose responsibilities include the ongoing assessment of the patient and his/her problems, ongoing adjustment of the treatment plan, linking to and coordination of required services, monitoring and support, developing and implementing the discharge plan, and advocating for the patient.” The concept of case management is an integral role of every MMT prescriber.

Where MMT is delivered within a program, under a collaborative team approach, the case manager may be a designated team member, rather than the MMT prescriber. Given that the context of care in which MMT is carried out in Nova Scotia will vary from the independent family physician within a community practice to a MMT prescriber within a defined MMT program working in a collaborative team, the concept of case management will be approached differently. In cases where the case management requirements are more than can be met by a family physician as the MMT prescriber in an office setting, the patient should be referred to addiction services.
Counselling and Case Management

Case management should be offered regardless of where the individual is in the system.\textsuperscript{117}

The role of a case manager includes the following activities:
- Facilitating communication within the treatment team
- Coordinating access to treatment
- Providing patient information
- Helping patients gain access to additional health and social services
- Advocating for the patient

9.4 Therapeutic Factors

Methadone alone may lead to recovery, but to be optimally effective, MMT should be an integrated treatment approach that includes counselling and other supports that address the determinants of health.

9.4.1 Therapeutic Relationship

Research shows that a positive therapeutic relationship between an MMT prescriber and a patient has a helpful impact. Therapeutic approaches are most successful when there is a strong therapeutic alliance.\textsuperscript{118, 119} This involves the MMT prescriber creating a non-judgmental, collaborative environment whereby patients feel safe to discuss their feelings and concerns. Particularly when there are complex psychosocial problems, the MMT prescriber will need to draw on the support of formal and informal referral. If an MMT prescriber is not able or prepared to provide counselling, it is essential to connect the patient with services in the community.

Non-judgmental trusting collaborative MMT prescriber-patient relationships are essential for positive results.

9.4.2 Extra Therapeutic Factors

Social determinants of health (extra-therapeutic factors), such as housing, income and social support networks, can greatly affect a person’s mental health. Providing counselling and case management to MMT patients can be complex, as patients may need help making changes in how they use substances. Also, they may have financial, housing, legal, and health problems, and histories of trauma, mental health problems, or relationship difficulties. Instability or difficulty in one or more of the following areas may indicate a need for more intensive counselling and help. These services are offered by addiction services personnel employed by the Nova Scotia Department of Health and Wellness at various locations throughout the province as well as various First Nations communities (see “Appendix C: Resources”). MMT prescribers in those communities should consider a referral to Addiction Services.

Medical and wellness issues may include:
- Identification and treatment of concurrent mental illness
- Chronic physical health problems (Hepatitis C virus [HCV], human immunodeficiency virus [HIV], chronic pain)
- Family planning
- Issues of abuse (physical, sexual, emotional) and trauma
• Parenting and family counselling
• Reducing substance use
• Lifestyle changes such as nutrition, exercise, leisure time

Life skills and practical help may include:
• Securing basic necessities, such as housing, food, clothing
• Legal assistance
• Life skills
• Coping with stress
• Social isolation

Practical support may include:
• Supportive counselling
• Help with referrals to community resources
• Filling out forms and applications, providing letters

9.4.3 Concepts of Recovery

Recovery is about empowerment (having control over one’s life), self-determination and personal responsibility, having one’s expertise valued, reaching one’s potential, engaging in meaningful activities (e.g., education and work), being included in community life, and having a voice in one’s treatment plans.

A useful website covering the issues of determinants of health and health promotion can be found at https://www.porticonetwork.ca/search/?_search=Overview+of+health+promotion

9.4.4 Benefits of Methadone Maintenance Treatment

These are some suggested topics for goal setting with MMT patients:

• Reduced or discontinued use of intravenous opioids
• Reduced or discontinued use of other substances of abuse
• Improved mental and physical health
• Improved engagement with primary care
• Reduced incidence of concomitant infections such as endocarditis, osteomyelitis, and cellulitis, with consequent reduced need for hospitalization
• Reduced emergency room visits for drug-related complications
• Improved nutrition and weight gain
• Improved HCV and HIV management
• Improved maternal health
• Improved mental health status
• Reduced involvement with the criminal justice system
• Improved living situation (opioid dependence often results in homelessness or unsafe living conditions. Methadone maintenance patients should be encouraged to seek drug-free accommodation, as this is essential for successful recovery. The definition of an improved living situation might include an environment with sober friends, safe long-term, drug-free housing or housing which supports recovery, as well as other forms of supportive housing.)
• Improved social and personal relationships
• Improved vocational and employment opportunities (Patients who attain improved medical and social stability are much more likely to connect with social agencies to gain access to financial support. They are also more likely to be considered for educational and training programs, which may be necessary for eventual employment.)
Patients’ treatment plans require revision and updating as program goals and benefits change.

9.4.5 Counselling Techniques and Skills

There is evidence of the impact of counselling. Recent studies recommend that MMT prescribers be willing and able to provide counselling to their MMT patients.\textsuperscript{120} Counselling happens across the continuum of care, from screening and assessment through treatment and relapse prevention. Most change happens in early treatment. Types of counselling that have proven effectiveness in addictions work include Motivational Interviewing (MI) and Cognitive Behaviour Therapy (CBT).

MI is a counselling style that recognizes and resolves patient ambivalence to prepare patients to change addictive behaviours. MI elicits change statements and goals from the patient, rather than the counsellor. It has been shown to be particularly helpful in working with people who use substances.\textsuperscript{121} This method focuses on patient’s experiences; draws on their concerns, perspectives, and values; and encourages patients to evaluate their own life choices and explore the consequences of their choices in a non-judgmental way.

CBT is a talk therapy that leads to understanding the relationship between thoughts, behaviours, and feelings. It is increasingly identified as the “gold standard” for psychotherapy in the field of addictions. CBT has been shown to be effective for people of all ages, and for people of different levels of education, income, and various cultural backgrounds. It has also been shown to be effective in either individual or group formats.

If appropriately educated and supported, the family can be a valuable resource for the patient and their MMT prescriber. The MMT prescriber can also play a valuable role in encouraging and facilitating access to supports and services, such as relapse prevention programs in the community. It is important to note that families affected by other’s addictions will also need support and this is offered through Addiction Services.

MMT prescribers can effectively use frequent, brief interventions to instill motivation in patients who lack self-motivation.

The following are examples of positive brief interventions that address different barriers to change in patients’ lives:

**Building a therapeutic relationship:**
- Demonstrate sustained interest and concern for patients’ progress
- Schedule regular visits and ensure that two-way communication exists

**Education:**
- Provide factual drug information
- Educate patients regarding the symptoms of impending relapse, such as exhaustion, complacency, impatience, dishonesty, self-pity, frustration, depression, and argumentativeness
• Discuss behaviours such as denying, minimizing, rationalizing, intellectualizing, and compartmentalizing

Goal planning:
• Consider all areas of patients’ lives, not just issues around drug use
• Prepare and document avoidance and “escape plans” to deal with risky situations that could potentially lead to relapse of drug use
• Identify and help remove barriers to change (such as the need for child care or transportation)
• Remind patients that it is better to reach a modest goal than to fail to reach a more ambitious target and coach patients to take achievable steps on the road to recovery

Promoting self-awareness and positive behaviours:
• Identify internal and external triggers for relapse
• Avoid dwelling on failures, rather help patients take pride in and build on their successes
• Encourage harm-reduction behaviour
• Encourage the development of self-esteem, which is the primary ingredient necessary for any successful therapy

9.5 Community Resources

Addiction Services is operated by the health authority in your community.

To find the Addiction Services office closest to you, visit www.addictionservices.ns.ca and see “Appendix C: Resources”.

Another useful reference is A Cultural Competence Guide for Primary Health Care Professionals in Nova Scotia.
10. MMT WITH CONCURRENT MENTAL AND PHYSICAL DISORDERS

MMT prescribers must be skilled in the identification and management of conditions that are common in opioid-dependent patients, such as physical and mental health disorders.

OVERVIEW

MMT prescribers must be skilled in the identification and management of conditions that are common in opioid-dependent patients, such as medical and mental health disorders. All patients should preferably have an identified primary care physician. The MMT prescriber, if not the patient’s family physician, should encourage the patient to see their primary care physician regularly for ongoing preventive care, screening, and chronic disease management.

Chronic diseases commonly associated with the MMT patient population include chronic pain, diseases caused by blood-borne pathogens such as Hepatitis B and C, and HIV, and a variety of mental illnesses. Concomitant substance use disorders will also be dealt with in this section.

Those MMT prescribers with an exemption to prescribe methadone for opioid use disorder should have an interest and expertise in the treatment of addiction in general (see section “2.1 Obtaining a Health Canada Methadone Exemption for Dependency”). MMT prescribers cannot prescribe methadone as an analgesic for non-addicted patients with chronic pain, unless they have the specific exemption for analgesia from Health Canada. This exemption is independent of the exemption for methadone as a treatment of addiction.

MMT prescribers with the Health Canada exemption for opioid dependency can prescribe methadone both as an analgesic and as an opioid substitution therapy for patients who have concurrent addiction and acute pain. However, for chronic pain management, where, over time, the treatment of pain (rather than that of opioid dependence) becomes the primary focus of the patient’s care, the MMT prescriber requires an exemption to prescribe methadone for pain.

STANDARDS

1. The MMT prescriber shall not prescribe methadone for pain without a Health Canada exemption for analgesia, unless the primary focus of the patient’s care is treatment of opioid use disorder rather than pain management. In this circumstance, CPSNS MMT Program Standards and Guidelines should be followed.

2. Take-home doses shall not be provided to patients with alcohol use disorder of any severity.

GUIDELINES

1. The MMT prescriber should encourage patients to attend a primary care physician
or team for ongoing, age-appropriate screening and chronic disease management if it is not feasible for the MMT prescriber to provide this care.

2. The MMT prescriber should have open and regular communication with the patient's primary-care physician.

3. MMT prescribers should screen patients for Hepatitis C and HIV, and offer referral and treatment when clinically indicated.

4. The MMT prescriber should ensure that the patient has immunity to Hepatitis A and B.

5. The MMT prescriber should assess the patient periodically for alcohol use through an alcohol consumption history.

6. For patients with acute pain that warrants short-term opioid therapy, MMT prescribers may prescribe opioids, in addition to methadone or may temporarily add an additional 10-15 mg evening dose of methadone in patients eligible for take-home doses.

7. If opioids are prescribed for acute pain, the MMT prescriber should choose an opioid that the patient has not misused in the past, and consider prescribing a sustained release opioid formulation (e.g., morphine SR Q8H or 24-hour morphine) dispensed at a frequency consistent with methadone dispensing.

8. The MMT prescriber should become familiar with the US Centers for Disease Control and Prevention's (CDC) Guidelines for Prescribing Opioids for Chronic Pain.

9. The MMT prescriber should only attempt long-term opioid therapy for methadone patients with chronic non-cancer pain in formal or informal consultation with a pain consultant.

10. The MMT prescriber may prescribe methadone in split doses for patients with severe chronic pain who require opioids. Usually this should only be done after the patient is on a stable once-daily dose and is eligible for take-home doses or receiving take-home doses.

11. The MMT prescriber should only attempt long-term opioid therapy for severe chronic pain if the patient has had insufficient analgesic benefit from an adequate trial of non-opioid treatments and from a trial of split methadone dosing.

12. The MMT prescriber should periodically screen and assess MMT patients for anxiety and mood disorders and refer to a mental health care professional if they have failed to respond to primary-care treatments.

13. The MMT prescriber should taper with a view to discontinuing benzodiazepine treatment in all patients.

10.1 Physical Disorders

10.1.1 Hepatitis C and HIV

Hepatitis C treatments can be successfully integrated into MMT. Adherence to antiretroviral treatment for HIV is higher in patients on MMT than those not receiving MMT.\textsuperscript{122} Patients with HIV should be referred to infectious disease or an HIV clinic.

When Hepatitis C is present, MMT prescriber's should focus on the following areas:

Lifestyle
- Advise patients against alcohol consumption
- Discuss appropriate diet
- Discuss risk of transmission
Immunization
Vaccinate patients against Hepatitis A and B, and provide other relevant vaccinations.

Treatment
Refer to a physician with expertise in Hepatitis C treatment when indicated.

MMT prescribers should attend to the following issues with HIV-positive patients:

Education
Educate patients on taking precautions with sexual relationships and shared needles.

Immunization
• Arrange for patients to be vaccinated against Hepatitis A and B
• Immunize patients with tetanus toxoid, pneumococcal vaccine, and influenza vaccine

Testing and Monitoring
• Consider tests for tuberculosis and syphilis

Treatment and Referral
• Refer to an infectious disease specialist for assessment and treatment
• Be aware of the many drug interactions between methadone and HIV medications, and make dose adjustments as clinically indicated

10.1.2 Hepatitis A and B

MMT patients should be tested for their immunity to Hepatitis A and B, and if not immune, immunized appropriately. Patients with Hepatitis B or C should be referred to a consultant who provides treatment services.

10.1.3 Hepatic, Renal, Respiratory, and Cardiac Disease

Hepatic Disease
While stable liver dysfunction does not appear to affect methadone levels, MMT patients with decompensated cirrhosis may become very sedated. The MMT prescriber should consider decreasing the dose in this circumstance, and benzodiazepines must be avoided. The half-life of benzodiazepines can be prolonged in hepatic dysfunction, and benzodiazepines can trigger encephalopathy. The QTc interval should be monitored, as liver dysfunction is a risk factor for Torsades de Pointes arrhythmias.

Renal Disease
Evidence suggests that the metabolism of methadone is not affected by renal insufficiency. Nonetheless, patients in acute renal failure should be monitored closely for signs of methadone toxicity.

Respiratory Disease
Tolerance to the respiratory depressant effects of methadone develops very slowly and incompletely. Methadone patients who develop an acute, serious respiratory illness (e.g., asthma, pneumonia, COPD exacerbation) should be closely monitored for both worsening respiratory function and methadone toxicity.

Cardiac Disease
Patients who have cardiac disease are often at higher risk for arrhythmias, therefore their QTc interval should be closely monitored. Before initiation on MMT, careful evaluation of cardiac symptoms (syncope, palpitations) and detailed
cardiac personal and family history should be obtained. Obtain a baseline and periodic ECG as indicated refer to section “5.6.2.2 Assessment and Monitoring”. Consideration should be given to a cardiology referral if there are any concerning features on history or physical exam.

10.1.4 Acute Pain

Patients in treatment for opioid use disorder are not insensate to pain due to their treatment. Further, they develop acutely painful conditions in circumstances no different than those patients who do not suffer from opioid use disorder. Treatment considerations for acute pain need to take into account the specific behavioral and physiological consequences of their condition and its treatment. The first such consequence is that of the development of tolerance. Because the methadone is a potent opioid, the opioid use disorder patient suffering acute pain can be expected to have a tolerance that is higher than that of someone not on methadone. This means a higher dose of the usual opioid treatment will be required to have the same desired effect. One good way to decide whether opioid analgesia is necessary is to ask about the usual pain management for the condition in question. Some dental surgeons routinely offer patients opioids after dental surgery. A typical recommendation is to double the usual dose of opioid for each dose given.

Providers not familiar with opioid use disorder treatment are generally reluctant to provide opioids even when they are indicated due to concern about the patient’s substance use disorder. This may be due to an unfounded fear of “feeding the addiction,” fear of interfering with urine drug screen results, or a concern about overdose. Patients themselves may be reluctant to take opioids recommended to them for acute pain for many of the same reasons. There is no evidence to suggest that providing additional opioid therapy for acute pain in MMT patients increases the risk of either relapse or overdose. In fact, undertreatment of acute pain is much more likely to increase risk of relapse.

Many patients are reluctant to disclose acute care providers that they are being treated for opioid use disorder with methadone even though on entering treatment they sign a treatment agreement that explicitly states they are required to disclose their ongoing treatment to any new health care provider. The College of Physicians and Surgeons of Nova Scotia requires that a PMP profile be obtained prior to writing a new opioid prescription.

It is recommended that, where possible, the provider managing the acute pain communicate directly with the MMT prescriber prior to initiating the pain treatment. Further, communication with the dispensing community pharmacist may prove valuable to helping direct treatment through verification of stability in treatment and most recent attendance. A decision can then be made about which provider will manage the acutely painful condition and under what specific controls. A conversation can be had about proper dosing of the new medication, drug interactions, the duration of treatment, and potential overdose safety.

If possible, the opioid used to treat acute pain should not be a drug previously abused as this is more likely to lead to instability in the opioid use disorder. The opioid used to treat the acute pain should be dispensed at the same interval as the methadone (i.e., patients prescribed methadone daily should have the acute pain
MMT WITH CONCURRENT MENTAL AND PHYSICAL DISORDERS

opioid dispensed daily). Long-acting medication is preferred, such as the 24-hour sustained-relief morphine Kadian. This drug is on the provincial formulary and can be taken at the pharmacy with daily witnessed ingestion. It provides 24-hour pain relief when effective.

