

THE CASE FOR SUBOXONE: A PRACTICE SUPPORT TOOL FOR NURSE  
PRACTITIONERS

by

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A CULMINATING PROJECT SUBMITTED IN PARTIAL FULFILLMENT OF THE  
REQUIREMENTS FOR THE DEGREE OF

MASTER OF NURSING – NURSE PRACTITIONER

in

THE FACULTY OF GRADUATE AND POSTDOCTORAL STUDIES

THE UNIVERSITY OF BRITISH COLUMBIA

Vancouver

April 2018

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### Abstract

Recent data released by the BC Coroners Service attributes 1,422 deaths in 2017 to overdose of illicit drugs in British Columbia (BC) (Office of the Chief Coroner, Ministry of Public Safety & Solicitor General [OCC], 2018). Not only are deaths from drug overdose are largely underreported and therefore underrepresented in statistics, this conservative estimate is expected to continue to rise as toxicology reports continue to result (OCC, 2018). In anticipation of Opiate Agonist Therapy initiation becoming a part of nurse practitioners' scope of practice in BC, this paper will discuss relevant prescribing guidelines and present a literature review and practice support tool for initiation of buprenorphine-naloxone, a promising option for treatment for Opioid Use Disorder.

*Keywords:* drug overdose, Opiate Agonist Therapy, nurse practitioners, scope of practice, prescribing, guideline, literature review, practice support tool, Opioid Use Disorder

### The Case for Suboxone: A Practice Support Tool for Novice Nurse Practitioners

In British Columbia (BC), high rates of opioid misuse and its related morbidity and mortality have resulted in an incredible public health crisis, leading to the formal declaration of a public health emergency in April of 2016 (British Columbia Center for Substance Use [BCCSU], 2017a). As this crisis continues, coroners' reports continue to show increasingly unprecedented deaths due to overdose (OD) in BC every year. Though the medication combination of buprenorphine-naloxone (suboxone) has recently been indicated as a first-line treatment for Opioid Use Disorder (OUD) in certain circumstances by the BC Centre of Substance Use (BCCSU) and numerous other agencies; it still remains under-utilized at present (BCCSU, 2017a). Initiating suboxone maintenance therapy (SMT) will soon fall within the scope of practice (SoP) for nurse practitioners (NPs). Unfortunately, because the role of NPs in prescribing Opioid Agonist Therapy (OAT) has not yet been legislated and regulated by the College of Registered Nurses of BC (CRNBC), it is not yet included in the current NP curriculum. As such, potential practice problems exist in that NPs may enter their practice with a lack of knowledge regarding initiation of SMT. Given the opioid crisis continuing to impact our patients' lives, it would be of great benefit for novice SMT prescribers to have access to a concise practice support tool (PST) to reference when eventually navigating SMT initiation. The scope of this paper will selectively discuss oral OAT with either SMT or methadone maintenance therapy (MMT), though it is acknowledged there are other available forms of OAT as well. The purpose of this culminating project is to provide support and clinical direction to NPs who will be responsible for initiating SMT once the

legislation allows it. The goal of this project is to increase NPs' comfort to prescribe SMT by developing a concise, evidence-based PST to provide clinical support.

### **Description of the Problem**

#### **The Opioid Crisis**

As reported by Fischer et al. (2005), illicit drug use (IDU) is widely acknowledged in worldwide literature as “a major contributor to the overall burden of disease” (p.251). The massive societal burden associated with illicit use of opioids is primarily associated with morbidity by way of communicable disease spread and infection, and mortality by way of suicide, OD, Human Immunodeficiency Virus (HIV)/Acquired Immunodeficiency Syndrome (AIDS), and liver disease (Fischer et al., 2005); these burdens are especially prevalent for users not receiving treatment (Fischer et al., 2005). Societal burdens of IDU and OD include increased use of Emergency Health Services (EHS), emergency room (ER) visits, funding for take-home Naloxone kits (THN) and an increasing amount of public funds being used to combat this public health crisis; in September of 2017, BC's provincial government committed an additional \$322 million to be used to combat IDU OD deaths (Ministry of Mental Health and Addictions [MMHA], 2017). In the mid 2000s, Fischer et al. (2005), reported their findings that each untreated user was associated with a societal cost burden of \$45,000 per year; a number which has likely increased exponentially in the last 12 years.

Despite the BC Government's declaration of Public Health Emergency in 2016, and the subsequent response and support from governments and health authorities; the number of illicit drug OD casualties in BC continues to increase (MMHA, 2017). In 2016, BC had 985 reported deaths from illicit drug OD; a 281% increase from 2015

(BCCSU, 2017a). From January to October of 2017 alone, there were 1,208 OD deaths in BC (MMHA, 2017). Provincial data explicitly show an increase in deaths involving fentanyl; non-opioid related IDU deaths have remained similar in number. This is likely due to and exacerbated by the emergence of fentanyl on the street market, and the highly potent synthetic opioid analogues used to dilute illicit street opioids (BCCSU, 2017a). HCPs can play a major role in attempt to achieve desired outcomes in the face of this crisis, such as decreasing the use of EHS for opiate-related ODs, decreasing the number of illicit drug users, and ultimately decreasing the morbidity and mortality from IDU and ODs in BC. In order to facilitate such outcomes, HCPs working with patients involved with OUD, including NPs, must be knowledgeable about, and clinically proficient in OAT and OUD. In this way, NPs can better “optimize engagement, care and treatment of individuals with [OUD], and recognize the need for a diversity of available treatment options that can be matched to individual patient needs and circumstance” (BCCSU, 2017a, p.14).

### **Opioid Use Disorder**

It is imperative that NPs understand OUD in order to effectively, efficiently and empathetically care for patients struggling with this affliction. The BCCSU summarizes OUD as a chronic illness, with potential for relapse as well as long-term remission, if the patient is appropriately treated (BCCSU, 2017a). It is important to consider that in OUD, the clinical course might involve periods of exacerbation and remission, but the fundamental, ongoing vulnerability and potential for exacerbation, despite treatment, never disappears (Schukit, 2016). This implicates the need for long-term treatment, even after patients are stabilized. To diagnose OUD per the Diagnostic and Statistical Manual

of Mental Disorders-5 (DSM-V), patients' opioid use must follow a problematic pattern and result in impairment or distress which is clinically significant, manifested as two or more of the 11 listed criteria (American Psychological Association [APA], 2014).

Notably, the compulsive opioid use that patients with OUD tend to develop results in them planning their daily activities around acquiring and administering the drugs (APA, 2014). Understandably, OUD can then interfere with employment, school, home or family life, and lead to several undesirable outcomes in such aspects of patients' lives.

As previously mentioned per the morbidity and mortality associated with IDU, patients with OUD are at higher risk for adverse health outcomes such as: cellulitis, abscesses, endocarditis, hepatitis, HIV, tuberculosis, other general medical complications, and death due to OD, accidents, injuries or AIDS (APA, 2014). As with all substance use disorders, OUD is also associated with an increased risk for attempted and completed suicides (APA, 2014). Further undesirable outcomes OUD patients may face include violence associated with the use, buying, and selling of drugs, and incarceration secondary to drug-related crime (APA, 2014). Notably, international literature shows the risk of death by OD is three to eightfold higher in the 14 days after release from prison; this significant risk remains elevated for a full month post-incarceration (Pijl, Bourque, Martens, and Cherniwchan, 2017). Fortunately, there are treatment options available for patients struggling with OUD in the form of OAT, and it is anticipated that legislation will soon allow for NPs to prescribe it. By utilizing prescribed opioids which are longer-acting and less euphoria-inducing in OAT, HCPs can help mitigate the patient's risk for morbidity, mortality and other undesirable outcomes associated with OUD (Nosyk, 2013).

**Opioid Agonist Therapy**

As previously discussed, ongoing and problematic IDU is associated with various harms including communicable disease and death. Harm reduction includes any activity which serves to reduce incidence and prevalence of such harms (Harm Reduction International [HRI], 2016). The defining characteristic of harm reduction programs, policies and individual practices is that they seek to prevent the harm in the context of ongoing IDU, rather than attempt to stop patients from using altogether (HRI, 2016).

OAT has been available for decades as a treatment option for opioid dependent patients. In these programs, HCPs prescribe suboxone or methadone with the intent to thereby eliminate harms associated with street drugs. Unfortunately, these treatment options are largely underutilized, despite having clear, evidence-based benefits and appropriate safety and side-effect profiles (BCCSU, 2017a, p.14). In fact, OAT "... [has] been shown to be superior to withdrawal management alone in terms of retention in treatment, sustained abstinence from opioid use, and reduced risk of morbidity and mortality" (BCCSU, 2017a, p.22). Indeed, OAT can allow patients who formerly struggled with OUD to live addiction-free, productive lives, free of ongoing IDU-related harms. Selecting between MMT and SMT for OAT depends heavily on patient and clinical circumstances.

In BC and worldwide, MMT has long been the predominantly used option for OAT (BCCSU, 2017a). The use of MMT can substantially reduce the associated morbidity and mortality with opioid dependence (Kamien, Branstetter, & Amass, 2008); it can also improve patients' physical and mental health status, reduce IDU, and decrease the risk of infectious disease spread and involvement in crime among those who stay in



treatment (Fischer et al., 2005). It has been shown that, among injection drug users, MMT reduces risky injection behaviours, and overall risk for hepatitis C and HIV infection (BCCSU, 2017a). As well, MMT increases adherence to antiretroviral therapy and contributes to improved virologic outcomes (BCCSU, 2017a). Though MMT has many demonstrated benefits, this program also contains various limitations; detailed discussion of which is outside the scope of this paper. Namely, barriers to successful MMT include the abysmal number of methadone prescribers in BC, and the resulting underutilization and poor retention of patients in the treatment program (BCCSU, 2017a). To this end, it is important for HCPs to consider alternative options for treatment of OUD, such as SMT.

SMT is now strongly endorsed for OUD as the preferred first-line treatment, once contraindications have been ruled out (BCCSU, 2017a, p.11). This recommendation stems from data which suggest it is safer to use, easier to clinically manage and has less associated risks than methadone (BCCSU, 2017a). The inclusion of naloxone in this drug reduces the risks for its misuse, diversion, and OD with resulting respiratory suppression; and allows for unsupervised administration, which is not feasible with methadone (Bell et al., 2004). Suboxone has been well established as an effective agent for OAT; it is similarly efficacious and as cost effective, if not more so than, methadone (Bell et al., 2004).