If the patient requires hospitalization, a temporary methadone exemption can be obtained through Health Canada for the admitting physician if they do not already possess one. Alternatively, if the usual MMT prescriber has admitting privileges at the hospital or has a methadone-prescribing colleague who has privileges, dosing can be coordinated through hospitalization on a consulting basis. It is imperative that admitted methadone-treated patients are not made to go without methadone due to the hospitalization. Even when a patient cannot take medication orally, there are safe ways to ensure that they do not experience the distress of opioid withdrawal. An anesthesiologist familiar with methadone maintenance treatment can assist if necessary.

The usual MMT prescriber should review the frequency of witnessed doses, clinic visits, and urine testing given the development of a new acute pain condition. Early in the course of treatment, the patient can be examined for signs of sedation two-four hours after their usual methadone dose if there is a concern about opioid toxicity. Consideration should be given to adding psychosocial supports for the patient as the new condition is likely to make the patient more vulnerable. The usual MMT prescriber will also have to make decisions about interpreting urine test results in light of newly prescribed medication possibly showing in urine screens. Confirmatory testing should be considered if there is a concern about illicit use through this treatment.

10.1.5 Chronic Non-Cancer Pain

Chronic non-cancer pain (CNCP) is common in MMT patients. MMT prescribers who prescribe methadone are encouraged to become familiar with the US Centers for Disease Control and Prevention’s (CDC) Guidelines for Prescribing Opioids for Chronic Pain.

MMT patients with CNCP present clinical challenges that require special consideration when prescribing opioids.

10.1.5.1 Methadone for Analgesia

Controlled trials have found that methadone is of comparable effectiveness to morphine as an analgesic. The duration of analgesic action of methadone is typically no more than eight hours. Patients with concurrent pain and opioid addiction often experience pain relief once methadone treatment is initiated. When an optimal dose for withdrawal management is reached, and if all non-opioid therapies have failed, the methadone dose may be split for patients who are on take-home doses. Formal or informal consultation with a prescriber experienced in methadone and chronic pain management should be considered.

10.1.5.2 Opioids in Combination with Methadone

Research to date has not examined the safety or effectiveness of methadone in combination with other opioids for opioid-dependent patients with chronic non-cancer pain.
Long-term opioid prescribing in MMT patients makes it difficult to prevent and detect opioid misuse and diversion. Therefore, opioids should only be used if there is strong likelihood of benefit (i.e., patients with serious, well-defined nociceptive or neuropathic conditions who have not responded to first-line non-opioid treatments or to split methadone dosing). Consultation with an experienced MMT prescriber is recommended before embarking on long-term opioid treatment for MMT patients.

10.1.5.3 Preventing Misuse and Diversion in Patients on Both Methadone and Opioids
MMT patients do not always inform their MMT prescriber if they are receiving opioids from another physician. Collaboration and communication between the MMT prescriber and pharmacist can enhance knowledge of other medications the MMT patient may be taking.

The methadone monitoring program offered by Nova Scotia Prescription Monitoring Program (NSPMP) is an especially important component of the care of patients who must be on both methadone and opioids. Although recommended for all MMT patients, it is critical in this situation to get a prescription monitoring report (patient profile from the NSPMP) on all patients during initiation, periodically, and at any sign of deterioration in stability.

When a patient requires a second opioid in addition to methadone, it is preferred that the MMT prescriber prescribe both the opioid and the methadone. If the MMT prescriber knows that another physician is prescribing opioids for the patient, several other strategies can be implemented to minimize opioid diversion and misuse. The opioid can be dispensed along with the methadone take-home doses. Pill counts and regular urine drug screening can also be helpful. Close communication with the patient’s opioid prescriber is advised to prevent dangerous drug combinations (see section “5.2 Strategies to Reduce Risks of Methadone”).

### TABLE 13: OVERVIEW OF CHRONIC PAIN MANAGEMENT

<table>
<thead>
<tr>
<th>Pain Condition</th>
<th>Management</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mild to moderate pain</td>
<td>Non-opioid treatments</td>
</tr>
</tbody>
</table>
| Severe pain condition that usually requires opioid therapy | Formal or informal consultation with chronic pain management specialists  
**First-line:** Non-opioid treatments  
**Second-line:** Split methadone dose  
**Third-line:** Sustained release opioid (e.g., 24-hour morphine) |
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10.2 Mental Health Disorders

10.2.1 Anxiety and Mood Disorders

The prevalence of anxiety and mood disorders is several times higher in MMT patients than in the general population. At least 30% of substance-dependent patients meet the Diagnostic and Statistical Manual of Mental Disorders’ (DSM-V) criteria for an Axis I psychiatric disorder, unrelated to drug use or withdrawal. Depression, anxiety, bipolar disease, and eating disorders are common, as are personality disorders such as antisocial personality disorder.

Identifying and providing treatment for mental health disorders can help improve methadone maintenance treatment outcomes, including reduced use of drugs and treatment retention.

MMT prescribers should consider referring MMT patients for more intensive assessment and treatment if they have persistent depression and anxiety despite an initial trial of pharmacotherapy.

10.2.2 ADHD

ADHD and substance use disorders commonly co-occur and prescription stimulant medications are frequently used recreationally. Confirmation of accurate diagnosis of ADHD for all MMT patients being prescribed stimulant medications is strongly recommended. If a previously undiagnosed patient requests stimulant medication or if an MMT physician suspects this diagnosis, it is recommended that a psychiatry consultation be obtained to confirm a definitive diagnosis.

Prior to prescribing stimulant medications, a trial of non-stimulant medication (Atomoxetine, imipramine, bupropion) is often indicated, as are behavioral approaches to ADHD.

If stimulant medication is going to be prescribed, it is recommended that long-acting stimulants (Adderall XR, Biphentin, Vyvance, or Concerta) be used preferentially with intermediate-acting stimulants (Ritalin SR or Dexedrine Spansule) as a second option.

Stimulants should be dispensed with the same frequency as methadone (e.g., daily witnessed ingestion (DWI) if methadone is DWI). The first dose of stimulant should be witnessed ingestion if a patient is on DWI methadone and if a second dose for later in the day needs to be prescribed, then this can be taken as a carry dose.

10.2.3 Management Issues

The initial assessment should always include screening questions for comorbid mental illnesses. When assessing for mental illness independent of drug use, past psychiatric treatment, a family history of mental illness, and drug-free periods are very important considerations. It may be difficult to determine whether a psychiatric disorder is the primary condition or whether it is secondary to drug use. For example, use of some substances such as alcohol may either cause symptoms, which present as mental illness (such as depression), or may interfere with the management of an underlying mental illness. The distinction may be
easy to make if symptoms are rapidly resolved when the intoxication state subsides (as in the case of cocaine and its resulting psychosis). In general, however, to rule out substance-induced disorders, a skilled assessment is required that should take into account how symptoms respond to increases or decreases in drug use, or periods of abstinence. Substance-dependent patients also have a significantly higher incidence of sexual abuse issues and eating disorders. In these cases, treatment and focused counselling to assist recovery may be beneficial. Mental Health Services should be consulted for further assessment and treatment. The document from Health Canada *Best Practices - Concurrent Mental Health and Substance Use Disorders* further outlines guiding principles for the treatment of concurrent disorders.

10.3 Poly-Substance Comorbidities

**Methadone maintenance treatment is very successful at reducing the harm associated with opioid use, but ongoing use of other mood-altering drugs reduces that benefit.**

As poly-substance use is very common among people who are dependent on opioids, practitioners delivering methadone maintenance treatment will almost certainly have to deal with this issue.

Consequently, MMT prescribers should pay attention to their patients’ use of other mood-altering drugs, both pharmaceuticals (prescribed or not) such as benzodiazepines, gabapentinoids, quetiapine, bupropion, zopiclone, oxy-butylin, Gravol (Dimenhydrinate), and illicit substances. All patients require a comprehensive assessment that includes a detailed inventory of all drugs used, leading to a diagnosis and treatment plan for each patient.

10.3.1 At-Risk Drinking

At-risk drinking and alcohol use disorder are common among MMT patients. Excessive alcohol use accelerates liver damage in patients with Hepatitis C. Alcohol also contributes to substance-induced mood, anxiety, and sleep disorders. Alcohol interacts with methadone causing sedation, risk of overdose, aspiration, accidents, violence, and other adverse events.

Alcohol has the potential to interact with methadone in a harmful way. It is recommended that patients on MMT be encouraged to minimize alcohol consumption as much as possible. Abstaining completely from alcohol is recommended for patients with Hepatitis C.

Alcohol use disorder in MMT patients should be aggressively addressed to reduce the risk of overdose. Methadone should only be dispensed, daily witnessed, in the context of an alcohol use disorder. Consideration should be given to referral to provincial Addiction Services.
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Alcohol use also poses unique concerns in methadone maintenance patients. The risk of overdose increases with use of alcohol, given the synergistic respiratory depressant effect alcohol has with methadone. In addition, alcohol interferes with the metabolism of methadone. Alcohol use disorder in its early stages has the potential to induce hepatic enzymes, which can accelerate methadone metabolism. At the very end stages, liver failure can precipitously reduce the methadone tolerance of a patient. For these reasons, methadone should be used with caution in end-stage liver disease. These complicated interactions underscore the need for MMT prescribers to appropriately screen and monitor their patients for alcohol use and aggressively address alcohol abuse-related issues when present.

Methadone maintenance treatment does not appear to significantly reduce alcohol consumption in the long-term.\textsuperscript{137, 138} Evidence suggests that counselling about alcohol use is effective in methadone patients.\textsuperscript{139}

**MMT prescribers should be aware of special considerations involved in managing alcohol problems, such as:**

**Management**
Pharmacologic treatments should be offered to those with alcohol use disorder including disulfiram and acamprosate. Naltrexone (ReVia\textsuperscript{®}) is contraindicated in patients on methadone. An excellent resource for physicians in primary care is \textit{http://www.sbir-diba.ca/}. Methadone patients in alcohol withdrawal should be managed in a withdrawal management unit (see “Appendix C: Resources”).

**10.3.2 Sedative-Hypnotics Including Benzodiazepines**

Comorbid sedative-hypnotic use poses another set of unique challenges. Like alcohol, these drugs have a synergistic respiratory depressant effect when used with methadone, and increase the risk of fatal overdose. The issue of multi-doctoring, where patients may be receiving sedative-hypnotics from other physicians, may need to be addressed.

Benzodiazepine use in MMT patients is associated with increased psychological distress, risk for overdose, higher risk of suicidal behaviour, violence, impaired attention and memory, impaired driving, and risk for continuing poly-drug use.\textsuperscript{140, 141, 142, 143, 144, 145} Results regarding the impact of benzodiazepine use on treatment retention have reported either a negative impact\textsuperscript{146} or no impact on treatment retention.\textsuperscript{147} There is no beneficial impact of benzodiazepines on treatment retention. As well, an observational study documented reduced symptoms of depression in MMT patients who were tapered off benzodiazepines and started on antidepressant therapy.\textsuperscript{148}

Sedative-hypnotics need to be used cautiously, if at all, in patients with addiction disorders. Long term benzodiazepine use is strongly discouraged in MMT patients. As there is added risk with benzodiazepine use in MMT patients, all long-term benzodiazepine use should be gradually discontinued. Benzodiazepine tapers should be effected over weeks or months due to the danger of acute withdrawal. During the process of tapering, benzodiazepines should also be dispensed at
the same interval as methadone. Consideration should be given to daily witnessed dispensing. Please refer to Ashton Manual website for information on benzodiazepine tapers.

10.3.3 Stimulants

Patients may still meet the criteria for opioid dependence when it is apparent that stimulants, whether cocaine or methamphetamine, are the drugs of choice.

**Failure to recognize stimulant abuse or dependence as a problem may undermine a methadone maintenance program.**

Stimulant use (cocaine, amphetamines) is common in patients with opioid use disorder. In some patients, stimulants are the patient’s drug of choice. In these cases, MMT is still appropriate if patients meet the criteria for opioid use disorder.

A plan to manage the stimulant use should be developed with the patient soon after the start of MMT, and reviewed periodically throughout treatment.

Methadone maintenance treatment may be appropriate for opioid use disorder, but a plan to deal with the stimulant use should be in place from the beginning. MMT should only be continued long-term if objective benefits can be documented. Furthermore, the treating MMT prescriber should be prepared to review and update the treatment plan at each visit.

10.3.4 Cannabis

The ongoing use of mood-altering drugs such as cannabis can undermine the efforts being made in treatment to develop non-chemical coping strategies. While there is controversy as to whether or not cannabis causes an “amotivational syndrome,” there is evidence that both anxiety and psychosis can be exacerbated by or result from cannabis use. Cannabis for medical purposes should not be authorized for those with substance use disorders.

Perhaps most importantly for the MMT patient, the procurement of cannabis often keeps patients connected to their drug dealers, which can remain a significant trigger for relapse.
11. METHADONE TOXICITY

Methadone toxicity presents a serious challenge to MMT prescribers. The most likely time for a patient to experience toxicity is during the induction phase.

OVERVIEW

Methadone toxicity presents a serious challenge to MMT prescribers. The most likely time for a patient to experience toxicity is during the induction phase. Due to its long half-life the effect of methadone is cumulative and toxicity may develop several days after a dose change. Cross-tolerance between methadone and other opioids is unpredictable, so a patient that is tolerant to another opioid is still at risk for methadone toxicity. There can be considerable variation between patients in how methadone is metabolized.

Overdose leading to opioid toxicity is characterized by a decreased level of consciousness, respiratory depression, and pinpoint pupils.

Two features of methadone toxicity make interpretation of these signs difficult:
1. Definite signs of methadone toxicity may occur within three-four hours but may not become apparent for five-nine hours after the overdose.⁷⁷, ¹⁴⁹
2. MMT patients who have had an overdose may appear relatively alert during conversation, succumbing to respiratory depression during sleep.¹⁵⁰

STANDARDS

None for this section.

GUIDELINES

1. The MMT prescriber should assess patients in-person or refer them to the emergency department if they might have taken a dose above what would be considered a safe dose, given their underlying tolerance, concurrent medication use, and health status.
2. If, after assessment, the MMT prescriber is concerned that the patient is at imminent risk for methadone toxicity, the MMT prescriber should take the following steps:
   a. Explain the risks of methadone overdose, including respiratory depression and death, and advise the patient that an ambulance is being called.
   b. Ensure a staff member keeps the patient awake until the ambulance arrives.
   c. Arrange an involuntary mental health assessment if the patient refuses to attend the emergency department.
11.1 Dosing and Assessment for Possible Methadone Toxicity

11.1.1 Definition of a Toxic Dose:

Reasonable dose increases during the induction phase are usually in the range of 10 mg every three days or 15 mg every five days. Intentional dose increases in excess of 15 mg are not considered safe and acceptable practice (see section “5.4.1 Dosing During Induction Phase”).

If a patient has consistently been on 50 mg per day for several weeks and then receives 60 mg by mistake, this would be considered within the range of a “reasonable” dose increase for that patient. However, if the patient was just initiated on 30 mg the day before, and then receives 40 mg on the second day, they could be at risk of methadone toxicity.

In the case of MMT prescriber or pharmacy error, or if non-prescribed (diverted) methadone is ingested where the exact amount ingested is not known with certainty, it is safest to manage the patient as if they took an overdose, even if the patient reports that he/she is alert and only took a “small amount.”

The risk of toxicity is determined not just by the amount of the extra dose but by the patient’s underlying tolerance and underlying health status, as well as the timing of dose increases. Even “extra” doses that are considered “small” for example 15-20 mg can cause toxicity during induction of methadone, or if the patient is elderly or has a respiratory illness. Because of the long half-life of methadone, increasing doses too frequently can lead to toxicity. At the time of methadone induction, it is important to discuss with the MMT patient the risks of overdose (see section “5.2 Strategies to Reduce Risks of Methadone” and “Appendix J: Patient Guide on Methadone Overdose”).

11.1.2 Assessment of the MMT Patient Who May Have Taken a Toxic Dose

If the patient is currently at the clinic, the MMT prescriber or delegate should engage the patient in conversation for at least five minutes, as an overdosed patient will have trouble maintaining alertness for more than a few minutes. During the conversation, observe for sweating, emotional lability, slurred or drawling speech, and “nodding off.” If possible, the patient should also be observed when not engaged in conversation. Falling asleep, dozing or napping could indicate toxicity even if the patient is easily arousable. Remember that the peak effect of the methadone is usually apparent three-four hours after ingestion, but may take as long as five-nine hours or more.

If the patient is not at the clinic, contact the patient and clearly communicate the effects of overdose and delayed onset of symptoms. Also, advise them to present to the nearest emergency department. The MMT prescriber should consult with the emergency physician. If unable to locate the patient or the patient is not willing to go to the emergency department, call 911.
11.2 Patient Referral to the Emergency Department for Overdose

The management of methadone overdose is described in detail in “Appendix Q: Emergency Department Management of Methadone Overdose”. When a patient is sent for emergency treatment, the appropriate documentation should be completed, and given to the paramedics or faxed to the emergency department. If possible, the MMT prescriber should speak directly with the attending emergency department physician or nurse.

A patient in the emergency department with a suspected methadone overdose should be:
1. Observed for a minimum of 10 hours, AND
2. All symptoms of overdose must be resolved before discharge.

If the MMT prescriber decides not to call the ambulance, a reliable adult should accompany the patient to the emergency department. The person must understand the life-threatening nature of the overdose and the dangers of refusing emergency department management.

If the MMT prescriber is uncertain about appropriate management, contact the IWK Regional Poison Control Center immediately. IWK Regional Poison Control Center Tel: 1-800-565-8161

11.3 Refusal to Go to Emergency Department

If the patient refuses to go the emergency department, then it may be necessary to fill out a Form 2, under Sections 8 and 9 of the Nova Scotia Involuntary Psychiatric Treatment Act (2005), which allows an involuntary psychiatric assessment of the patient at an emergency department. The patient will have to be medically cleared by the emergency physician prior to being seen by the psychiatrist.

Many MMT prescribers are reluctant to complete a Form 2 on a patient who is alert and coherent. However, methadone overdose meets the requirements for an involuntary assessment.

Methadone overdose meets the requirements for an involuntary assessment because:
1. The patient is at imminent risk of bodily harm.
2. The patient has a mental health diagnosis (addiction) and as the result of the mental health disorder, the person is likely to suffer serious physical impairment or serious mental deterioration. This disorder can make it difficult for the patient to appreciate the need for medical treatment. (Clinical experience suggests methadone patients
tend to be far more concerned about methadone withdrawal than intoxication. The MMT patient might be worried that they will receive naloxone in the emergency department or that their next methadone dose will be reduced or delayed).

If the patient refuses to go to the emergency department and a clinical decision is made to not complete a Form 2 (e.g., no MMT prescriber available onsite or the MMT prescriber is speaking to the patient by phone and has not assessed the patient in the preceding 72 hours as required by a Form 2), then it is reasonable to send an ambulance or police to the patient’s home.

If the MMT prescriber thinks that the patient would benefit from assessment in the ER but the patient refuses to go to the ER and the MMT prescriber decides that the patient does not meet criteria to complete a Form 2 or to call emergency services, the patient should be asked to sign an AMA or “Against Medical Advice” form (see “Appendix O: Against Medical Advice (AMA)”). Explain to the patient and their partner or family member, if available, that the patient is at risk of respiratory depression and death, especially if they fall asleep. Advise the patient not to use any other substances or medications.
12. SPECIAL POPULATIONS

12.1 Adolescents

GUIDELINES

1. In cases where an MMT prescriber considers it appropriate to offer an adolescent MMT, it is recommended that the MMT prescriber seek consultation with an experienced MMT provider.

Patients under 18 years of age may be considered for MMT, the approach being similar to adult MMT with a few provisions. The focus of treatment should be on psycho-social interventions with opioid substitution as an adjunct. However, pharmacotherapy should not be delayed by virtue of chronological age. Opiate substitution alternatives to methadone such as buprenorphine / naloxone (Suboxone®) may be more appropriate for some adolescents. More information on adolescent addiction can be found in Nova Scotia Adolescent Withdrawal Management Guidelines.

Any treatment option involving withdrawal should be avoided if the patient is pregnant. Methadone should be considered after a thorough assessment and a discussion about all the treatment options has taken place. The MMT pre-scriber should ensure that there has been a discussion with the adolescent (and other family members, where possible) about potential issues with methadone, including side effects, risks, and difficulty of tapering off. Diversion risks in this population must be carefully considered and factored into prescribing practices.

In cases where an MMT prescriber considers it appropriate to offer an adolescent MMT, it is recommended that the MMT prescriber seek assistance by referral and/or consultation with an experienced MMT prescriber.

12.2 Pregnancy

Pregnant opioid-dependent women are at increased risk of obstetrical and medical complications due to repeated cycles of opioid intoxication and withdrawal.

OVERVIEW

Guilt and shame about substance use, fear of being judged and of having children removed are major barriers to care. A respectful approach acknowledges that change is a process and meets women at their stage of change. Preserving the mother-infant bond is important. Support encompasses the mother-child unit and each woman is respected as a mother, even when she is separated from her child.

Opioid-dependent women are at increased risk of obstetrical and medical complications due to repeated cycles of opioid intoxication and withdrawal. Opioid-dependent women have higher rates of premature delivery and infants with low birth weight leading to higher rates of infant morbidity and mortality. Morbidity and mortality have been attributed to the direct effect of the drug itself, but are also secondary to other associated lifestyle factors such as poor nutrition,
inadequate prenatal care attendance, and concomitant substance use such as alcohol and tobacco.\textsuperscript{151, 153, 156}

MMT is considered the treatment of choice for pregnant women with opioid dependence. The benefits of MMT during pregnancy include improved prenatal care, nutritional status, and social stability leading to increased likelihood of maternal custody, as well as, reduced incidence of pre-term delivery, low birth weight, and infant mortality.\textsuperscript{162, 163} Respect and a non-judgmental approach are critical.

Pregnancy provides a “window of opportunity” to motivate substance-using women to make changes in their lives.

\textbf{STANDARDS}

1. The MMT prescriber shall offer MMT to opioid-dependent pregnant patients on an urgent basis.

\textbf{GUIDELINES}

1. MMT prescribers should ensure pregnant opioid-dependent patients are counselled regarding the risks and benefits of MMT during pregnancy.
2. The MMT prescriber should consider consultation with a prescriber who is experienced in MMT in pregnancy when contemplating initiating a pregnant patient on methadone maintenance for opioid dependence.

3. The MMT prescriber should aim for a maintenance dose of methadone that keeps the patient comfortable for 24 hours and helps maintain abstinence.
4. The MMT prescriber should assess the daily methadone dose for adjustments, anticipating the need for dose increases during the third trimester of pregnancy to prevent maternal withdrawal symptoms.
5. As an alternative strategy, MMT prescribers may consider split dosing during pregnancy if an adequate single daily dose cannot be achieved without side effects as the methadone dose is adjusted upward in the third trimester.
6. The MMT prescriber should consider dose replacement after reported emesis in pregnant patients in accordance with section “5.9 Vomited Doses”.
7. The MMT prescriber should encourage pregnant patients to continue methadone maintenance therapy during pregnancy.
8. The MMT prescriber should only consider tapering and detoxification in patients demanding it and after reviewing significant risks based on clinical and social stability, previous good response to tapering, and the absence of concurrent psychiatric disorders or addiction to other substances.
9. The MMT prescriber should ensure the MMT patient is referred for appropriate high-risk perinatal care.
10. The MMT prescriber should ensure that there is open communication between the methadone and obstetrical physician regarding the use of MMT during pregnancy and planning for labour and delivery.
11. During labour and delivery, the MMT prescriber should ensure the pregnant MMT patient receives her regular daily methadone dose.
12. The MMT prescriber should monitor the MMT patient closely for symptoms of methadone intoxication and mood disorders during the postpartum period.

13. The MMT prescriber may need additional visits with the patient during the immediate postpartum period to provide support during this transition phase.

14. The MMT prescriber should encourage breastfeeding during MMT.

15. The MMT prescriber should consider referring to a child protection agency, depending on the mother’s length of time in treatment, the stability of substance use, and social situation, according to provincial legislation.

12.2.1 Effects of Methadone on the Neonate

To date, no conclusive long-term study has been published about the long-term effects of neonatal exposure to methadone.\textsuperscript{164, 165, 166, 167, 168} Environmental factors and caregivers can play a significant role in mediating these effects of methadone exposure on infants’ growth and development.

Methadone crosses the placenta, but has not been found to be teratogenic. There is weak evidence linking strabismus to opioid use during pregnancy, especially with methadone exposure in utero.\textsuperscript{169, 170}

The most significant risk of methadone exposure during pregnancy is neonatal withdrawal, also known as neonatal abstinence syndrome (NAS).\textsuperscript{171}

Up to 85% of newborns exposed to methadone experience withdrawal symptoms and signs\textsuperscript{172, 173} such as:

1. Central nervous system (CNS) hyperirritability (e.g., high-pitched cry, increased muscle tone, sleep disturbances, tremors, seizures)
2. Gastrointestinal dysfunction (e.g., poor feeding, regurgitation, vomiting, loose stools)
3. Metabolic, vasomotor and respiratory disturbances (e.g., sweating, recurrent sneezing, yawning, fever)

Withdrawal usually begins within 72 hours of birth, but late presentations (up to two-four weeks after birth) have been reported,\textsuperscript{174} and symptoms may last for several weeks or months. Some infants will require specialist consultation with a paediatrician or neonatologist to assist in managing their opioid withdrawal therapy.

12.2.1.1 Neonatal Opioid Withdrawal (Neonatal Abstinence Syndrome or NAS)

If withdrawal occurs, the onset of symptoms depends on the half-life of the substance used and when the last dose was taken. The occurrence and severity of neonatal opioid withdrawal does not correlate with higher maternal methadone dose.

Neonatal opioid withdrawal is always a diagnosis of exclusion. When neonatal opioid withdrawal is suspected, other diagnoses such as hypoglycaemia, hypocalcaemia, and sepsis should be ruled out first.

Infants of mothers who used prescription drugs during pregnancy, especially benzodiazepines, barbiturates, and antipsychotics, as well as alcohol and nicotine, may have neonatal withdrawal symptoms for a longer duration.
Rooming-in with the infant, breast-feeding, frequent skin-to-skin contact, and cuddling is encouraged. This increased contact results in a demonstrated reduction in the need to treat opioid-exposed infants.

12.2.2 MMT During Pregnancy

Early referral for perinatal care is essential. Any opioid-dependent pregnant woman is considered to be high-risk.

12.2.3 Initial Assessment

The same assessment is required for pregnant women as would ordinarily occur. Special emphasis should be placed on reviewing personal safety, nutritional status, and housing. The MMT prescriber should review the risks involved in alcohol intake, tobacco use, and other illicit drug use.

12.2.4 Methadone Dosing During Pregnancy

Protocol for induction:
Outpatient methadone induction during pregnancy should be managed according to the same induction schedule described in section “5.4.1 Dosing During Induction Phase”.

12.2.4.1 Establishing a Maintenance Dose
An appropriate maintenance dose should be determined for each individual. A clear relationship between maternal methadone dose and the severity of Neonatal Abstinence Syndrome (NAS) has not been established. Therefore, the risks of illicit opioid use outweigh the potential risks of higher methadone doses in such situations.

12.2.4.2 Dose Adjustments During Pregnancy
If on methadone prior to conception, women in MMT can continue on their pre-pregnancy dose during the first and second trimesters. Methadone clearance rates gradually increases from the first to the third trimester, resulting in lower mean serum methadone levels as the pregnancy progresses. This change in methadone clearance has been attributed to different factors such as increased methadone metabolism during pregnancy, increased maternal renal elimination, increased volume of distribution and tissue binding, and additional metabolism by placenta and fetus. Small increments in methadone dose later in pregnancy may be required.

When pregnant women continue to experience withdrawal symptoms with single daily dosing, split dosing (i.e., every 12 hours) can be considered. Women need to meet stability criteria (see section “7.2 Take-Home Doses: Criteria”) for take-home doses or arrangements can be made with the pharmacy to provide an evening observed dose. Twice-daily methadone dosing has been associated with sustained plasma methadone levels and fewer withdrawal symptoms resulting in improved treatment compliance and decreased use of other illicit substances. Split dosing should be done in collaboration with a MMT prescriber with experience in prescribing methadone for pregnant women.
12.2.4.3 Managing Vomited Doses
Underlying causes of the vomiting should be addressed. For pregnant patients or patients with underlying medical conditions (e.g., cancer or HIV), the MMT prescriber may decide to prescribe a replacement dose even if the pharmacy or clinic staff did not observe emesis (see section “5.9.1 Vomiting in Pregnancy”).

12.2.5 MMT Tapering or Withdrawal During Pregnancy (Prenatal Methadone Withdrawal Management)
The standard of care for pregnant opioid-dependent patients is methadone maintenance throughout pregnancy and postpartum. However, some patients insist on detoxification from all drugs during pregnancy. Patients insisting on withdrawal or tapering should be informed that the risk of relapse with dose reduction or discontinuation of methadone in pregnancy is high – certainly no less than in non-pregnant patients.

The patients who are most likely to be successful in withdrawal during pregnancy and remain drug-free are those who have had prolonged stability on methadone, have had drug treatment including relapse prevention, and are socially stable.

Patients should also be made aware of all the risks of being in withdrawal when pregnant and should be strongly counselled against methadone withdrawal. Particular attention should be paid to fetal and maternal wellbeing during pregnancy tapers.

There is limited guidance in terms of the rate of methadone tapering or detoxification. The dose should be decreased as slowly as possible to minimize withdrawal. Please refer to section “8.1”. This process should be stopped if the pregnant woman reports any adverse outcomes such as relapse to drug use, increased cravings, intolerable withdrawal symptoms, or obstetrical complications.

12.2.6 Prenatal Care for MMT Patients
The addition of on-site prenatal care has been shown to improve attendance and pregnancy outcomes. Certain studies show that methadone substitution treatment provides pregnant women with greater social stabilization and prenatal care. Therefore, comprehensive care, which provides MMT and prenatal care, is the most effective approach in increasing patient retention and reducing adverse neonatal outcomes.

12.2.7 Intrapartum Management for MMT Pregnant Patients
Methadone will not provide pain relief during labour and additional analgesia will be required. Thus methadone should not be used as pain control in labour. The regular methadone dosage should be continued and not considered as part of the pain management plan. The usual labour and delivery pain medication can be used. Epidural anesthesia is usually the preferred method of pain control in labour, due to altered pain perception in this population group. Nitrous oxide may be useful in the second stage. Opioid analgesics may be used, but the dose may need to be higher than expected for a non-opioid-dependent woman. The patient must be monitored for somnolence and respiratory depression.
When pregnant women who are already on methadone arrive at a hospital in labour, the usual methadone dose can be given in a decreased volume of fluid (by arrangement with the pharmacy). If oral fluids are contraindicated, methadone may be replaced by intravenous opioid management. Mixed agonist-antagonists must be avoided as they can precipitate acute withdrawal symptoms.

### 12.2.8 Postpartum Management for MMT Patients

#### 12.2.8.1 Dosing

A few weeks postpartum, the MMT patient may find her established dose of methadone is too high, in particular if the dose was increased in the third trimester. If this occurs, the dose should be decreased based on clinical symptoms until a new stable dose is reached. For those women whose dose was split, a split dose may no longer be required. The MMT prescriber should consider the risk of relapse to illicit opioids prior to beginning the decrease. Any decrease in dose should be based on clinical assessment.

#### 12.2.8.2 Support

Mothers often feel extremely guilty if the infant exhibits symptoms of opioid withdrawal requiring treatment and an extended hospital stay. The services of public health nurses, attendance at drop-in centers, and parenting classes should be encouraged.

#### 12.2.8.3 Breastfeeding

Methadone enters the breast milk in very small amounts that are unlikely to be clinically significant.\(^{188, 189}\) The mean daily amount of methadone ingested by infants ranges between 0.01-0.05 mg depending on the maternal methadone dose. This amount is not sufficient to prevent NAS and the infant still requires additional opioid treatment for NAS. Breastfeeding is contraindicated in the presence of active substance abuse.

#### 12.2.8.3.1 Breastfeeding and Hepatitis C and HIV

No studies have demonstrated transmission of Hepatitis C (HCV) through breast milk alone to infants.\(^{190}\) Breastfeeding by women who are infected with HCV is considered safe. Breastfeeding is contraindicated if patients are HIV-positive.

#### 12.2.9 Reporting to Child Protection Agencies

In Nova Scotia, the Children and Family Services Act S.N.S 1990, c.5 outlines a legal responsibility to promote the well-being and protection of children. Any health care professional who has reasonable grounds to suspect that a child is, or may be, in need of protection has a legal duty to report this suspicion.

In Canada, the fetus is not legally recognized as a person, and as such, the obligation to report only applies once the child is born. Prenatally, health care providers may contact child protection services after discussion and with consent from the pregnant woman. Patients should be encouraged to self-report during the prenatal period in order to increase self-efficacy, dignity, and stability, while promoting open and informed decision-making by child protection authorities.

Consider immediate referral if the pregnant woman has children in her care and there is a child protection concern.
13. MMT IN FEDERAL/PROVINCIAL CORRECTIONAL FACILITIES

Incarcerated opioid-dependent individuals should be offered ongoing MMT or initiation of MMT.

OVERVIEW

Incarcerated opioid-dependent individuals should be offered ongoing MMT or initiation of MMT. High-risk behaviour such as injection opioid use can be seen within correctional facilities. The prevalence of HIV and viral Hepatitis is high in the correctional population due in part to the prevalence of needle sharing. The controlled environment, imperatives for security, and the governance of correctional policy may affect the institutional MMT prescriber’s ability to provide patient-centered care at community standards. The trusting and non-judgmental therapeutic relationship between MMT prescribers and patients must remain the focus of treatment.