### **The Practice Problem**

Though the number of OAT prescribers in BC continues to rise, there is still insufficient delivery of this program in BC. There were 401 OAT-prescribing physicians in 2015-2016, however this number is inclusive of hospitalists as well as temporary

exemptions only; therefore, this number is likely over representative (Office of the Provincial Health Officer [OPHO], 2017). Despite the 401 reported, the true number of physicians prescribing ongoing OAT for that time frame was estimated to be less than 300 (OPHO, 2017). The number of BC physicians prescribing OAT rose significantly to 1125 in 2016-2017, yet this is still not enough to satisfy the need (BCCSU, 2017b). It is well recognized that this barrier to patient access to OAT remains particularly great in rural and remote areas (OPHO, 2017). In attempt to remove a barrier to access; the exemption for physicians to prescribe suboxone was no longer required in BC as of July 2016 (OPHO, 2017). To further increase patient access to OAT, it is assumed that prescribing OAT will soon be included in the SoP for qualifying NPs. In fact, a document outlining the Standards, Limits and Conditions for NPs prescribing OAT has been developed for eventual legal regulation, but is not yet in effect (CRNBC, no date). Because this area of practice is specialized, new to NPs, and has not yet passed regulation, it has not yet been included in NP curriculum. As such, there will be increased educational requirements for NPs to prescribe OAT in the form of continuing education courses.

The practice problem regarding underutilization of SMT is multifactorial and has several points for examination. The objective of this project is to consider one aspect only: to address the current knowledge gap regarding OAT, and thus encourage NPs to confidently and competently prescribe SMT. The literature review will explore suboxone pharmacology and its clinical utilization, relevant guidelines and the current NP SoP. The purpose of this project is twofold. First, I hope to facilitate NPs' knowledge and understanding of SMT, in hopes that they will prescribe it, and thereby

increase access for patients to this beneficial program. Secondly, I will develop a PST in hopes to encourage NPs who are wary of initiating SMT to guide them through it in their practice (see Appendix A). To measure the impact of this project, I will solicit feedback from physician colleagues who are proficient with SMT to confirm that the clinical guidance tool was appropriately addressed. Secondly, I will solicit feedback from NP colleagues who previously were unfamiliar with SMT, and gauge their willingness and comfort to use the PST to involve SMT in their practice.

### **Literature Review**

#### **Search Strategy**

Literature was solicited from multiple scholarly and non-academic sources for this comprehensive literature review. For pharmacological information, Google Scholar was used through the UBC library proxy, with the search terms *opioid pharmacology* and *suboxone pharmacology*. Abstracts of full-text articles on the first two pages with attractive titles were read. From reading the abstracts, several full articles were then read, and the two articles with the most desired and relevant information were used.

For non-pharmacological suboxone literature, CINHALL was used with the search terms *suboxone* and *opioid use disorder*. The search was limited to English and full-text only articles. After only one article resulted, Google Scholar was used again, with the same search terms. Full-text results were scanned for meta-analyses and randomized control trials (RCTs). Abstracts of identified primary studies were scanned for appropriateness to the subject matter. The RCT/meta-analysis with the most appropriate content, and with the most recent date of publication, was used. Information regarding

NPs and SMT prescribing, as well as SMT itself, was gleaned from literature and guidelines from the websites of both the CRNBC and the BCCSU.

### **Opioid Pharmacology**

Opium has been used for centuries as a means to alter moods and relieve pain (Gourlay, 2004). Derivatives of opium and their synthetic analogues have since been adapted for use in the medical field for regulated use. Opioids produce their analgesic, euphoric, sedative and other effects by binding to three distinct receptors with varying affinities and activating them to varying degrees (Gourlay, 2004). In this way, opioids can be selectively administered to produce the desired physiological response, depending on the degree to which they induce or inhibit each of the mu, delta or kappa receptors. Opioids can be classified by their effect on these receptors as agonists (which produce a maximal response from that receptor), partial agonists (which elicit only a partial response), or antagonists (which produce no functional response, and prevent agonists from binding) (Pathan & Williams, 2012). Activation of mu receptors, at spinal and supraspinal sites, is responsible for analgesia, “dependence, euphoria, respiratory depression, sedation, miosis, and tolerance” (Gourlay, 2004, p.154). Delta receptors are associated only with analgesia and euphoria, while kappa-agonists “produce analgesia, miosis, sedation, and, in contrast to the other receptors, dysphoria” (Gourlay, 2004, p.154).

While euphoria, sedation, and tranquility accompany short-term opioid use, regular or extended opioid use is associated with developing tolerance, and ultimately, dependence (Boothby & Doering, 2007). Problems associated with problematic opioid use and OUD include feelings that agonists produce which “may lead the patient to

continue to take these drugs despite the development of serious related problems ... [and] the need to escalate doses in order to achieve these desired effects; such levels of opioids can overwhelm respiratory drive and lead to death” (Schukit, 2016, p.357). Opioid antagonists such as naloxone can be used in instances of opioid OD, whereby it will preferentially bind to mu receptors, replacing the existing opioid agent at the receptor site, and thereby eliminating its agonistic effects (Gourlay, 2004).

### **Suboxone Pharmacology**

Buprenorphine hydrochloride is one component of the brand name drug suboxone. It is a partial agonist at mu receptors, and a long-acting antagonist at kappa receptors (Boothby & Doering, 2007). Though the pharmacokinetics and pharmacodynamics of buprenorphine may not be well reported, it is largely accepted that its partial agonist effects are a result of binding to, and slowly dissociating from, the mu receptors (Boothby & Doering, 2007). Furthermore, “...as the buprenorphine dose increases, the [analgesic] effect decreases, and narcotic antagonism proportionally increases” (Boothby & Doering, 2007, p.268). This accounts for the ‘ceiling effect’ seen with buprenorphine dosing, and is also responsible for the phenomenon termed ‘precipitated withdrawal;’ this occurs when buprenorphine is taken after the patient has used opioids and has full agonists already on board. This results in reversal of analgesia, and induces opioid withdrawal effects (Boothby & Doering, 2007).

The naloxone component to suboxone functions to prevent misuse and diversion of the drug. In fact, when the sublingual tablet is taken as directed, the bioavailability of naloxone is negligible, and the buprenorphine functions to its full effect (CRISM, 2016). However, in the case of suboxone misuse via other routes of administration, such as

intranasal (snorting), subcutaneous, intramuscular, or intravenous; sufficient absorption and bioavailability of naloxone is able to induce withdrawal symptoms (CRISM, 2016). Due to naloxone's very short onset of action, misuse of suboxone can result in patients experiencing acute withdrawal within two minutes (CPSBC, slide 20).

Pharmacologically, suboxone was formulated in such a way that it would have several benefits. A rapid onset of action allows patients to feel its effect shortly after taking it. A long half-life allows for a long duration of action, and q24h dosing. It also allows for SMT to be titrated up to a therapeutic dose within a couple of days, rather than MMT, which can take weeks or months to reach a therapeutic dose (BCCSU, 2017a).

While suboxone clearly has several demonstrated benefits, it is unfortunately not always a viable clinical choice. SMT is absolutely contraindicated in the case of patient allergy to any component of the drug, severe liver dysfunction, acute alcohol intoxication, delirium tremens, or patients with severe respiratory distress (BCCSU, 2017a). Pregnancy is no longer listed as a contraindication, but it is advised for clinicians to consult an addiction medicine specialist when treating pregnant women taking suboxone (BCCSU, 2017a).

### **Suboxone Efficacy and Utilization**

As of June 5, 2017, all education and clinical guidance for HCPs prescribing OAT fell under the responsibility of the BCCSU, previously being overseen by the College of Physicians and Surgeons of BC (CPSBC). In keeping with this responsibility, guidelines were published by the BCCSU for management of OUD on the same date. These evidence-based guidelines draw from extensive research and literature to strongly recommend suboxone as the preferred first-line treatment for OUD. In addition to

buprenorphine being six times safer than methadone in terms of risk for OD, other factors which implicate SMT as a more attractive alternative than MMT include: a decreased risk for suboxone misuse, abuse, and diversion, eventual flexible take-home dosing schedules for stable patients, fewer drug interactions, and milder withdrawal symptoms (BCCSU, 2017). SMT also provides an option for OAT where MMT is simply not logistically possible due to pharmacy and witnessed ingestion requirements (BCCSU, 2017). A Cochrane review conducted in 2014 sought to evaluate buprenorphine as a maintenance treatment for OUD management, and compare it to both placebo and MMT. Compared to placebo, buprenorphine is better able to reduce illicit opioid use, and sustain people in treatment better (Mattick, Breen, Kimber, & Davoli, 2014). Results comparing buprenorphine to MMT varied, due to the different dosages and lengths of treatment. However, when both prescribed at fixed doses, buprenorphine and methadone were equally as effective for both retaining patients in treatment, and suppressing illicit opioid use (Mattick, Breen, Kimber, & Davoli, 2014).

It is consistently reported in current literature that SMT is underutilized – namely under-prescribed by physicians – in Canada (Nosyk et al., 2013). While there may be many contributing factors for this, a notable barrier has specifically been mentioned by Luce & Strike (2011), who acknowledge that their lack of experience with suboxone leads practitioners to forego prescribing it. Given this observation for physicians, it is reasonable to anticipate the same when NPs attain prescribing privileges as well. Other potential barriers to SMT utilization in BC could include common barriers to care such as logistic and geographic concerns, and systemic issues such as restricted extended health coverage.

A review of current literature and statistics unfortunately reveals a gap in exploring why SMT is so underutilized in BC, and even Canada. Even personal communication with persons at the BCCSU who were instrumental in putting together the Guideline for Clinical Management of OUD, was unsuccessful in attempting to source a document or resource which explicitly and accurately tracks the number of prescribers and prescriptions of suboxone by NPs and physicians in BC.

In light of the ongoing public health emergency, an update statement was released by the Ministry of Mental Health and Addictions (MMHA) in 2017 detailing areas that will be focused on in order to escalate their response to the opioid crisis. Appropriately, they have identified the immediate priority as saving the lives of people who are at risk of OD and death. Other urgent priorities are also described and well rationalized. As part of their strategy targeting addiction treatment services, the MMHA addresses OAT and the clear need to increase access to it. Despite prioritizing ‘building provider capacity’, and referencing the recently published BCCSU guidelines; there was no clear push to expedite changing the NP SoP to include OAT. While the MMHA reports that increased training initiatives have resulted in more physicians prescribing OAT, there still undeniably remains a large gap between patients’ OAT needs and HCPs’ deliverance (MMHA, 2017).

### **NP Scope of Practice**

Since July 1, 2016 in BC, prescription of suboxone no longer required a federal exemption for physicians, in attempt to increase patient access to SMT. To further increase access, continuation of SMT prescribing has been added to the NP SoP as of January 6<sup>th</sup> of 2017. In order to prescribe SMT, NPs must be able to access



PharmaNet, and adhere to federal regulations for prescribing controlled substances, the Controlled Prescription Program from the College of Pharmacists of British Columbia, and all standards listed in Section C. of our practice standards (CRNBC, 2018). The NP must have completed additional education in the form of an online module, and completed a preceptorship with strict requirements. At this time, NPs are restricted to continuation only of an existing suboxone prescription (CRNBC, 2018).