STANDARDS

1. The institutional MMT prescriber shall ensure a Treatment Agreement (see “Appendix E: Sample Methadone Maintenance Treatment Agreement”) is signed by the patient and kept as part of the medical file.
2. The institutional MMT prescriber shall ensure health care staff contacts the previous MMT prescriber and/or pharmacy to determine the patient’s current dose, and the date and time of the last dose received to ensure that three or more doses were not missed.
3. The institutional MMT prescriber shall ensure that protocols to treat a known or suspected opioid overdose are available to all health care staff. Naloxone (Narcan®) must be available.
4. The institutional MMT prescriber shall ensure arrangements are made for methadone pick-up at a community pharmacy in the event of an outside pass.
5. The institutional MMT prescriber shall make every attempt to educate the patient on the potential for relapse and the dangers of overdose, and encourage adherence to treatment.
6. The institutional MMT prescriber shall not prescribe take-home doses to a patient upon release from the correctional facility.
7. Pregnant patients with an opioid use disorder must be offered MMT while incarcerated.

GUIDELINES

1. The institutional MMT prescriber should ensure program rules and expectations are in writing and verbally described to each patient.
2. The institutional MMT prescriber should ensure dispensing times are clearly defined.
3. The institutional MMT prescriber should clearly describe the expectations regarding provision of UDS samples, appointments with the MMT prescriber, and general behaviour at the onset of treatment.
4. The institutional MMT prescriber should ensure UDS results are maintained in the medical chart.

5. The institutional MMT prescriber should ensure UDS results are not shared with non-medical staff, except when there is a safety issue and, if shared, should not be used for punitive purposes.

6. The institutional MMT prescriber should ensure UDS are performed at intake and periodically thereafter, particularly if the patient shows evidence of intoxication, injection drug use, or diversion of methadone.

7. The institutional MMT prescriber should assess patients in person or via telemedicine for dose increases.

8. In exceptional circumstances due to facility constraints, (e.g., lockdown or inmate movement issues) when the institutional MMT prescriber cannot assess a patient, the institutional MMT prescriber should designate a nurse to assess the patient for dose increases. A single dose increase of no more than 10 mg can be given by the nurse prior to the assessment of the facility physician.

9. The institutional MMT prescriber should ensure a process is in place for the safe administration of methadone for patients.

10. The institutional MMT prescriber should ensure a safe process is in place to initiate patients on MMT, if feasible.

11. The institutional MMT prescriber should ensure every effort is made to provide continuity of care with a community physician. The correctional physician should ensure that the patient has access to daily methadone after release until the patient can see their community MMT prescriber.

12. Prior to release from the facility, the institutional MMT prescriber should slowly decrease (taper) the methadone dose if the patient is going to a community with no available MMT prescriber. This should be done only as a last resort.

13. The institutional MMT prescriber should ensure a bridging prescription is forwarded to a community pharmacy until the patient's next appointment if there is a gap of time from the date of release to the scheduled appointment with the community MMT prescriber. Details of the prescription should be communicated with the community MMT prescriber.

14. The institutional MMT prescriber should ensure counseling and support is provided throughout an involuntary taper process and that the opportunity for the patient to reapply for MMT is available, if they can adhere to program requirements.

13.1 Approaches to Treatment in a Correctional Facility

13.1.1 Approach to Treatment

It must be clear that the interests of the patient are the priority of the institutional MMT prescriber. A multidisciplinary team approach to the provision of MMT is essential in this setting and should include clinical staff, substance abuse counsellors (where available), and persons responsible for the patient's MMT in the community. The importance of ongoing communication between the community MMT prescriber and the institutional physician cannot be overstated, particularly at the time of incarceration and at the time of release.
Patient confidentiality is extremely important in health care, and that should apply to the correctional system as well. Doctor-patient confidentiality must be maintained, as with any health care encounter.

13.1.2 UDS

It is essential that urine drug screening results used in MMT in correctional facilities is only for therapeutic purposes and results should be maintained in a confidential manner in the medical chart.

13.1.3 Missed or Vomited Doses

Refer to section “5.9 Vomited Doses” and section “5.7 Missed Doses”

13.2 Continuing Ongoing MMT

13.2.1 Issues Unique to Providing MMT in Correctional Facilities

13.2.1.1 Methadone Brought With a Patient

Methadone accompanying any patient should be discarded unless continuity of handling can be proven, such as in a transfer from another correctional facility (if continuity of handling cannot be proven, methadone should be discarded or even returned to the prescribing pharmacy to allow for the “bottles” to be accounted for by the pharmacy).

13.2.1.2 Treatment Agreement

The institutional MMT prescriber shall ensure a treatment agreement is signed by the patient and ensure that the treatment agreement and medical history are kept as part of the medical file (see “Appendix E: Sample Methadone Maintenance Treatment Agreement”).

13.2.1.3 Dosing on Admission

Upon admission to the correctional facility and prior to dispensing the first methadone dose, confirmation must be obtained about whether a patient is enrolled in and attending a community MMT program and receiving community methadone maintenance.

Often institutional MMT prescribers are not available on the weekend to maintain patients on MMT if incarceration occurs after hours, leaving patients at risk for destabilization. The time and dosage of the last witnessed methadone ingestion should be determined. A MMT prescriber may delegate a nurse to assess the patient including vital signs, appearance and level of alertness, intoxication, symptoms of withdrawal, date and time of last observed ingestion, communication with community provider if available, recent medical and psychosocial history, and results of UDS in order to recommend continuance of MMT at the same dose. The institutional MMT prescriber may then provide a methadone prescription to the pharmacy at the correctional facility for the same dose or a lower dose. Alternatively the patient’s community MMT prescriber may provide a prescription for a bridging dose until the institutional MMT is available.
To provide safe MMT, institutional MMT prescribers must use their clinical judgment to determine the appropriate dose. If there is suspicion that the patient is not taking their full dose, please refer to section “5.7 Missed Doses” Missed Doses. If it can be confirmed that the patient has been on a stable dose, this dose should be maintained while they are incarcerated. If the dose is reduced, the institutional MMT prescriber should reassess the patient more frequently for symptoms of withdrawal and intoxication, and appropriate dose changes should be made. Benzodiazepines should be used very cautiously, if at all. If the patient is on other sedating medications they should be monitored closely until the institutional MMT prescriber has done an appropriate assessment. If the dose is withheld based on the initial nursing assessment, the patient should be assessed by the attending physician without unreasonable delay.

13.2.1.4 Delegated Dose Increases

If the institutional MMT prescriber cannot assess an inmate (e.g., in exceptional circumstances such as lockdown or offender movement issues), the institutional MMT prescriber should delegate a nurse to assess a patient for dose increases.

Prior to the assessment of the institutional MMT prescriber, a single dose increase (of no more than 10 mg) can be given by the nurse.

The nurse’s assessment is documented in the chart and includes the following:

- The reason the assessment is being performed by the nurse and not the MMT prescriber
- Any obvious signs of withdrawal noted by the nurse
- When the withdrawal symptoms begin in relation to the dose (e.g., eight hours before the next dose or 16 hours after the dose)
- Time of use
- Drug cravings
- Time and amount of last dose
- Mental status
- Signs and symptoms of sedation
- Any ongoing opioid use (drug name, amount used, and route of use)

13.3 Observed Administration

It is not uncommon for MMT patients to be under considerable pressure from other patients to divert their medication. Adequate steps to avoid diversion are critical to ensure MMT patients safety within the facility.

Below are suggested recommendations that can be incorporated into the facilities administration process:

- MMT patients to show proper identification
- MMT patients receiving methadone should be isolated from other patients during administration process
- MMT patients should drink water immediately following administration
- A nurse can inspect the patient’s mouth before and/or after administration
• MMT patients should not wear bulky clothing (e.g., parkas, hoodies)
• MMT patients should not bring cups or containers into the administration area
• MMT patients may be frisked before entering and/or upon leaving administration area
• A 20-minute direct observation period should follow immediately after administration

13.4 Initiating MMT in a Correctional Facility

If a patient is not receiving methadone at the time of incarceration, the following conditions should be met before initiating MMT:
• The patient must meet the DSM-V diagnostic criteria for opioid use disorder.
• A UDS must be interpreted and a complete assessment performed prior to initiation.
• Contact with the NSPMP is advised to obtain a patient profile before initiation or resumption of MMT in a correctional facility.
• Patients not currently using opioids (but with a documented history clearly showing a pattern of long-term opioid dependence continuing until the time of incarceration) should be considered for initiation on methadone while in the correctional facility (see section “4. Initial Patient Assessment” and section “5. Dosing During Induction, Stabilization, and Maintenance”).
• Pregnant patients with an opioid use disorder must be offered MMT while incarcerated.
• Patients with HIV infection, or Hepatitis B or C should be made a high priority for being offered methadone treatment while incarcerated.

13.5 Accidental Overdose of Methadone

In the event of a methadone overdose, patients should be transported to a community hospital emergency department for assessment and observation. If returned to the institution, a procedure for close observation for at least 24 hours should be in place. Naloxone (Narcan®) must be available in all correctional facility health centres.

13.6 Out-of-Facility Pass

The institutional MMT prescriber shall ensure that arrangements will be made such that methadone be available from a community pharmacy in the event of an outside pass.

13.7 Treatment Planning for Release

It is imperative that every attempt to provide good discharge planning is made prior to release. If an appropriate release plan is not made, patients are at a very high risk of overdose after release from a correctional facility. However, release dates are not always known and patients may be unexpectedly released precipitously and/or directly from court.
13.7.1 Treatment Planning – Release Date Known

When the release date of the patient is known, arrangements should be made in advance. An appointment should be scheduled with the community MMT prescriber and appropriate clinical information should be sent. The correctional physician should ensure that the patient has access to daily methadone until the patient can see their community MMT prescriber.

13.7.2 Treatment planning – Release Date Unknown or Unexpected

Patients are often released from custody directly from court or on very short notice without the knowledge of the facility health care staff. Therefore, where possible, facility health care staff should do the following:

• Ensure patients receive their daily dose of methadone prior to leaving the facility.
• Advise patients to contact facility health care staff if they are released directly from court, without the benefit of a release plan.
• Contact the community methadone provider when they learn of a patient’s release, and advise the patient to contact the community methadone provider if they are released directly from court, without the benefit of a release plan.

If assistance is required by the facility in finding a local pharmacy that dispenses methadone, contact the Nova Scotia College of Pharmacists.

13.8 Take-Home Doses

The institutional MMT prescriber shall not prescribe take-home doses to a patient upon release from the correctional facility.

13.9 Involuntary Withdrawal

Refer to section “8.2 Involuntary Withdrawal”.
In many cases, hospital physicians know little about MMT and must rely on the expertise of a MMT prescriber.

**NOTABLE DEFINITIONS**

**Attending Physician (or Most Responsible Physician [MRP])**
The physician who is responsible for the overall care of the patient, and who must approve all orders written by other physicians. Physicians without a methadone exemption are not allowed to order or prescribe methadone unless they receive a special exemption from Health Canada.

**Hospital MMT prescriber**
The prescriber who prescribes methadone. This prescriber holds the appropriate general exemption to prescribe methadone and is usually a different physician than the MRP. For example, when a patient on a stable dose of methadone is admitted to the hospital with pneumonia, the attending physician will manage the pneumonia and the hospital MMT prescriber will order the methadone.

**Temporary Methadone Exemption**
If the attending physician does not hold a methadone exemption for dependence, and there is not an MMT prescriber within the hospital available to manage the methadone for this particular patient during their inpatient stay, the attending physician can contact Health Canada, Office of Controlled Substances, Methadone Program at toll free at 866-358-0453, ext. 1 to obtain a temporary exemption to treat this patient while they are a hospital inpatient. The physician must provide their full name, licence number, telephone number, the name and address of the hospital, the patient’s full name, age, gender, and the required methadone dose. The physician must also provide the date the order for methadone was written and the telephone number of the hospital pharmacy. Temporary exemptions are only valid for one specific patient, and only for the duration of that patient’s stay in hospital. Temporary exemptions are only granted for the care of patients who are already on methadone at the time of admission. Dosage adjustments during hospitalization should generally be made in consultation (informal or formal) with an experienced MMT provider holding the appropriate general exemption where it is available. In the case of suspected methadone toxicity, a dose decrease may need to be implemented before consultation is obtained.

**OVERVIEW**
General or psychiatric hospitals should identify at least one MMT prescriber, on staff or in the community, who has agreed to be available for telephone consultations. Collaboration with the patient’s current community MMT prescriber by telephone or in person is strongly recommended. If feasible, the community MMT prescriber should be encouraged to seek out...
active hospital privileges so that he/she may write hospital orders for methadone.

An important aspect of MMT for hospitalized patients is to facilitate the seamless transfer of care of patients back to their community physicians upon hospital discharge.

STANDARDS

1. The hospital MMT prescriber should verify the patient’s current dose with the patient’s pharmacy and NSPMP for current methadone dose, recent changes in dose, missed doses, number of take-home doses per week, exact date and time of the last reported dose, and last witnessed dose.

GUIDELINES

1. General hospitals should have access to at least one MMT prescriber who is on their medical staff and available for consultation. Methadone for liquid preparation should be on the hospital formulary.
2. The hospital MMT prescriber should ensure the prescription at the community pharmacy is cancelled for the duration of the patient’s hospital stay.
3. The hospital MMT prescriber should conduct a focused assessment with these objectives:
   a. Identify acute risk factors for methadone toxicity
   b. Obtain a history of methadone use
   c. Order a UDS if clinically unstable
   d. Order an ECG if patient is on a high dose or has risk factors for arrhythmias.
4. The hospital methadone order should specify that the dose be mixed in orange drink crystals’ such as Tang © or other crystalline juice, and dispensed daily with witnessed ingestion under the observation of a nurse. The order should also specify dispensing dates, and should direct nurses to withhold the dose if the patient shows signs of sedation or intoxication.
5. If the patient is NPO, the hospital MMT prescriber may allow the methadone to be mixed in water (or clear juice, with the attending physician’s approval) to a final volume of 15 ml.
6. The hospital MMT prescriber should prescribe oral or parenteral opioids to minimize withdrawal symptoms if methadone is not available or is contraindicated (e.g., prolonged QTc interval).
7. To avoid methadone toxicity, the hospital MMT prescriber should monitor for the emergence of risk factors during the patient’s hospital stay, such as co-prescribing of sedating drugs. The methadone dose should be adjusted accordingly.
8. MMT may be initiated in-hospital for pregnant patients, and for patients requiring prolonged hospitalization who might leave against medical advice if their acute opioid-withdrawal symptoms are not treated. The involvement of an experienced MMT prescriber, with a long-term dependency exemption, is required.
9. In patients who are already on methadone, are currently getting take-home doses and are going to start daily witnessed ingestion as a result of admission to hospital,
HOSPITAL-BASED MMT

consideration should be given to potential for overdose if there is any concern that they have not been regularly ingesting their full dose while they have been in the community with take-home doses. The involvement of an experienced MMT prescriber, with a long-term dependency exemption, is advisable.

10. On discharge, the hospital MMT prescriber may write a prescription for the patient's community pharmacy to last for several days until the patient can see their community MMT prescriber. A hospital prescription may not be necessary if the patient has take-home doses at home (at the same dose as that provided in hospital).

11. The hospital MMT prescriber physician should contact the MMT prescriber in the community on admission and discharge of the patient to coordinate care.

14.1 Guidelines for Hospital Pharmacies and Medical Administrators

All hospitals are expected to have methadone on their formulary. If methadone is not on the formulary, the hospital should have a process in place to safely secure methadone in a timely fashion. A community pharmacy may deliver methadone to the hospital. Methadone should be stored in a locked narcotic cupboard and dispensed under the supervision of a nurse.

14.2 MMT Prescribers Working in a Hospital

14.2.1 Verifying the Community Dose

It is not safe to rely solely on the patient’s history. Only the dispensing pharmacist is able to verify with certainty whether the patient has filled their methadone prescription and when it was last dispensed.

The history of the last witnessed ingestion is important. The community MMT prescriber can verify the prescribed dose only. Only the dispensing pharmacist can verify with certainty the dose and last dispensing time and date. If the pharmacy is closed, the dose should be verified through NSPMP. If feasible, urine drug screening, including methadone, may be useful. The hospital physician should be in contact with the community MMT prescriber. On admission to hospital, MMT patients are at risk of adverse events, as with transfer of care of any patient from one provider to another. MMT patients are often complex with a variety of physical and emotional health issues not encountered in other hospitalized patients. Collaboration between the inpatient care provider and the MMT prescriber should take place to review issues that have come up in treatment, safety considerations surrounding methadone dosing, toxicity and the potential for drug interactions,
and how necessary and planned inpatient treatment will impact future care in MMT.