Since the inclusion of SMT continuation was added to our scope, a working document has been released by the CRNBC regarding the pending standards, limits and conditions for prescribing the initiation of OAT. Because NPs may soon be responsible for its induction and maintenance; it is prudent to emphasize that NPs may only prescribe OAT for OUD. NPs may not prescribe OAT for any other uses, such as chronic pain. In initiating OAT treatment, NPs must demonstrate knowledge of substance use disorders and treatment strategies as well as harm reduction strategies for OUD. In treating patients with OUD, NPs must either make or confirm the diagnosis, and conduct a thorough risk assessment. NPs must prescribe in a way which is safe for the client and the public. The additional education and preceptorship requirements remain. Finally, NPs must apply the practice guidelines per the BCCSU when initiating SMT (CRNBC, no date).

## **Suboxone Initiation**

### **Pre-Initiation**

The clinical utilization of suboxone and methadone have largely proven to be equally effective in reducing use of illicit opioids as long as a sufficient dose of suboxone is used (BCCSU, 2017a). When initiated properly, appropriate therapeutic doses can be

reached relatively quickly, and contribute to stability for patients on OAT (BCCSU, 2017a). Since the initiation of suboxone requires some extent of opioid withdrawal, outpatient initiation may be difficult or inappropriate for some patients. In the case of difficult initiations, it is prudent to consider referral of SMT initiation to an inpatient facility (BCCSU, 2017a). In such programs, short-term care is provided for the intensive symptom monitoring and medical management required in challenging inductions (BCCSU, 2017a). Prior to prescribing SMT, prescribers must fulfill the legal requirements to prescribe, and may also consider completing optional online education programs.

Prescribers must first rule out any contraindications prior to initiating SMT. First, the patient must of course not have an allergy to any of the drug components. Severe dysfunction of the liver, evidenced by “liver enzymes > 3-5 times normal upper limit” (BSSCU, 2017a, p.41), would be prohibitive of SMT initiation. Acute intoxication of alcohol, presence of severe respiratory distress and delirium tremens are all contraindications for initiating SMT (BCCSU, 2017a). While pregnancy is no longer a contraindication for SMT, it is advised that prescribers consult specialists in addictions medicine in this case (BCCSU, 2017).

After ruling out contraindications and at baseline for SMT, prescribers should conduct a comprehensive assessment of the patient’s physical and mental health, and confirm a DSM-5 diagnosis of OUD (BCCSU, 2017a). Of note, acute OUD with current problematic opioid use is not a requirement for SMT initiation. SMT may be considered for patients with a documented OUD, who are currently abstaining from use, but present a high risk of relapse. Prescribers should conduct a thorough addictions history and

assess for concurrent use of other substances such as tobacco and cocaine, with special attention to concurrent use of sedating or depressant substances such as alcohol and benzodiazepines (BCCSU, 2017a). Baseline assessment also includes general laboratory tests; a comprehensive panel would include kidney and liver function testing; HIV and hepatitis A, B, C serology, syphilis, gonorrhea, and chlamydia serology; TB, and a pregnancy test for women of childbearing age (BCCSU, 2017a). A review of the patient's PharmaNet should be conducted in this stage as well. Patients currently on MMT wanting to switch to SMT are able to, so long as they have been stable for a minimum of 6-7 days on a methadone dose of  $\leq 30$  mg daily (BCCSU, 2017a). Consultation with an addictions specialist is advised in transitioning patients from MMT to SMT (BCCSU, 2017a).

In preparation for the induction, prescribers must obtain and document informed consent for SMT. A treatment agreement should be signed and placed in the chart. Appendix B demonstrates a comprehensive agreement contract, provided by the BCCSU. At this stage, patients should be counselled regarding precipitated withdrawal. The induction date should be planned in advance, so patients and prescribers can make arrangements to be present for the first few days of SMT. During SMT induction, patients must not drive, operate any heavy machinery, or be acutely intoxicated with alcohol. As discussed previously, patients must discontinue their opioid use in such a way that they present in moderate withdrawal on the Clinical Opioid Withdrawal Scale (COWS) for their first dose (BCCSU, 2017a).

### **Day One**

In planning day 1 of initiation, patients should accept their first dose in the morning, and return to clinic (RTC) in the afternoon for reassessment (BCCSU, 2017a). If a patient presents with a COWS score <12, it is advisable to defer SMT initiation until later either that day, or altogether until the following day (BCCSU, 2017a). The first dose should be witnessed to ensure the sublingual drug is taken appropriately and fully dissolved. The tablets may take up to 10 minutes to fully dissolve, and the patient should not swallow, talk eat, drink or smoke during this time (BCCSU, 2017a). The usual starting dose for SMT is 4mg/1mg for a COWS score >12 (BCCSU, 2017a); this dose can be lowered to 2mg/0.5mg for patients who are starting SMT in absence of current opioid use, or those at high risk for precipitated withdrawal (BCCSU, 2017a). Patients experiencing severe symptoms of withdrawal may warrant a starting dose of 6mg/1.5mg (BCCSU, 2017a). Patients should be assessed for precipitated withdrawal 30-60 minutes after their first dose (BCCSU, 2017a). If withdrawal symptoms resolve within one to three hours of the first dose, the patient can RTC the next day (BCCSU, 2017a). If withdrawal symptoms persist one to three hours after the first dose, another dose can be given at that time, providing a 12mg/3mg maximum dose on day 1 is not exceeded (BCCSU, 2017a). Following the additional dose, patients should again report if withdrawal symptoms have resolved or not. If they have not, prescribers can utilize adjunct medications for symptom management, such as clonidine, anti-emetics, antidiarrheals, and over-the-counter analgesics such as ibuprofen or acetaminophen (BCCSU, 2017a).