14.2.2 In-Hospital Assessment of the Patient

A focused assessment will identify acute risk factors for methadone toxicity. The following should be included in the assessment:

**History**
- Methadone dose, recent changes in dose, missed doses, number of take-home doses per week, and exact date and time of the last reported dose and last witnessed dose
- Recent substance use (including alcohol)

**Chart Review**
- Reason for hospital admission
- Out-patient and in-hospital medications
- Cardiorespiratory, hepatic, and renal status

**Investigations**
- Baseline UDS
- ECG

14.2.3 Hospital Methadone Order

The order should be similar to community prescriptions, specifying that the dose is to be mixed in juice and ingestion is to be observed by a nurse. Start and end dates should be specified in the order, and nurses should be instructed to hold the dose if the patient shows signs of sedation or intoxication. Patients unable to tolerate the ingestion of 100 ml could receive their daily dose in a final volume of 50 ml. Patients pending surgery for any reason or patients for whom “nothing by mouth” (NPO) is ordered should receive their daily dose in a final volume of 15 ml.

14.2.4 Patients for whom “Nothing by Mouth” (NPO) is ordered

If the patient is unable to take oral medications or fluids, withdrawal can be lessened with scheduled doses of parental morphine or hydromorphone. If possible, peripheral and central lines should be avoided in patients who have recently been using injection drugs. On days of surgery, the usual amount of methadone should be given in a small amount of juice (i.e., 10-15 ml) in consultation with the anaesthesiologist.

14.2.5 Adjusting the Dose

There have been case reports of serious toxicity in hospitalized patients on methadone, caused by drug interactions or the patient’s medical condition.

**Close monitoring is required if the patient has:**
1. Medications introduced that are sedating or that inhibit methadone metabolism or that prolong QTc interval (see “Appendix A: Drug to Drug Interactions” and “Appendix H: Medications that Cause Prolonged QTc Interval”)
2. A decreased level of consciousness
3. An acute cardiorespiratory illness
4. Missed methadone doses prior to hospitalization
5. Worsening hepatic or renal function

In these circumstances, frequent observation should be ordered, specifying that the dose be withheld if the patient shows signs of sedation or intoxication.
**HOSPITAL-BASED MMT**

When adjusting the dose, the hospital MMT prescriber should keep in mind that acute methadone withdrawal can have serious medical consequences in patients with medical illness. Even intubated patients in a coma will undergo withdrawal if MMT is abruptly discontinued, which can cause agitation and cardiorespiratory instability. Therefore methadone should not be rapidly tapered or discontinued unless the patient is experiencing methadone-induced intoxication, sedation, or arrhythmias. If it is rapidly tapered, the dose should be carefully readjusted as withdrawal symptoms emerge.

**14.2.6 Initiating MMT in Hospital**

The treating physician must involve an MMT prescriber with a long-term dependency exemption to initiate MMT in hospital for pregnant patients, and for seriously ill patients who require prolonged hospitalization and who might leave against medical advice. If MMT initiation is required, the treating physician must consult with a community MMT prescriber holding the general methadone exemption for dependence.

**14.2.7 Opioid Withdrawal Management**

If it is determined, for medical reasons or patient preference, that opioid withdrawal management is indicated, the treating physician should consult with an addiction physician experienced in withdrawal management.

**14.2.8 Discharge from Hospital**

There should be adequate communication between the hospital MMT prescriber, the community MMT prescriber, and the community pharmacist at the time of discharge.

Upon discharge from hospital, it may be necessary in some cases, to allow take-home doses in order for the patient to recover from their illness or surgery at home. However, the decision to prescribe take-home doses should be made by the community MMT prescriber as soon as it can be arranged.

Discharge planning needs to be considered within the first few days of admission when prescribing methadone. The treating physician should be aware that although most patients act responsibly with take-home doses, there is also the risk of diversion and the patient not taking the complete dose.

When issuing a multiple day or weekend pass, the patient should only be issued take-home doses if they had been on take-home doses prior to admission. The community pharmacist should be contacted for the history of an observed dose/witnessed ingestion.
APPENDICES

APPENDIX A: DRUG TO DRUG INTERACTIONS

Pharmacodynamic
Pharmacodynamic interactions involve drugs that cause additive effects to undesired side effects of methadone such as:

- Medications that cause sedation including alcohol, benzodiazepines, barbiturates, and dimenhydrinate (Gravol). The combination of these drugs with methadone results in a high risk of toxicity and overdose during induction and risk of central nervous system (CNS) depression during maintenance.
- Medications that cause constipation and urinary retention through their anticholinergic effects.
- Medications that cause QTc prolongation (see “Appendix H: Medications that Cause Prolonged QTc Interval”).

Pharmacokinetic
Pharmacokinetic interactions involve drugs which interact with the metabolism of methadone and thereby increase or decrease the expected methadone levels and subsequent effects; or drugs whose metabolism and subsequent blood levels are affected by methadone. Most of these interactions involve the cytochrome P450 (CYP450) enzymes. While there are more than 28 CYP enzymes, the most important enzymes in methadone metabolism are CYP3A4 and CYP2B6. Some P450 interactions may be potential (i.e., theoretical), others are currently being investigated to confirm their clinical significance. The MMT prescriber should remain aware of how methadone may affect the metabolism of other drugs.

Drugs metabolized by one or more CYP enzymes are termed substrates. An inhibitor is any drug that slows the metabolism via specific CYP enzymes resulting in a less rapid metabolism of substrate drugs, which may result in higher than expected levels of substrate drugs. An inducer is any drug that boosts the activity of specific CYP enzymes resulting in more rapid metabolism of substrate drugs, which may result in lower than expected levels of substrate drugs. Drugs and substances that increase and decrease the effects of methadone are listed in the table below.

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<thead>
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<th>Increase methadone effect</th>
<th>Decrease methadone effect</th>
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<tbody>
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<td>Anti-infection</td>
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<td>Antibacterial</td>
<td>Ciprofloxacin (Cipro)</td>
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<td>Clarithromycin (Biaxin)</td>
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<td>Erythromycin</td>
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<td>Antifungal</td>
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<td>Ketoconazole (Nizoral)</td>
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<td>Cardiac</td>
<td>Ca++ channel blocker</td>
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<td>Corticosteroid</td>
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<td>Gastrointestinal</td>
<td>Antacid</td>
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<td>Neurologic</td>
<td>Anti-alcohol</td>
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<td>Anticonvulsant</td>
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<td>Migraine</td>
<td>Dihydroergotamine</td>
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<td>Psychiatric</td>
<td>Antianxiety</td>
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<tr>
<td>Antidepressant</td>
<td>Fluoxetine (Prozac)</td>
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<td>Fluvoxamine (Luvox)</td>
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<td></td>
<td>Moclobemide (Manerix)</td>
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<td>Nefazodone (Serzone)</td>
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<td>Paroxetine (Paxil)</td>
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<td>Barbiturate</td>
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<td>Opioids</td>
<td>Butorphanol (Stadol)*</td>
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<td>Buprenorphine (Suboxone/Subutex)*</td>
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<td>Fiorinal (Due To Butalbital)</td>
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<td>Naloxone (Narcan®)*</td>
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<td>Naltrexone (Revia)*</td>
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<td>Nalbuphine (Nubain)*</td>
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<td>Pentazocine (Talwin)*</td>
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<td>Urologic</td>
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<td>Urinary acidifiers</td>
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<td>Urinary alkalizers</td>
<td>Sodium Bicarbonate</td>
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<td></td>
<td>Potassium Citrate (Polycitra, K-Lyte)</td>
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<td>Herbal drugs</td>
<td>Cat’s Claw</td>
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<td>Chamomile</td>
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<td>Echinacea</td>
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<td>Goldenseal</td>
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<td>Food</td>
<td>Grapefruit Juice</td>
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<td>Addictive drugs</td>
<td>Alcohol (Acute Use)</td>
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*These opioids are contraindicated. They are either pure antagonists or agonist/antagonists and will cause acute withdrawal if given to a patient on methadone maintenance. The following website may be consulted: [http://reference.medscape.com/drug/methadose-dolophine-methadone-343317#3](http://reference.medscape.com/drug/methadose-dolophine-methadone-343317#3)
Dear Pharmacist,

Our patient has requested to attend your pharmacy for Methadone Maintenance Treatment (MMT). We encourage active communication between pharmacist and MMT prescriber. The following safety measures, methadone dispensing practices, and clinic policies have been discussed with the patient.

Please feel free to contact me to discuss any of these matters or with any further suggestions that your team may have for this patient’s clinical care.

You may call me at ___________________________. PLEASE DO NOT GIVE THIS PHONE NUMBER TO THE PATIENT.

Patients are required to drink methadone dispensed in approximately 100 ml orange drink crystals’ such as Tang © or other crystalline juice in front of the pharmacist. The ingestion of methadone must be witnessed every day for patients receiving daily dispensing and on the day that patients pick up their doses for patients receiving take-home doses. Ask the patient to speak after their drink to ensure that it has been swallowed.

The pharmacy team shall inform the MMT prescriber of any information or observed evidence of diversion of methadone.

The pharmacist shall inform the MMT prescriber of missed methadone doses by the patient.

If three (3) doses are missed in a row, the methadone prescription shall be cancelled. The patient must be reassessed by the methadone prescriber before methadone is restarted.

If there is any evidence of intoxication, sedation, or impairment (slurred speech, stumbling gait, disorientation), the methadone dose must be withheld from the patient to prevent a
possible overdose. The pharmacy team must contact the MMT prescriber to inform them of the observation of concern. If the patient returns within eight hours of their originally scheduled witnessed ingestion, and the pharmacist is satisfied that the patient is no longer intoxicated, sedated or impaired, the pharmacist may give the patient the withheld dose. However, no take-home doses may be released until the MMT prescriber reauthorizes.

If the pharmacist observes evidence of an overdose, the patient will be advised that urgent medical care is required. The pharmacist may call 911 for transport to hospital. The pharmacist will contact the MMT prescriber directly to inform them of the overdose and treatment directives.

Take-home doses should be dispensed in childproof bottles. Patients are required to store any take-home doses in a locked metal box to ensure community safety (i.e., to avoid consumption of methadone by someone other than to whom it is prescribed). The pharmacist may request that the locked box be presented prior to issuing take-home doses.

Any doses of methadone that are vomited can only be replaced if the pharmacist or a member of the pharmacy team has witnessed the vomiting within 15 minutes of ingestion, informs the methadone provider of such, and the MMT prescriber provides a written prescription for the replacement dose.

The MMT patient shall return all take-home dose bottles to the pharmacy before receiving the next take-home doses.

The start and end date recorded on the prescription are the first day and the last day the patient is authorized to receive a dose for that prescription. **Regardless of doses that may end up not being dispensed, the prescription is not to be dispensed after the end date.**

A patient is authorized to receive take-home doses based on their clinical stability. Providing take-home doses to a patient before they are clinically stable puts them and the public at risk of overdose and diversion. Providing take-home doses for patients because the pharmacy is closed is a last resort when all other steps outlined in the *NSCP MMT Standards of Practice* and the *CPSNS Methadone Maintenance Treatment Handbook* have been exhausted, and then only in accordance with these documents.

Thank you,
APPENDICES

APPENDIX C: RESOURCES

Health Canada Office of Controlled Substances
Tel: (613) 946-5139
Toll-free: 1-866-358-0453

Health Canada Methadone Exemption Application

For an exemption to prescribe MMT, a physician must:
1. hold a licence to practise medicine in Nova Scotia.
2. be in good standing with the CPSNS.
3. complete an application form and agree to practise in accordance with the CPSNS Methadone Maintenance Treatment Handbook 2nd Edition.
4. successfully complete the Opioid Dependence Treatment Core Course through CAMH.
5. complete eight hours of clinical training with a MMT prescriber approved by the CPSNS.

For more information contact the CPSNS Methadone Maintenance Support Program at 902-421-2216. The above conditions must be met in entirety for CPSNS to support a College member’s application to Health Canada for a methadone exemption for dependency. An application from Health Canada to apply for an exemption can be found here.

The initial exemption is issued for three years, with a requirement for renewal every three years. At the time of exemption renewal, every MMT prescriber will have a practice review conducted by an experienced methadone prescriber. This review is designed to provide constructive feedback to the MMT prescriber both to maximize patient and community safety, and to support the MMT prescriber in their efforts to provide evidence-based methadone maintenance therapy in accordance with the Standards and Guidelines of the Handbook. It includes a review of selected patient files using a tool based on the Standards and Guidelines, and a discussion with the MMT prescriber to provide recommendations for practice improvement.

College of Physicians and Surgeons of Nova Scotia Methadone Program
Tel: (902) 421-2216

Nova Scotia Prescription Monitoring Program
Toll-free: 1-877-476-7767

IWK Regional Poison Centre
Emergency Telephone Number: 1-800-565-8161 (within NS and PEI only)
Tel: (902) 470-8161 (Halifax or outside NS and PEI)

Nova Scotia College of Pharmacists
Tel: (902) 422 8528

Methadone Drug Interactions Information Website(s):
www.drug-interactions.com

Centre for Addiction and Mental Health
Toll Free: 1-800-463-6273
www.crediblemeds.org

AT Forum Methadone Drug* Interactions – 3rd Edition (*Medications, illicit drugs, and other substances)
IWK Health Centre Choices Addictions Program

Nova Scotia Adolescent Withdrawal Management Guidelines 2013

Mental Health Mobile Crisis Team
Tel: 902-429-8167
Toll Free: 1-888-429-8167

Gambling Support Network
1-888-347-8888

811-Non-emergency health information and services

211-Help finding the right community and social services

Smokers' Helpline
1-877-513-5333

Nova Scotia Health Authority

Nova Scotia Addiction Services Offices

EASTERN ZONE

Cape Breton, Northern & Central Inverness, Victoria Counties
Central Intake for Community Based Services, Inpatient Withdrawal Management, Addiction Day Program & Opioid Recovery
902-563-2583

Opioid Recovery Program
North Sydney 902-794-5465
Glace Bay/New Waterford 902-842-2229
Sydney 902-563-2590

Sharon MacKenzie
Manager, Opioid Recovery Program
902-842-9602
Sharon.L.MacKenzie@nshealth.ca

Guysborough, Antigonish, Richmond and Southern Inverness Counties
Community-Based Services
902-867-4500 Ext.4615 (Antigonish)
625-2363 (Port Hawkesbury)
Withdrawal Management 902-625-3239
(Strait Richmond)

NORTHERN ZONE

Pictou County
Community-Based Services 902-755-7017
(New Glasgow)
Withdrawal Management 902-485-4335 (Pictou)

Cumberland County
Community-Based Services
902-667-7094 (Amherst)
Withdrawal Management
902-597-8647 (Springhill)

Colchester County and Municipality of East Hants
Community-Based Services 902-893-5526
(Truro) 902-883-0295 (East Hants)
Opiate Treatment Program
902-893-4776 (Truro)
Trina Gouthro BScN, RN, MN
Manager, Opiate Treatment Program
Direct Office Line: 902-893-1724
trina.gouthro@cehha.nshealth.ca
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WESTERN ZONE

Mental Health and Addictions Central Intake
1-855-273-7110 Monday to Friday 8:30-4:30 (excluding holidays)

Opioid Treatment Program (use intake line above)
Intensive Treatment Program (use intake line above)

Shondalee Eisnor
Coordinator Opioid Treatment Program
902-365-1701 ext. 1572
shondalee.eisnor@nshealth.ca

South Shore Health
Addictions & Mental Health Central Intake
902-543-5400

South West Health
Addictions Intake 902-742-2406
Withdrawal Management 902-742-2406

CENTRAL ZONE

Capital Health
Central Intake 902-424-8866 or toll free at 1-866-340-6700

Opioid Treatment Program
902-424-8866

Inpatient/Day Treatment Program
902-424-8866

Charlene Casey-Gomes
Health Service Manager
Intensive Treatment Services
902-424-2031
cmccasey@cdha.nshealth.ca

Direction 180 Clinic
(2158 Gottingen Street Halifax)
Cindy Mac Isaac
Executive Director
902-420-0566
direction180@ns.aliantzinc.ca

IWK Health Centre
Mental Health and Addiction Services Central Referral 902-464-4110 or 1-888-470-5888

CONTACTS IN FIRST NATION COMMUNITIES IN NOVA SCOTIA

Acadia FN
Marla Robinson-Pyne, A/Health Director
902-742-0257
marlarobinson-pyne@acadiaband.ca

Cruser Meuse, NNADAP Prevention
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Patricia Marshal, Home and Community Care
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Goldy Simon, NNADAP Prevention
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Josephine Courtenay, CHN  
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Sharon Rudderham, Health Director  
902-379-3200  
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Barbara MacNeil  
Maternal Child Health Family Visitor  
902-379-3200  
bmacneil@eskasonihealth.ca

Erin Rudderham  
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binchey@nadaca.ca

Ruby Paul  
Mental Health Administrative Assistant  
902-379-2910  
rubypaul@eskasonihealth.ca

Tom Sylliboy, Mental Health Worker  
902-379-2910  
tomsylliboy@hotmail.com

Mik'maq Lodge – see below

**Glooscap FN**  
Charlotte Warrington, Health Director  
902-684-0165  
cwarrington@glooscapfirstnation.com

Tanya Greencorn, CHN  
902-684-0165  
chn@glooscapfirstnation.com  
Tammy Rafuse, NNADAP Worker  
902-684-0165  
nadaca@glooscapfirstnation.com

**Membertou FN**  
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902-564-6466  
darleneanganis@membertou.ca

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902-564-6466  
nataliemcewan@membertou.ca

Tanya Poulette, CHN  
902-564-6466  
tanyapoulette@membertou.ca

Blair Paul, NNADAP Worker  
902-564-6466  
blairpaul@membertou.ca

**Millbrook FN**  
Elizabeth Paul, Health Director  
902-895-9468  
elizabethp@millbrookhealth.ca

Cindy Ryan, CHN  
902-895-9468  
cindyr@millbrookhealth.ca
APPENDICES

Peter Gloade
NNADAP Worker / Council Member
902-895-9468
peterg@millbrookhealth.ca

Charles Casselman
Mental Health Worker
902-895-9468

Paq’tnkek Mi’kmaw Nation
Juliana Julian, Health Director
902-386-2048
j.julian@paqtnkek.ca

Leanne McKay, CHN
902-386-2048
leanne.macleod@paqtnkek.ca

Mike Taylor, NNADAP
902-386-2048
m.taylor@paqtnek.ca

Pictou Landing FN
Philippa Pictou, Health Director
902-752-0085
p.pictou@plfn.ca

Christine MacFarlane, CHN
902-752-0085
Christine.m@plfn.ca

Sarah Clark, NNADAP Prevention Worker
902-752-0085
sarah.plfn.ca

Tiana Fusco,

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Laurie Touesnard, Health Director
902-535-2961
ltouesnard@potlotek.ca

Brent Musgrave, CHN
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bmusgrave@potlotck.ca

Francis Doucette, NNADAP Worker
902-535-3564

Sipekne’katik
Loraine Etter, Health Director
902-758-2063
Letter@sipeknekaitik.ca

Terry Knockwood, CHN
902-758-2063
tknockwood@sipeknekaitik.ca

Peggy O’Reilly, CHN
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poreilly@sipeknekaitik.ca

Jacqueline Paul, NNADAP
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Tina Sacknevin
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902-758-2063
tsacknevin@sipeknekaitik.ca

Brian Knockwood, NADACA
Community Addictions Counsellor
902-758-2063
bknockwood@sipeknekaitik.ca

Eagles Nest Treatment Centre – see below

Wagmatcook FN
Elaine Allison, Health Director
902-295-2755
eallison@wagmatcookhealth.ca
Shirley Fraser, CHN  
902-295-2755  
sfraser@wagmatcookhealth.ca

Anne MacDonald, CHN  
902-295-2755  
Amacdonald@wagmatcookhealth.ca

Priscilla Googoo  
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902-295-2755  
pgoogoo@wagmatcookhealth.ca

Waycobah  
Jennifer MacDonald  
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902-756-2156  
jenennifermacdonald@waycobah.ca

Kim MacDonell, CHN  
902-756-2156  
Kim.macdonnell@waycobah.ca

Clare MacEachern  
Nurse Practitioner  
902-756-2156  
ClareMacEachern@waycobah.ca

Stewart Basque  
NNADAP Prevention  
902-756-2156  
stuartbasque@waycobah.ca

Treatment Centres  
Residential programs serving all First Nations  
Currently developing day programs for  
clients on opioid replacement therapy  
Dawna Prosper  
Executive Director  
902-379-2152  
dawnaprosper@hotmail.com

Mik'maq Lodge – Eskasoni  
Lloyd Gould  
NADACA Clinical Director/Counsellor  
902-379-2262  
lgould@nadaca.ca

Eagles Nest – Sipekne'katik  
Theresa Morris  
NADACA Clinical Director/Counsellor  
902-758-4277  
tmorris_3@hotmail.com

Acronyms  
NNADAP - National Native Alcohol & Drug Abuse Program

NADACA - Native Alcohol and Drug Abuse Counselling Association

CHN – Community Health Nurse (public health nurse)

A problematic pattern of opioid use leading to clinically significant impairment or distress, as manifested by at least two of the following, occurring within a 12-month period:

1. Opioids are often taken in larger amounts or over a longer period than was intended.
2. There is a persistent desire or unsuccessful efforts to cut down or control opioid use.
3. A great deal of time is spent in activities necessary to obtain the opioid, use the opioid, or recover from its effects.
4. Craving, or a strong desire or urge to use opioids.
5. Recurrent opioid use resulting in a failure to fulfill major role obligations at work, school, or home.
6. Continued opioid use despite having persistent or recurrent social or interpersonal problems caused or exacerbated by the effects of opioids.
7. Important social, occupational, or recreational activities are given up or reduced because of opioid use.
8. Recurrent opioid use in situations in which it is physically hazardous.
9. Continued opioid use despite knowledge of having a persistent or recurrent physical or psychological problem that is likely to have been caused or exacerbated by the substance.
10. Tolerance, as defined by either of the following:
   a. A need for markedly increased amounts of opioids to achieve intoxication or desired effect.
   b. A markedly diminished effect with continued use of the same amount of an opioid.
   Note: This criterion is not considered to be met for those taking opioids solely under appropriate medical supervision.

11. Withdrawal, as manifested by either of the following:
   a. The characteristic opioid withdrawal syndrome (refer to Criteria A and B of the criteria set for opioid withdrawal).
   b. Opioids (or a closely related substance) are taken to relieve or avoid withdrawal symptoms. Note: This criterion is not considered to be met for those individuals taking opioids solely under appropriate medical supervision.

MILD
Presence of 2-3 symptoms.

MODERATE
Presence of 4-5 symptoms.

SEVERE
Presence of 6 or more symptoms.
It is important that the patient receive clear information about the MMT program rules and expectations. Policies on take-home doses, urine drug screens, appointments, and treatment withdrawal should be specified. The MMT prescriber should provide a copy of the treatment agreement to the patient and revisit it once the patient is stabilized.

There are provincial rules that must be followed by doctors and nurse practitioners who prescribe methadone and pharmacists that dispense it. This agreement has been prepared to give you information about methadone maintenance therapy (MMT), as well as to provide a record of informed consent.

Sample Methadone Maintenance Treatment Agreement

This treatment agreement is between the patient and the MMT prescriber (doctor or nurse practitioner) to describe the terms and conditions of methadone treatment. When signed, each person agrees to follow the agreement.

FOR THE PATIENT

Things you need to know about methadone and the methadone program

To get into the methadone program, you have to sign your name on the last page. When you sign your name, it means you understand the things below. If you don't understand these things, ask your MMT prescriber to explain them to you. If you still don't understand these things after talking to your MMT prescriber, you should not sign your name on the last page.

1. You are addicted to (dependent on) the drug you are trying to quit. Dependent means that if you don't get the drug, you will have withdrawal and feel really bad or get sick. The kind of drug you are trying to quit is called an opioid. Opioids are drugs like heroin, dilaudid, hydromorphone, oxycontin, codeine, morphine, and percocet.

2. You understand that there are other possible treatments for opioid addiction, such as detox, drug counseling, and residential programs and that these can sometimes help you quit using opioids. The risks and benefits of these treatments have been explained to me.

3. Methadone is an opioid drug, but it is different because it can help you stop taking the other opioid drug you are dependent on.

4. If you suddenly stop taking methadone, or take less of it, you will probably have withdrawal and feel very sick. You might have sweating, muscle pain, bone pain, nausea, vomiting, diarrhea, or feel irritable or restless. Opioid withdrawal can be very uncomfortable, but it is usually not serious and cannot hurt you unless you are pregnant or have a serious heart condition.

5. While you are taking methadone, you could get very sick or die if you take any drugs that change your mood or cause sedation, drowsiness, or cloudy thinking. These include other opioids (such as dilaudid, morphine, or oxycontin/OxyNeo), alcohol, cocaine, heroin, sleeping pills, or...
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benzodiazepines (such as valium, diazepam, ativan, clonazepam, xanax and others).

6. Methadone is a very strong drug, and if it is taken by someone who doesn't usually take opioids, it might kill them.

7. You can leave the methadone treatment program whenever you want.

8. If you are pregnant or if you get pregnant, you understand that your baby will become physically dependent on methadone and, once born, may suffer opioid withdrawal that requires specialized treatment. As far as anyone knows, there are no serious problems that happen to babies and children when their mothers took methadone during the pregnancy.

9. You should not eat poppy seeds when you are taking methadone because they might make it look like you are taking opioid drugs if you have a urine (pee) test.

10. Some drugs you can buy in a drugstore without a prescription (such as Tylenol #1) could make it look like you are taking opioid drugs if you have a urine (pee) test. You should ask the pharmacist if any drug you buy without a prescription (even cough syrup) might affect a urine drug test.

11. When you take methadone, there might be some changes to the way you feel. You might sweat more, you might not be able to move your bowels (poop) as easily as before, you might lose interest in having sex, you might feel different when you have sex, you might feel tired, you might have nausea, you might have fuzzy or cloudy thinking, you might put on weight, and you might urinate (pee) less. These changes will probably not be too bad, but your MMT prescriber can help you if they happen. If you take the methadone the way your MMT prescriber tells you to, the methadone probably won't give you any more problems than that.

12. You understand that methadone can make you drowsy or have cloudy thinking, and can make driving or using machinery dangerous, especially when you are starting it or when the dose increases.

13. If your MMT prescriber thinks that the methadone is not working for you or that it is causing you some harm, the MMT prescriber may stop giving you methadone, or give you less.

14. If you say that your methadone is lost or was stolen, it will not usually be replaced.

15. If you seem drunk or high, or if you act strangely, you may be asked to see a doctor, and you may be given less methadone or none at all.

16. Methadone is only one part of the treatment of opioid addiction, and getting counselling will make it much more likely that you can stop using drugs and make your life better.

Things you are expected to do

When you sign your name on the last page, it means you know you are expected to do the things below. If you don't do these things you may have to leave the program. If you don't understand these things, ask your MMT prescriber to explain them to you.

1. You are expected to treat the MMT prescriber, pharmacist, all clinic staff, and all other patients with respect.

2. You are expected to be open and honest when talking to the MMT prescriber about your addiction, the drugs you take, and any side effects you have to the methadone.

3. You are expected to tell the MMT prescriber all of the medications you take, and any new medication you are prescribed from any other MMT prescriber, nurse practitioner, or dentist. You understand that if you don’t
tell the MMT prescriber about getting a prescription for another opioid, you could be charged with a crime called double-doctoring.

4. You are expected to tell any other doctor, nurse practitioner, or dentist you see that you take methadone.

5. You are expected to store the methadone in a safe place, such as a locked box, when you have take-home doses.

6. You are expected not to drive or operate machines when you start taking methadone and when your MMT prescriber changes your dose of methadone. Your MMT prescriber will tell you when it is OK to start driving or using machines again.

7. You are expected to take methadone only as it is prescribed. When you take the methadone at the clinic or pharmacy, you are expected to let a clinic staff member or pharmacist watch you take it.

8. You are expected to go to only one pharmacy to get methadone, and to let clinic staff know if you plan to change pharmacies.

9. You are expected to give a urine (pee) sample that will be tested for drugs whenever your MMT prescriber or clinic staff ask you. If you don't give a sample, the clinic will not give you take-home doses of methadone.

10. If you do anything with your urine (pee) sample to hide any drug use, the clinic will not give you take-home doses of methadone.

11. You are expected to tell the MMT prescriber if you are pregnant or if you plan to get pregnant.

12. You agree to go to all your appointments with the doctor or nurse practitioner who is prescribing methadone for you, and to let the MMT prescriber or clinic staff know if you cannot keep an appointment. If you miss appointments, the clinic may give you fewer take-home doses of methadone, or it might not let you take methadone home at all.

**Things you are not allowed or not supposed to do**

When you sign your name on the last page, it means you know that you are not supposed to do the things below. If you do these things, the clinic may not give you methadone, or may stop take-home doses. If you don't understand these things, ask your MMT prescriber to explain them to you.

- Arrive late, after the clinic or pharmacy hours
- Refuse to show proper ID, such as a driver’s licence, when you are asked to
- Refuse to provide a urine (pee) sample when asked to
- Miss three or more doses of methadone in a row
- Take a dose of methadone less than 16 hours after a previous dose

When you sign your name on the last page, it means you know that you are not allowed to do the things below. If you do these things, you may have to leave the methadone program. If you don't understand these things, ask your MMT prescriber to explain them to you.

- Hurt or threaten to hurt the staff or other patients
- Carry any kind of weapon, including a knife or a gun
- Sell or use drugs in the clinic or near the
APPENDICES

• clinic, or do anything else that is illegal
  • Give or sell your methadone to anyone
  • Shout, swear, fight, or argue in the clinic or anywhere near the clinic
  • Break, damage, or steal anything in the clinic or near the clinic
  • Insult or make fun of people because of their sex, sexual orientation, race or skin colour, or because of the way they behave or look

Consents

When you sign your name on the last page, it means that you will let the people at the methadone clinic do the following things:

• Let your MMT prescriber give the Nova Scotia Prescription Monitoring Program (NSPMP) your name, date of birth, health card number, address, and the date you started taking methadone. The NSPMP will keep this information private.
• Let your MMT prescriber talk to other doctors, nurse practitioners, pharmacists, or health workers about your care.
• Let the clinic pharmacist and nurses talk to pharmacists or other health workers to check on how much methadone you were given at another place.

Confidentiality

Everything you tell the clinic staff will be kept private. But sometimes the MMT prescriber, pharmacist or other health care workers have to report certain situations, such as these:
• If a child under your care is being harmed or not taken care of, there is a law that makes the clinic staff tell this to the social services department.
• If the clinic staff think you might kill yourself, you might kill someone else, or you can't take care of yourself, you may have to see a psychiatrist, even if you don't want to.
• If the clinic staff think you may hurt someone, there is a law that makes them tell this to the police department.
• If the clinic staff think you should not be allowed to drive because you are high, drunk, or for some other reason, there is a law that makes them tell this to the driving licence department.
• If you have AIDS, HIV, Hepatitis B or Hepatitis C, and some other diseases, there is a law that makes your MMT prescriber tell this to the health department.
• You will not tell anyone (even your family or friends) the names of the other patients at the methadone clinic or pharmacy, or anything else about these patients.

When you sign your name on the last page, it means that you:
1. Have talked to the MMT prescriber about this agreement. If you don't understand these things after talking to your MMT prescriber, you should not sign your name.
2. Agree that if you don't do what this agreement says, you may have to leave the methadone program.

FOR THE MMT PRESCRIVER (DOCTOR OR NURSE PRACTITIONER)

1. I will treat the patient with respect.
2. I will listen carefully to what the patient tells me and include them in discussions about treatment plans.
3. I will review the different possible treatments for the patient's addiction, including the risks and benefits.
4. I will explain clearly the risks, benefits, and side effects of methadone maintenance.
treatment.
5. I will do a full assessment, including history, examination, and appropriate tests.
6. I will carefully assess the patient and will recommend what I think is the best treatment.
7. I will consider the patient’s safety at all times when making treatment decisions.
8. I will follow the standards and guidelines of this Handbook. If I make treatment recommendations which are different from the standards and guidelines of this Handbook, I will document the reasons clearly.
10. I will review the patient’s progress and make recommendations for changes to the treatment as necessary.
11. I will document my assessments and treatment plans.
12. I will answer the patient’s questions about the treatment at scheduled visits.
13. I will make sure that the patient always has methadone prescribed as long as they are following this agreement.
14. I will make sure that another MMT prescriber is available to treat my patient when I am away.
15. I will talk with other health care workers who are involved with the patient about the patient’s condition when necessary.
16. I will not talk with other health care workers who are not involved with the patient, unless it is required by law.
17. I will report to Child Protection Services when I believe a child under the patient’s care is at risk, as required by law.
18. I will report to the Registry of Motor Vehicles when I believe the patient is unsafe to drive, as required by law.
19. I will report to Public Health when the patient has been diagnosed with a reportable communicable disease (such as HIV or Hepatitis C), as required by law.
20. I will arrange an urgent assessment if I believe the patient is at risk of killing themselves or someone else.