### **Day Two and Maintenance**

In the event patients RTC the following day without withdrawal symptoms since their last dose, the day 2 dose should be equivalent to the total dose from day 1. If the patient has experienced withdrawal symptoms since their last dose, prescribers should increase the total dosage from day 1 by 4mg/1mg (BCCSU, 2017a). Following the same actions as on day 1; patients should RTC for re-assessment 2-3 hours after the day 2 morning dose. If there are no symptoms after 2-3 hours, prescribers can continue with this dose on day 3. If patients are still experiencing withdrawal symptoms after an increased dose on the morning of day 2, an additional 4mg/1mg can be given in the afternoon, with a maximum dose of 16mg/4mg for day 2 (BCCSU, 2017a). Patients who still have withdrawal symptoms after 16mg/4mg, or 2-3 hours after the additional afternoon dose, should again be managed symptomatically until the next day (BCCSU, 2017a). It is also advised at this point to again ensure patients are administering the tablets correctly (BCCSU, 2017a).

In the following days, prescribers should follow this approach to reach a stable dose, with a maximum daily dose of 24mg/6mg (BCCSU, 2017a). Daily doses above 24mg/6mg do not have evidence for clinical advantage, and such dosages should be justified in the NP's documentation (BCCSU, 2017a). A clinical stable dose is one on which the patient "can sustain an entire 24-hour dosing interval with no withdrawal symptoms and no medication-related intoxication or sedation" (BCCSU, 2017a, p.46). Titrating by 2mg/1mg, a target dose of 12mg/3mg to 16mg/4gm should be reached within a week (BCCSU, 2017a).

Ongoing care after induction of SMT includes assessment in clinic every 1-2

weeks. Once patients are clinically stable, prescribers can decrease the follow-up visits per their comfort. SMT follow up visits should include assessment for “adequacy of dosage, side effects, substance use (via urine testing [UDS] ...), and psychosocial functioning” (BCCSU, 2017a, p.46). Regular UDS should be conducted at least every month during SMT induction and dose titration, and then at least four times per year once stable (BCCSU, 2017a). It is conducted both to assess for adherence to SMT, and to detect use of other substances such as other opioids, benzodiazepines, et cetera (BCCSU, 2017a). The BCCSU Guidelines for OUD include additional information for further clinical guidance, such as managing missed doses, an alternative rapid induction schedule, and alternate day dosing or take-home doses for clinically stable patients (BCCSU, 2017a).

### **Description of the Practice Support Tool**

In the medical field, where research, scientific evidence, and practice guidelines are always changing; HCPs can find it hard to keep up. PSTs are effectively a link between current evidence and practice, and can therefore make it easier for HCPs to stay up-to-date with current evidence-based practices. They support the implementation of guidelines into protocols, and facilitate their application to clinical practice (Napolitano, p. 1321). They utilize current evidence to detail essential steps in patient care for specific clinical problems, and optimize outcomes whilst maximizing efficiency (Rotter et al., 2010). A 2010 Cochrane review assessed PSTs in the form of clinical pathways, similar to the one developed as the project for this paper, and found they were associated with positive patient and cost outcomes (Rotter et al., 2010). Given the previously discussed

knowledge gap for NPs and SMT induction, it seems a PST will be an invaluable clinical tool for novice practitioners.

Given the impending responsibility and requirements for OAT initiation by NPs, it is important to feel comfortable prescribing SMT moving forward. While the BCCSU provides a thorough, detailed and evidence-based guideline for initiation, maintenance and tapering of SMT, it is lengthy and may be too time-consuming to realistically utilize in clinic. The project created from this paper will be a physical document-based tool which NPs can utilize in practice to provide quick clinical support for SMT initiation. Because there are so many elements and considerations for continuation, maintenance and tapering of SMT, this PST will only assist with its initiation and maintenance. Other experts may be consulted for clinical help with maintenance or tapering of suboxone until concise PSTs are available for those aspects of SMT as well.

### **Conclusion**

ODU can be devastating to not only the lives of patients struggling with this disorder, but also to their families, friends, communities and other loved ones as well. Factors such as criminalization, poverty and barriers to healthcare can perpetuate the burden of disease and health inequities that patients with OUD largely face. Outdated and punitive laws, criminalization of IDU, discrimination, social inequalities and lack of adequate harm reduction services can create and exacerbate OUD-related risks and harms (HRI, 2016). With the expected change in scope to allow NP prescribing of OAT, NPs are poised to affect change in countless lives; not only of OUD patients themselves, but also their families and loved ones, the communities disproportionately affected by opioid-related deaths, and the population of BC as a whole.

The intent of this project is to provide clinical support to NPs naïve to OAT, specifically with regards to initiation of SMT. It is hoped that increasing access to SMT will result in overall better morbidity and mortality outcomes associated with OUD. To provide concise, evidence-based guidance for SMT induction; the BCCSU Clinical Guidelines directed the development of this PST, supplemented with information from the Centre for Addictions and Mental Health (CAMH). The Professional Standards and Guidelines detailed by the CPSBC for the “Safe Prescribing of Drugs with Potential for Misuse/Diversion” (CPSBC, 2016) were also considered.

Further consideration must be given to the potential eventual taper and discontinuation of OAT, if and when the patient and prescriber are both agreeable and it is clinically appropriate. In critique of this tool, it is prudent to always consider individual prescriber, patient and clinical contextual factors. Though 4mg/1mg is suggested as the starting dose, anecdotal experience with SMT initiation at 4mg/1mg has been largely unsupported, as it can lead to increased withdrawal symptoms, and patients’ unwillingness to continue with SMT. As described by Mattick et al (2014), poor retention in SMT can in fact be attributed to too slow of an induction, and result in patients leaving treatment. Careful consideration must be used when initiating SMT dosages for current heavy opioid users. In the interest of harm reduction, reducing ODs and saving more lives; further research should be conducted regarding patient induction and retention in SMT.



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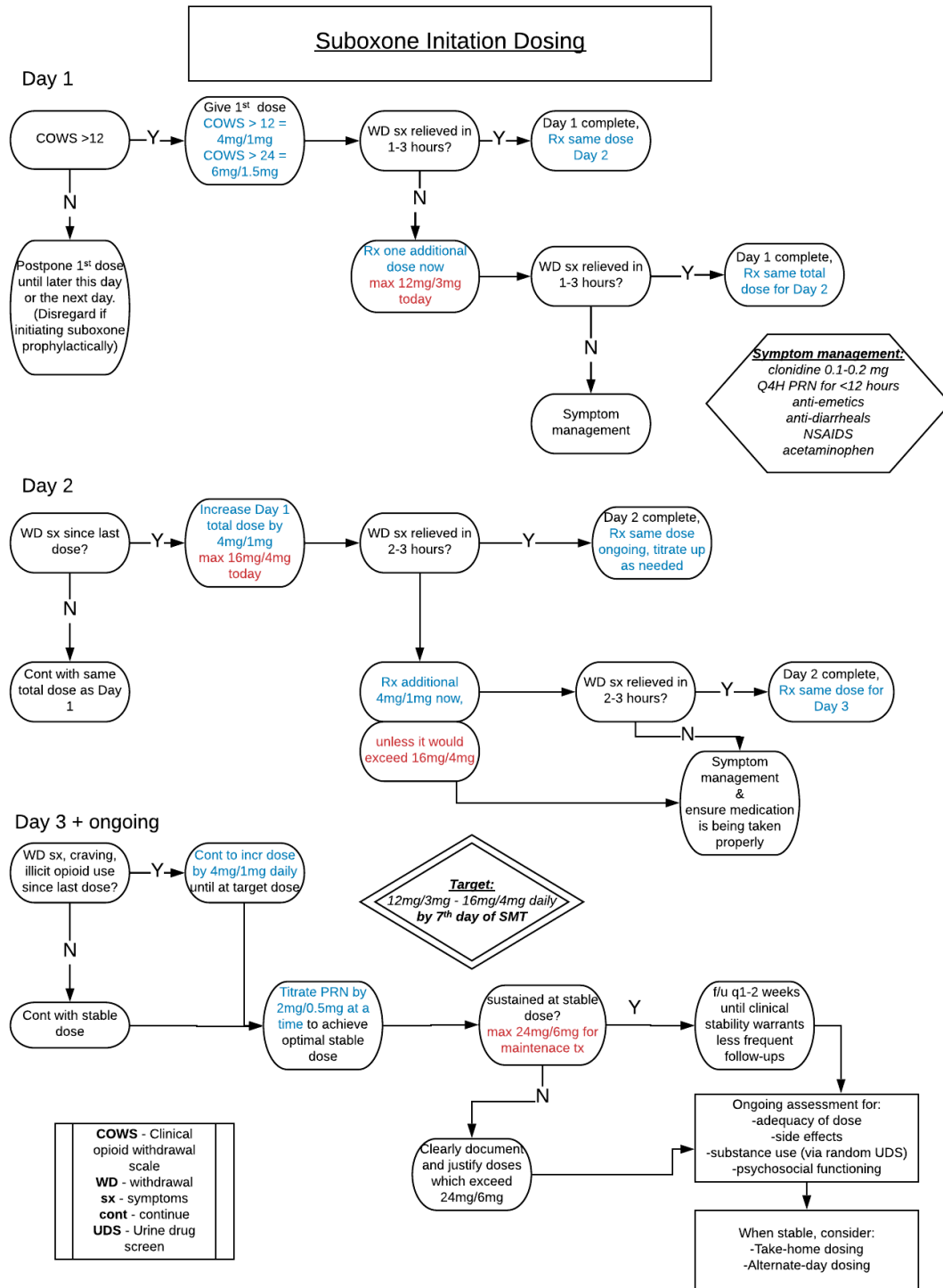
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## Appendix A

### Practice Support Tool



## Appendix B

## BCCSU BUPRENORPHINE/NALOXONE Treatment Agreement and Consent Form



## BUPRENORPHINE/NALOXONE TREATMENT AGREEMENT AND CONSENT FORM

| Patient Information  |                      |
|----------------------|----------------------|
| Surname: _____       | Given name(s): _____ |
| Date of birth: _____ | PHN: _____           |