Dated (dd/mm/yyyy)

Patient’s Name

Dated (dd/mm/yyyy)

MMT Prescriber’s Name

Dated (dd/mm/yyyy)

MMT Prescriber’s Signature
## Opioid Agonist Therapy - Admission Assessment

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<th>Substance</th>
<th>Amount/route/frequency/time</th>
<th>Last use</th>
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<td>c</td>
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<td></td>
<td>p</td>
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<td>Cocaine</td>
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<td>Amphetamines</td>
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<td>Cannabis</td>
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<tr>
<td>Benzodiazepine</td>
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<td></td>
<td>p</td>
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<tr>
<td>Hallucinogens</td>
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<td></td>
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<td>bupropion quetiapine</td>
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<tr>
<td>gabapentin</td>
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<td></td>
<td>p</td>
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<tr>
<td>Tobacco</td>
<td>c</td>
<td></td>
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<tr>
<td></td>
<td>Pack Years</td>
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Opioid Withdrawal:
- sweats
- chills
- restlessness
- irritability
- nausea/vomiting
- diarrhea
- insomnia
- headache
- abdominal cramps
- musculoskeletal pain

Risk behaviours:
- intravenous drug use
- sharing needles
- crime
- sex trade work
- driving

# injections/day: 

needle source:

Negative effects of opioid use:
- housing (homelessness, evictions, unable to pay rent)
- relationships (family discord, loss of friends, child apprehended)
- finances
- education
  grade level:
- employment (lost jobs, couldn't hold jobs, never employed)
- crime
  number of convictions:
  years of incarceration:
- health
  drug-related diagnoses:
  drug-related admissions:
  overdoses:
Past treatment
- tried to cut down or stop on own
- withdrawal management
- NA/AA/CA
- addiction treatment programs:
  - residential programs:
    - previous opioid agonist therapy (methadone/buprenorphine)
      what, where:
      when, how long:
      why stopped:

Current social status
housing:
family relationships (family of origin, partner, children):
finances (work, EI, community services, other):
drug coverage (Pharmacare, 3rd party insurance, family):
legal (parole, probation, outstanding charges):
occupation (school, employment, volunteering, childcare):
supports (family, friends, health care worker):

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<thead>
<tr>
<th>Immunization:</th>
<th>HAV/HB</th>
<th>when:</th>
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</thead>
<tbody>
<tr>
<td>Medical history</td>
<td>Psychiatric history</td>
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</table>

<table>
<thead>
<tr>
<th>Medical history</th>
<th>Psychiatric history</th>
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</thead>
</table>

allergies:
cardiac:
Last menstrual period (LMP):

Medications:
Examination: BP   pulse                        weight                     height                          BMI
General                                              Chest  
skin: track marks                                     CVS   
EENT: pupils                                              Abdomen  
GU                                                   MSK    
Neuro                                                Psych  

UDS:  
☑ opioid     ☐ methadone     ☐ cocaine     ☐ benzodiazepine     ☐ amphetamine     ☐ Marijuana

DSM-V criteria for opioid use disorder
☑ Taking the opioid in larger amounts and for longer than intended
☑ Wanting to cut down or quit but not being able to do it
☑ Spending a lot of time obtaining the opioid
☑ Craving or a strong desire to use opioids
☑ Repeatedly unable to carry out major obligations at work, school, or home due to opioid use
☑ Continued opioid use despite persistent or recurring social or interpersonal problems
☑ Stopping or reducing important social, occupational, or recreational activities due to opioid use
☑ Recurrent use of opioids in physically hazardous situations
☑ Consistent use of opioids despite persistent or recurrent physical or psychological difficulties
☑ Tolerance (need for increased amounts to get desired effect)
☑ Withdrawal

Problem list:
Opioid use disorder    ☐ mild (2-3 criteria)
                      ☐ moderate (4-5 criteria)
                      ☐ severe (≥ 6 criteria)

medical problems:

psychiatric problems:

social problems:
APPENDIX G: BEHAVIOURAL ADDICTIONS

It is increasingly recognized that behavioural addictions are significantly comorbid with substance use disorders, as well as occurring independently of substance abuse. Substance use disorder can be characterized by continued use of a substance despite negative consequences from the continued use of that substance. Along with loss of control, substance use disorder also encompasses compulsive seeking of the substance and formation of a pathological relationship with the substance. Patients with behavioural addictions share these characteristics.

Examples of behavioural addictions include:
- Gambling disorder problem or pathological gambling
- Compulsive sexual behaviours such as use of pornography or sex workers
- Compulsive shopping or spending
- Compulsive theft or criminal behaviour
- Compulsive exercise
- Compulsive eating
- Compulsive work habits
- Compulsive use of internet or video games

The hallmark of a behavioural addiction is the inability to resist the impulse to engage in the behaviour that is harmful to oneself or others. Given the high incidence of comorbid behavioural addictions and substance use disorders, screening of patients for behavioural addictions at the initial evaluation and on an intermittent basis is recommended. Evaluation for behavioural addictions can be incorporated into a yearly review, or used in the evaluation of recurrent relapse or failure to progress through the stages of recovery.

The following clinical screening tools are useful in assessing behavioural addictions:

Gambling: South Oaks Gambling Screen (Download PDF)

Problem Gambling Severity Index (Download PDF)

Gamblers Anonymous 20 Questions

Sexual Addiction Sexual Addiction Screening Test
# APPENDIX H: MEDICATIONS THAT CAUSE PROLONGED QTC INTERVAL

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
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<tbody>
<tr>
<td>Known Risk of Torsades de Pointes (TdP)</td>
<td>These drugs prolong the QT interval AND are clearly associated with a known risk of TdP, even when taken as recommended.</td>
</tr>
<tr>
<td>Possible Risk of TdP</td>
<td>These drugs can cause QT prolongation BUT currently lack evidence for a risk of TdP when taken as recommended.</td>
</tr>
<tr>
<td>Conditional Risk of TdP</td>
<td>These drugs are associated with TdP, BUT only under certain circumstances of their use (e.g., excessive dose, in patients with conditions such as hypokalemia, or when taken with interacting drugs) OR by creating conditions that facilitate or induce TdP (e.g., by inhibiting metabolism of a QT-prolonging drug or by causing an electrolyte disturbance that induces TdP)</td>
</tr>
<tr>
<td>Drugs to avoid In Congenital Long QT Syndrome</td>
<td>These drugs pose a special risk of TdP for patients with congenital long QT syndrome and include all those in the other three categories PLUS additional drugs that do not prolong the QT interval perse, but which have a special risk because of their adrenaline-like actions.</td>
</tr>
<tr>
<td>Females &gt; Males:</td>
<td>Substantial evidence indicates that there is a greater risk of TdP in women (usually &gt; two-fold).</td>
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</table>
## Medications that Cause Prolonged QTc Interval

<table>
<thead>
<tr>
<th>System</th>
<th>Class</th>
<th>Risk</th>
<th>Possible risk</th>
<th>Conditional risk</th>
<th>Avoid with congenital long QT syndrome</th>
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<tr>
<td>Anaesthetic</td>
<td>Sevoflurane</td>
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<td>Arsenic</td>
<td>trioxide</td>
<td>Oxaliplatin</td>
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<td>Anti-infection</td>
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### Medications that Cause Prolonged QTc Interval

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<tr>
<th>System</th>
<th>Class</th>
<th>Risk</th>
<th>Possible risk</th>
<th>Conditional risk</th>
<th>Avoid with congenital long QT syndrome</th>
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# APPENDICES

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<th>System</th>
<th>Class</th>
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# Medications that Cause Prolonged QTc Interval

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<td>Ritodrine</td>
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<td></td>
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<tr>
<td>Psychiatric</td>
<td>Anti-psychotics</td>
<td>Chlorpromazine</td>
<td>Aripiprazole</td>
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<td></td>
<td></td>
<td>Haloperidol</td>
<td>Asenapine</td>
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<td></td>
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<td>Levomepromazine</td>
<td>Clozapine</td>
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<td>Mesoridazine</td>
<td>Cyamemazine</td>
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<td></td>
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<td>Pimozide</td>
<td>Iloperidone</td>
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<td>Sulpiride</td>
<td>Olanzapine</td>
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<td></td>
<td></td>
<td>Thioridazine</td>
<td>Paliperidone</td>
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<td></td>
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<td></td>
<td>Pipamperone</td>
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<td></td>
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<td></td>
<td>Quetiapine</td>
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<td></td>
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<td>Risperidone</td>
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<td></td>
<td></td>
<td></td>
<td>Sertindole</td>
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<td></td>
<td></td>
<td></td>
<td>Ziprazidone</td>
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## Medications that Cause Prolonged QTc Interval

<table>
<thead>
<tr>
<th>System</th>
<th>Class</th>
<th>Risk</th>
<th>Possible risk</th>
<th>Conditional risk</th>
<th>Avoid with congenital long QT syndrome</th>
</tr>
</thead>
<tbody>
<tr>
<td>Psychiatric</td>
<td>Anti-depressants</td>
<td>Citalopram</td>
<td>Venlafaxine</td>
<td>Amitriptyline</td>
<td>Amphetamine</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Escitalopram</td>
<td>Clomipram</td>
<td>Doxepin</td>
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<td></td>
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<td></td>
<td>Desipramine</td>
<td>Fluoxetine</td>
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<td></td>
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<td>Imipramine</td>
<td>Paroxetine</td>
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<td></td>
<td></td>
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<td>Mirtazapine</td>
<td>Sertraline</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Nortriptyline</td>
<td>Trazodone</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td>Trimipramine</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dementia</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mood Stabilizers</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sedatives</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stimulants</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Respiratory</td>
<td>Bronchodilator</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Decongestant</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>System</td>
<td>Class</td>
<td>Risk</td>
<td>Possible risk</td>
<td>Conditional risk</td>
<td>Avoid with congenital long QT syndrome</td>
</tr>
<tr>
<td>-----------------------</td>
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<td>----------------------------------------</td>
</tr>
<tr>
<td>Urologic</td>
<td>Antispasmodic</td>
<td>Mirabegron</td>
<td>Solifenacin</td>
<td>Tolterodine</td>
<td></td>
</tr>
<tr>
<td>BPH</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Tolterodine</td>
</tr>
<tr>
<td>Erectile Dysfunction</td>
<td></td>
<td></td>
<td></td>
<td>Alphuzosin</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Vardenafil</td>
<td></td>
</tr>
</tbody>
</table>

This table was updated In April, 2016. For regularly updated Information, see: [www.crediblemeds.org](http://www.crediblemeds.org)

Normal QTc Values:
Women <460 ms
Men <440 ms

*Note: Values above 500 ms indicate significant risk of torsade*
APPENDIX I:
SAMPLE METHADONE PRESCRIPTIONS

On the methadone prescription, the MMT prescriber shall specify:
1. The total quantity in milligrams written in numbers and words (to help to prevent tampering of prescriptions).
2. The daily dose mixed in orange drink crystals’ such as Tang © or other crystalline juice. The recommended final volume is 100 ml. Patients unable to tolerate 100 ml of juice can have the methadone mixed to a final volume of 50 ml. Patients who are under NPO orders can have methadone mixed to a final volume of 15 ml. For doses mixed to a final dose other than 100 ml, the MMT prescriber should communicate with the pharmacist.
3. The days of the week that require witnessed ingestion.
4. The number of take-home doses (carries) per week if applicable.
5. The start and end date.

Three samples follow to illustrate a prescription with a changing dose, a prescription at a stable dose, and a prescription with take-home doses.

1. Prescription with a changing dose:
This prescription represents a typical induction of methadone, with daily witnessed dispensing of a gradually increasing dose. The prescription must include each dose with the length of time at that dose. The patient requires assessment by the MMT prescriber or a delegated provider prior to any dose change.
2. Prescription at a stable dose:
This prescription represents a stable dose of methadone with daily witnessed dispensing.

3. Prescription with take-home dosing:
This prescription represents a stable dose of methadone with twice weekly take-home dispensing. The prescription must clearly state the days on which the patient is to visit the pharmacy to receive a witnessed dose and the number of take-home doses per week.
APPENDIX J: PATIENT GUIDE ON METHADONE OVERDOSE

These are important things you need to know about methadone. If you don’t understand these things, ask your methadone doctor or someone at the clinic.

You should always take the amount of methadone that the clinic gives you. No more and no less. Taking too much of a drug is called an overdose. An overdose of methadone can make you very sick and might even kill you.

You have to be extra careful about taking the amount of methadone the clinic gives you in the first two weeks, or you might overdose.

If you take too much methadone you may have trouble breathing, you may get tired, or the black circles in the middle of your eyes (pupils) may get very small. If this happens, you should let the clinic know right away. If you can’t reach the clinic, you should call an ambulance or go to the emergency room.

Doctors can do things to make you better if you take too much methadone.

Even if you have been on methadone for a long time, taking more methadone than you are supposed to take can be dangerous. Even a little bit more methadone could make you very sick and might even kill you.

Below are some questions that people who take methadone often ask. You should read these and make sure that your family or the people you live with also read them. If you don’t understand any of these things, ask your methadone doctor or someone at the clinic.

Why can’t my doctor increase my dose more quickly?

Because your body takes time to get used to methadone, your doctor has to go slowly, and not give you too much methadone to begin with. Most drugs don’t build up slowly in your body like methadone does. If you got a full dose of methadone right away, you would probably get very sick and might even die. A dose of methadone that might feel like too little on a Monday could put you in hospital by Thursday.

What can I do to feel better when I stop taking the drugs I used to take, and I go through withdrawal? What if I can’t sleep?

Taking a drug that your doctor doesn’t know about could make you very sick or even kill you. Always ask your doctor what you can take while you are on methadone. Your doctor will know about things that can make you feel better that won’t make you sick.

Prescription painkillers, alcohol, allergy pills, cocaine, crack, heroin, sleeping pills, or tranquilizers (pills that relax you, like benzodiazepines) can be very dangerous if used with methadone.

Isn’t methadone supposed to make you sleepy?

No. You are supposed to feel normal on methadone, not high or sleepy. Methadone builds up slowly in your body so feeling sleepy...
During the day may not happen until several days after you have been given a bigger dose. If you start to feel sleepy during the day, you should let your methadone doctor know right away, because this could be a sign of overdose.

**How do I know if my methadone dose is too high?**
- You may feel sleepy, and nod off several times during the day
- You may be forgetful
- You may be difficult to wake up from your sleep
- You may have slurred speech, stumble, or seem drunk

If any of these things happen, you should let the clinic know right away. If you can't reach the clinic, you should call an ambulance or go to the emergency room.

**What can I do to make sure I don't overdose?**
- Only take your methadone in the morning
- See your methadone prescriber or nurse at least once a week until you are on a stable dose
- Don't take prescription pain killers, alcohol, allergy pills, cocaine, crack, heroin, sleeping pills, or tranquilizers (pills that relax you, like benzodiazepines)
- Tell your family and close friends that you are on methadone. If they see that you're drowsy, tell them they must call your methadone doctor or an ambulance

I've been offered a small amount of methadone by another patient at the pharmacy. This can't hurt — I know I need 80 mg and I'm only at 45 mg.

Never take extra methadone. It's probably safe for your friend, but it could kill you. You took 80 mg once and were okay. If you had taken 80 mg every day for three or four days, you might have died. Remember, it takes five days for the dose to build up in your blood.

I get take-home doses from the clinic. If I have a friend who goes into withdrawal, is it safe to give him a little bit of methadone?

No it isn't safe, because your friend is not used to methadone. A dose that is just right for you could kill your friend.
### APPENDIX K: SAMPLE METHADONE MAINTENANCE CLINICAL NOTE

<table>
<thead>
<tr>
<th>Name:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Date:</td>
<td></td>
</tr>
</tbody>
</table>

**Subjective**

- Current methadone dose:  
- Current dispensing interval and take-home doses:  
- Take-home dose safety reviewed (locked box, dangers of diversion):  
- Missed doses since last visit:  
- Opioid withdrawal:  
  - Timing:  
  - Withdrawal symptoms:  
- Opioid use:  
- Other drug use:  
- Methadone side effects:  
- Involvement in other drug treatment:  
- Mood (depression, anxiety, suicidality):  
- Sleep:  
- Housing:  
- Occupation (employment, volunteering, child-care, elder-care):  
- Legal problems:  
- Financial status:  

**Objective:**

- Appearance (sedation, intoxication):  
- Urine drug screen results:  

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[139]
<table>
<thead>
<tr>
<th>Assessment:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plan:</td>
</tr>
<tr>
<td>Dispensing interval, take-home doses</td>
</tr>
<tr>
<td>Total number of days:</td>
</tr>
<tr>
<td>Methadone dose:</td>
</tr>
<tr>
<td>Dispensing interval, take-home doses, total number of days:</td>
</tr>
<tr>
<td>Start date:</td>
</tr>
<tr>
<td>End date:</td>
</tr>
<tr>
<td>Pharmacy:</td>
</tr>
<tr>
<td>Return date:</td>
</tr>
</tbody>
</table>
APPENDIX L: URINE DRUG SCREEN INTERPRETATION

The interpretation of urine drug screen (UDS) requires consideration of a number of factors, including opioid metabolites, detection times, substances that cross-react causing false positive results, and cut-off values that may lead to false negative results.

**Opioids that metabolize to other prescribed opioids:**
Some opioids metabolize into other prescribed opioids. These metabolites can be detected in UDS and, if not recognized as metabolites, may be misinterpreted as unsanctioned opioid use.

<table>
<thead>
<tr>
<th>Opioid</th>
<th>Metabolite</th>
</tr>
</thead>
<tbody>
<tr>
<td>Codeine</td>
<td>Morphine, hydrocodone</td>
</tr>
<tr>
<td>Morphine</td>
<td>Hydromorphone</td>
</tr>
<tr>
<td>Hydrocodone</td>
<td>Hydromorphone</td>
</tr>
<tr>
<td>Heroin</td>
<td>Morphine, (codeine contaminant)</td>
</tr>
</tbody>
</table>

*Buprenorphine, fentanyl, hydromorphone, meperidine, methadone, and oxycodone do not metabolize to other prescribed opioids.*

**Detection times:**
Detection times are dependent on the rate of clearance of the substances measured. The times listed in the table below are approximate, and will depend on the specific testing materials used. With point-of-care testing, the detection times will be provided by the vendor. With hospital testing, it is recommended that the detection times be ascertained from the laboratory. It is important to recognize that some substances (barbiturates, benzodiazepines, and cannabinoids) can be detected for weeks after last use."'

<table>
<thead>
<tr>
<th>Drug</th>
<th>Detection time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amphetamines</td>
<td>2 days</td>
</tr>
<tr>
<td>Barbiturates</td>
<td>Short acting 1 day</td>
</tr>
<tr>
<td></td>
<td>Long acting 2-3 weeks</td>
</tr>
<tr>
<td>Benzodiazepines</td>
<td>Therapeutic dose 3 or more days (depends on half-life of specific drug)</td>
</tr>
<tr>
<td></td>
<td>Extended use: 4-6 weeks</td>
</tr>
<tr>
<td>Cocaine</td>
<td>2-4 days</td>
</tr>
<tr>
<td>Opioids</td>
<td>2-3 days</td>
</tr>
<tr>
<td>Cannabinoids</td>
<td>Light smoker (1 joint) 2-3 days</td>
</tr>
<tr>
<td></td>
<td>Moderate smoker (4 joints a week) 5 days</td>
</tr>
<tr>
<td></td>
<td>Daily smoker 10 days</td>
</tr>
<tr>
<td></td>
<td>Chronic smoker 4 weeks</td>
</tr>
</tbody>
</table>

**False positive tests**
Many drugs can cross-react with immunoassay tests causing false positive results. When an unexpected UDS result occurs, it is important to exclude the possibility of a false positive test. The following lists some substances that can cause false positive tests.

**THC:** ketoprofen, naproxen, ibuprofen, sustiva, pantoprazole, promethazine, riboflavin, marinol, sativex, hemp seed oil
**Opioid:** poppy seeds, chlorpromazine, rifampin, dextromethorphan, quinine, fluoroquinolones

**Methadone:** quetiapine, methotrimeprazine, diphenhydramine, doxylamine, chlorpromazine, thioridazine, verapamil

**Benzodiazepines:** sertraline, oxaprozin, flurbiprofen, indomethacin, ketoprofen, ibuprofen, naproxen

**Amphetamine:** vicks vapor nasal inhaler, ephedrine, pseudoephedrine, tyramine, ciprofloxacin, mefanamic acid, labetalol, methylphenidate, trazodone, desipramine, bupropion, propranolol, phenylephrine, mexilitine, selegiline, amantadine, ranitidine, metronidazole, phenothiazines, some diet pills

**Cocaine:** salicylates, fluconazole

**Cut-off values**

Immunooassay tests have artificially established cut-off values in an attempt to reduce the incidence of false positive tests. This is largely established for workforce testing to minimize false positive tests and resulting consequences. As a result, a substance may be present, but not reported as positive if it exists at levels below the artificial cut-off value. This leads to possible false negative results. The higher the cut-off value, the higher the risk of false negative results. The table below lists the range of cut-off values with tests currently being used in Nova Scotia. It is recommended that MMT prescribers consult with the laboratory to determine the specific cut-off values for the tests used.

<table>
<thead>
<tr>
<th>Substance</th>
<th>Cut-off Value</th>
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</thead>
<tbody>
<tr>
<td>Amphetamine</td>
<td>300-1000 ng/ml</td>
</tr>
<tr>
<td>Benzodiazepine</td>
<td>150-300 ng/ml</td>
</tr>
<tr>
<td>Opioid</td>
<td>20-2000 ng/ml</td>
</tr>
<tr>
<td>THC</td>
<td>50-150 ng/ml</td>
</tr>
<tr>
<td>Barbiturates</td>
<td>200-300 ng/ml</td>
</tr>
<tr>
<td>TCA</td>
<td>300-1000 ng/ml</td>
</tr>
<tr>
<td>PCP</td>
<td>25 ng/ml</td>
</tr>
<tr>
<td>Cocaine</td>
<td>150-300 ng/ml</td>
</tr>
<tr>
<td>Methamphetamines</td>
<td>300-1000 ng/ml</td>
</tr>
<tr>
<td>Oxycodone</td>
<td>100 ng/ml</td>
</tr>
<tr>
<td>Methadone</td>
<td>100-300 ng/ml</td>
</tr>
</tbody>
</table>
APPENDIX M: TAKE-HOME DOSE AGREEMENT

Things you are expected to do when you are allowed to get take-home methadone

Methadone is a strong drug, and when people are allowed to take it home from the clinic or pharmacy, they have to be very careful with it. People could get sick or die if you don't follow the rules for take-home methadone. Here are some things you should know:

• A single dose of methadone can kill someone who is not used to taking it.
• A single dose of methadone can kill someone who is taking another drug.
• Children often die if they take methadone when they are not supposed to.

You have to sign your name on this page before your doctor can give you take-home methadone. When you sign your name, it means that you know you are expected to do the things below. If you don’t understand these things, ask your doctor to explain them to you. If you still don’t understand these things, you should not sign your name.

• You are expected to store your take-home doses in a locked box, in a location where it won’t be stolen or accidentally taken by another person. You are expected to show this locked box to your MMT prescriber if you are asked to.
• You are expected to swallow your dose of methadone only on the day(s) they are prescribed. You are expected to take a full dose once every 24 hours. You should not take it more often or less often.
• You are expected to swallow the methadone dose in front of the pharmacist on the day that you pick up your take-home doses.
• You are expected to return all your used methadone bottles to the pharmacist before you get your next take-home doses.
• You should not give, lend, or sell your take-home doses to anyone else. You know that selling methadone is against the law and that it is dangerous for other people.
• You know that take-home doses are a privilege and not a right. You know that your MMT prescriber can stop giving you take-home doses if he or she thinks that is the right thing to do.
• If your health stays the same and you do what you are supposed to with your take-home doses, they will be continued and you may be given more doses to take-home.
• The clinic does not have to replace your take-home doses if they are lost, spilled, thrown up, or stolen. Stolen take-home doses should be reported to the local police department.
• You know that your MMT prescriber, the pharmacist, or the clinic staff can tell you at any time that you have to bring in all your full and empty take-home methadone bottles for them to check. If you don’t bring in your bottles when they tell you to, they can stop giving you take-home doses or make you leave the program. They might also call the police.
• You are expected to let the clinic know if your address or phone number changes.

Patient’s Name

Patient’s Signature

Date

Witness’s Name

Witness’s Signature

Date
APPENDIX N: SAMPLE TAPERING READINESS QUESTIONNAIRE

When a client indicates that he or she would like to leave treatment, a number of questions should be asked to determine if the person is ready to taper from methadone. Consider the following questions:

1. Have you been abstaining from illegal drugs, such as cocaine and non-prescribed opioids and benzodiazepines? □ Yes □ No

2. Do you think you are able to cope with difficult situations without using drugs? □ Yes □ No

3. Are you employed or in school? □ Yes □ No

4. Are you staying away from people who use drugs and illegal activities? Yes □ No □

5. Have you gotten rid of your “works”/“outfit”? □ Yes □ No

6. Are you living in a neighbourhood that doesn't have a lot of drug use, and are you comfortable there? □ Yes □ No

7. Are you living in a stable family relationship? □ Yes □ No

8. Do you have non-drug-using friends that you spend time with? □ Yes □ No

9. Do you have friends or family who would be helpful during a taper? □ Yes □ No

10. Have you been participating in counselling that has been helpful? □ Yes □ No

11. Does your counsellor think you are ready to taper? □ Yes □ No

12. Do you think you would ask for help when you were feeling bad during a taper? □ Yes □ No

13. Have you been on methadone for a long time (> 1 year)? □ Yes □ No

14. Are you in good mental and physical health? □ Yes □ No

15. Do you want to get off methadone? □ Yes □ No

The more questions the client can honestly answer by checking “yes,” the greater the likelihood that he or she is ready to taper from methadone. Consider that each “no” response represents an area that probably needs work to increase the odds of a successful taper. 3

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APPENDIX O:
AGAINST MEDICAL ADVICE (AMA)

Date:__________________________________________

I,______________________________________, acknowledge that ______________________ explained my condition to me and advised me of the potential risks and/or complications which could or would arise from refusal of medical care. I have also been advised that other unknown risks and/or complications are possible. Being aware that there are known and unknown potential risks and/or complications, it is still my desire to refuse the advised medical care.

I do hereby release ______________________ and_____________________ (clinic name) from all liability resulting from any adverse medical condition(s) caused by my refusal of the recommended medical care.

Signature of Patient/Parent/Legal Guardian:

_________________________________________________________________________

Date____________________________________________________________

Witness ___________________________________________________________

If witness acted as translator, check here □

Name of translator____________________________________________________
APPENDIX P: FORM 2 – MEDICAL CERTIFICATE FOR INVOLUNTARY PSYCHIATRIC ASSESSMENT (PART 1)

I, Dr. ________________________________ (full name), a MMT prescriber,

personally examined ________________________________ (full name of person)

of ________________________________ (address of person) on ___ / ___ / _____ (dd/mm/yyyy)

at _______ a.m./p.m. at ________________________________ (location of examination).

It is my opinion that the person meets all of the following criteria (as set out in Sections 7 and 8 of the Act):

• The person apparently has a mental disorder
• The person, as a result of the mental disorder, (check one or both boxes)
  • Is threatening or attempting to cause serious harm to him/herself or has recently done so, has recently caused serious harm to him/herself
  • Is seriously harming or is threatening serious harm towards another person or has recently done so
• The person is likely to suffer serious physical impairment or serious mental deterioration (or both)
• The person would benefit from psychiatric inpatient treatment in a psychiatric facility and is not suitable for inpatient admission as a voluntary patient

The following information supports my opinion that this person meets the criteria as checked above:

1. Observations from my examination of the patient:

____________________________________________________________________________________

____________________________________________________________________________________

____________________________________________________________________________________

____________________________________________________________________________________

____________________________________________________________________________________
APPENDICES

2. Information from other sources:

Sources of above information (identify specific sources):

I therefore certify that the person named in this certificate be detained, restrained and observed in ______________________________ (name of psychiatric facility) for up to 72 hours for an involuntary psychiatric assessment by a psychiatrist.

__________________________ a.m./p.m. 

(Date of signature) (Signature of MMT prescriber)

(MMT prescriber’s name – printed)

Notes:

1. This certificate must be signed by the MMT prescriber who examined the person, and, in accordance with Section 9 of the Act, is not effective unless signed within 72 hours of the examination.

2. A person cannot be taken into custody or detained unless this certificate is accompanied by one of the following:
   • A second Medical Certificate for Involuntary Psychiatric Assessment - Part 1 (Form 2) signed by another MMT prescriber
   • A Medical Certificate for Involuntary Psychiatric Assessment - Part 2 (Form 3) signed by the same MMT prescriber who signed Part 1.
APPENDIX Q: EMERGENCY DEPARTMENT MANAGEMENT OF METHADONE OVERDOSE

* NOTE: The MMT prescriber may send this form to the emergency department to assist in managing a patient with a suspected methadone overdose.

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Patient: 
Doctor: 
Poison Centre Phone #: 
Doctor Phone #: 

Relevant details (to be completed by MMT prescriber):
• Usual methadone dose
• Dose of the suspected overdose (if known):
• Concurrent alcohol, benzodiazepine, or other drug use
• Medications
• Relevant medical/psychiatric history
• Circumstances of the overdose (intentional or accidental)

Clinical features of methadone overdose:
Methadone acts for at least 24 hours, much longer than other opioids. Symptoms begin up to 10 hours after the overdose. Early symptoms include nodding off, drowsiness, slurred speech, and emotional lability. Respiratory depression occurs later.

Emergency care protocol for managing suspected methadone overdose

Monitoring:
• Check frequently for vital signs, respiratory rate, and O2 sat
• Hold a brief conversation to assess alertness
• ECG and cardiac monitoring to check for prolonged QTc interval and ventricular arrhythmias (methadone can cause torsades de pointes)

Medical management with intubation or naloxone
Naloxone (Narcan®) is a safe treatment in patients who are not physically dependent on opioids (e.g., patients not in methadone therapy who took methadone at a party). For methadone or opioid-dependent patients, intubation avoids risks of naloxone-induced withdrawal. Intubation is necessary if:
• RR < 12; hypercapnia; persistent desaturation despite supplemental oxygen
• Patient fails to respond to naloxone within 2 min

Naloxone precautions
• Ventricular dysrhythmias and cardiac arrest can occur with naloxone-induced withdrawal, especially if patients are withdrawing from other substances.
• Patients in naloxone-induced withdrawal may become agitated and leave against medical advice.
• Naloxone can induce emesis.

Above risks are avoided with intubation.

Naloxone dosing
• If the patient has severe respiratory depression, give 2.0 mg naloxone IV.
• If there is minimal respiratory depression,
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give 0.01 mg/kg weight to avoid precipitating withdrawal.
• If there is no response after the initial dose, repeat naloxone 2-4 mg every 2-3 minutes.
• If there is no response after 10-20 mg naloxone, search for other causes for the coma.
• If the patient responds to naloxone, infuse at 2/3 of the effective dose per hour.
• Give a bolus of 1/2 the effective dose 15-20 minutes after starting infusion.
• Titrate dose to avoid withdrawal, while maintaining adequate non-assisted respirations.

Departure AMA: If the MMT prescriber feels the patient is not safe to leave, a Form 2 should be completed and the patient should be forced to stay.

Discharge instructions: Tell patient not to take any methadone, alcohol or sedating drugs until seen by MMT prescriber the next day. Have a family member or support person observe overnight, and call an ambulance if the patient appears more drowsy, is difficult to arouse, or snores much more loudly than usual.

Recommended emergency care observation periods
• Observe for at least 10 hours post-overdose.
• Discharge if patient has been completely asymptomatic after ten hours observation.
• If patient becomes symptomatic at any time during the 10 hours, monitor for at least 24 hours post-overdose.
• If patient is intubated or on naloxone, continue intubation/naloxone for at least 24 hours post-overdose.
• Monitor for at least six hours after naloxone or intubation is discontinued.
### APPENDIX R: LIST OF ACRONYMS

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<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
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<tbody>
<tr>
<td>AA</td>
<td>Alcoholics Anonymous</td>
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<tr>
<td>AMA</td>
<td>Against Medical Advice</td>
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<tr>
<td>BP</td>
<td>Blood Pressure</td>
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<tr>
<td>CAMH</td>
<td>Centre for Addiction and Mental Health</td>
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<tr>
<td>CBT</td>
<td>Cognitive Behavioural Therapy</td>
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<td>CFPC</td>
<td>College of Family Physicians of Canada</td>
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<tr>
<td>CNCP</td>
<td>Chronic Non-Cancer Pain</td>
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<tr>
<td>CNS</td>
<td>Central Nervous System</td>
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<tr>
<td>COPD</td>
<td>Chronic Obstructive Pulmonary Disease</td>
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<tr>
<td>CPSBC</td>
<td>College of Physicians and Surgeons of British Columbia</td>
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<td>CPSNS</td>
<td>College of Physicians and Surgeons of Nova Scotia</td>
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<td>CPSO</td>
<td>College of Physicians and Surgeons of Ontario</td>
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<tr>
<td>CRNNS</td>
<td>College of Registered Nurses of Nova Scotia</td>
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<td>DMAC</td>
<td>District Medical Advisory Committee</td>
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<td>DSMV</td>
<td>Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition</td>
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<td>ECG</td>
<td>Electrocardiogram</td>
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<td>ED</td>
<td>Emergency Department</td>
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<td>EDDP</td>
<td>2-Ethylidene-1, 5 Dimethyl-3, 3-Diphenylpyrrolidine</td>
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<td>HCV</td>
<td>Hepatitis C Virus</td>
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<tr>
<td>HIV/HCD</td>
<td>Human Immunodeficiency Virus</td>
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<td>IPC</td>
<td>Inter-Professional Collaboration</td>
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<td>LMP</td>
<td>Last Menstrual Period</td>
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<td>MI</td>
<td>Motivational Interviewing</td>
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<td>MMT</td>
<td>Methadone Maintenance Treatment</td>
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<td>NA</td>
<td>Narcotics Anonymous</td>
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<td>NAS</td>
<td>Neonatal Absence Syndrome</td>
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<td>NPO</td>
<td>Nothing by Mouth</td>
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<td>NSCP</td>
<td>Nova Scotia College of Pharmacists</td>
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<td>OAT</td>
<td>Opioid Agonist Therapy</td>
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118 Gossop M, Stewart D, Marsden J (2006) Effectiveness of Drug and Alcohol Counselling During Methadone Treatment: Content, Frequency, and Duration of Counselling and Association with Substance Use Outcomes. Addiction 101: 404-12


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<td>179</td>
<td>Finnegan LP (1991) Treatment Issues for Opioid-Dependent Women During the Perinatal Period. J Psychoactive Drugs 23: 191-201</td>
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