| Patient Agreement   |
|---|
| <p><b>I UNDERSTAND AND AGREE THAT:</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> I am being started/continued on buprenorphine/naloxone (often called Suboxone®) for the treatment of opioid addiction. While I may choose to taper off this treatment at any time, I understand that most patients benefit from at least one year of treatment or longer.</li> <li><input type="checkbox"/> While I am receiving buprenorphine/naloxone treatment, I will only get opioid prescriptions from my buprenorphine/naloxone prescriber and will not get any from other doctors or clinics.</li> <li><input type="checkbox"/> For my safety, I give consent to my buprenorphine/naloxone prescriber to communicate with my pharmacist and any other physicians involved in my care, and to check my PharmaNet profile.</li> <li><input type="checkbox"/> I can expect confidentiality about my treatment from my doctor and other healthcare providers. My personal information will not be shared except with other healthcare providers as I agreed to above.</li> <li><input type="checkbox"/> I will work with my buprenorphine/naloxone prescriber to develop a treatment plan and set goals. We will review regularly and change them as needed.</li> <li><input type="checkbox"/> In addition to buprenorphine/naloxone, I can participate in counselling or peer-support groups and other programs, as part of my treatment plan. My buprenorphine/naloxone prescriber will give me information about the options and programs available in my community.</li> <li><input type="checkbox"/> I can choose my clinic and pharmacy and can decide to change either if necessary.</li> <li><input type="checkbox"/> I can decide if I want to continue, stop or change my treatment plan at any time. I agree to make this decision with my prescriber.</li> <li><input type="checkbox"/> Beginning buprenorphine/naloxone treatment may require daily trips to the pharmacy and regular visits to my prescriber, which may impact my work, school or other responsibilities.</li> <li><input type="checkbox"/> My prescriber may need to make changes to my treatment plan to provide the safest and best possible care. These changes might include dosage, how often I pick up my medication, how often I visit the clinic, and how often my urine is tested. Until I am stable, I will receive buprenorphine/naloxone through daily witnessed ingestion at a pharmacy or another healthcare provider.</li> </ul> |

## Patient Agreement (continued)

- ☐ Once I am stable, my prescriber will work with me to determine if take-home doses are appropriate.
- ☐ I will not give my prescriptions or medications to anyone else.
- ☐ I will not take my medication more often or at higher doses than my prescription states.
- ☐ I am the only person who may pick up my buprenorphine/naloxone prescription from the pharmacy.
- ☐ Missing more than one dose of buprenorphine/naloxone may lead to withdrawal, and missing more than 6 consecutive daily doses may cause a loss of tolerance to buprenorphine/naloxone, requiring that I take a lower dose until I stabilize.
- ☐ If I do not pick up my buprenorphine/naloxone from the pharmacy for 3 or more consecutive days, my prescription may be cancelled until my prescriber has been told the reason for my missed doses. I may receive a lower dose of buprenorphine/naloxone after multiple missed doses to prevent overdose.
- ☐ Like any prescribed medication, the pharmacy cannot replace my medication if it is lost or stolen. I cannot pick my medication up early from the pharmacy.
- ☐ I will not be cut off from treatment. If buprenorphine/naloxone is not providing the results expected, my prescriber will work with me to try other medications. If my prescriber can no longer provide care for me, they will refer me to another person who can.

## I UNDERSTAND THAT I AM EXPECTED TO:

- ☐ Abstain from opioid use for 12-24 hours before I begin treatment with buprenorphine/naloxone, and that I will need to work with my doctor closely when first starting buprenorphine/naloxone. Those currently taking methadone may need to abstain longer than 72 hours.
- ☐ Provide urine for drug testing on a regular basis.
- ☐ Provide urine samples at the clinic and that these samples are not to be altered. Urine samples that are cold or appear to have been altered will be treated as a serious issue and may affect my treatment plan and ability to receive take-home doses.
- ☐ Avoid using alcohol or other drugs, such as prescription or over the counter opioid medications, sleeping pills, or tranquilizers. I understand that combining alcohol or these medications with buprenorphine/naloxone can lead to overdose and other serious harms and may affect my treatment plan and ability to receive take-home doses.
- ☐ Notify any health care provider that I receive care from that I am taking buprenorphine/naloxone.
- ☐ Do my best to keep appointments as scheduled. I understand that missing or skipping scheduled appointments may affect my treatment plan and ability to receive take-home doses.
- ☐ Take my medication as prescribed. I understand that buprenorphine/naloxone contains naloxone which will cause immediate withdrawal if injected or snorted.
- ☐ Treat others and be treated with respect. I understand that treating staff with disrespect for any reason is unacceptable and may lead to discharge from the program.
- ☐ Keep a Narcan (naloxone) kit on hand in case of overdose and receive training in how to use it.
- ☐ **Notify my primary care provider if I become pregnant (if applicable)**  
I understand that for safety I must inform my prescriber if I am pregnant, suspect I may be pregnant, or if I am planning a pregnancy.



## Patient Identified Goals

- ☐ \_\_\_\_\_
- ☐ \_\_\_\_\_
- ☐ \_\_\_\_\_
- ☐ \_\_\_\_\_

## Prescriber Agreement

I confirm that:

- ☐ This form has been reviewed in detail with the patient and they understand its content fully. This should be reviewed again when the patient is not in withdrawal.
- ☐ The patient was given time to ask questions and seek clarification before signing this document.
- ☐ The evidence for other treatment options was reviewed, and the patient agrees to buprenorphine/naloxone.
- ☐ Information and resources to support psychosocial treatment interventions and supports will be provided to the patient.
- ☐ PharmaNet was reviewed to identify other prescribed medications, and will be checked at each subsequent appointment.
- ☐ It is my responsibility to decrease the possibility of diversion. If and when the patient is assessed as ready to receive take-home doses, guideline standards for random urine drug tests and medication checks will be pursued and clinical judgement used in an effort to limit risks of diversion.
- ☐ A treatment plan with clear goals was developed with the patient, and will be reviewed and documented regularly during treatment.

## Consent

Patient's signature: \_\_\_\_\_

Date: \_\_\_\_\_

Prescriber's signature: \_\_\_\_\_

Date: \_\_\_\_\_



British Columbia Centre on Substance Use (n.d.). BUPRENORPHINE/NALOXONE TREATMENT CONSENT FORM. Retrieved from: <http://www.bccsu.ca/wp-content/uploads/2017/08/Buprenorphine-Naloxone-Treatment-Agreement-and-Consent-Form.pdf>