

A quick-reference guide for prescribing buprenorphine/naloxone (Suboxone) in the outpatient setting

By empowering physicians to treat opioid use disorder in their own clinics, an easy-to-use resource supporting Suboxone induction could have important impacts on both individual and public health.

ABSTRACT: British Columbia is in the midst of an opioid crisis. Treatment with buprenorphine/naloxone (Suboxone) is one way to mitigate the many harms resulting from opioid use, yet studies show that few physicians are prescribing this medication. A quick-reference guide for physicians that supports Suboxone induction in the outpatient setting was proposed as part of a Resident Scholar Project required for completing a residency in family medicine at the University of British Columbia. The project involved the creation and evaluation of a teaching tool for physicians based on recent guidelines from the British Columbia Centre on Substance Use as well as

peer-reviewed articles grounded in evidence-based medicine. While the project was undertaken at the Nanaimo site of the UBC Island Medical Program, key stakeholders considered during development included primary care physicians, trainees, and people with opioid use disorder throughout BC. Feedback was obtained from physicians with an interest in addiction medicine. The clinical tool that resulted from the project is intended to be a supplementary resource, not a stand-alone one. Further improvement of the tool is expected in future as physicians using the resource participate in a self-test survey and feedback process.

British Columbia is experiencing one of the greatest public health emergencies in its history. Opioid-related deaths continue to climb because opioid use is increasing and illicit drugs are being contaminated with devastatingly potent opioids such as fentanyl and carfentanyl. In 2017 the province had 1210 illicit drug overdose deaths associated with fentanyl compared with 667 the year before.¹

In April 2016 the sharply rising number of deaths related to fentanyl led BC's provincial health officer to declare an "opioid overdose emergency." Shortly after, the special licensure requirement was removed for prescribing Suboxone, a formulation of buprenorphine and naloxone combined at a ratio of 4:1 and administered sublingually. This made it legal

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for any physician with prescribing privileges to use Suboxone to treat opioid use disorder, a complex neurobehavioral illness recognized in the *DSM-5*. Opioid use disorder is characterized not only by negative changes in a person's ability to function at home, at work, and in society, but by the development of physical tolerance and withdrawal symptoms. Suboxone can be used to manage these symptoms because the buprenorphine it contains is a partial agonist at the mu opioid receptor with a very high binding affinity. Once bound, buprenorphine activates the receptor less than a full agonist such as morphine, fentanyl, heroin, or methadone. The naloxone content of Suboxone deters tampering and misuse as it is active only when administered parenterally, often precipitating withdrawal symptoms in the opioid-tolerant user.

When prescribed skillfully, Suboxone results in the reduction or elimination of withdrawal symptoms without providing the reinforcing "high" or potentially deadly sedative effects of a full agonist, and is now recommended as first-line therapy for the management of opioid use disorder in BC.²

Suboxone prescribing resource

A resource designed to reduce barriers to treating opioid use disorder with Suboxone in the family practice setting was proposed as part of the Resident Scholar Project required for the University of British Columbia family medicine residency program. A quick-reference guide was seen as a way to fill the knowledge gap felt by many would-be prescribers considering starting a patient on Suboxone and to support clinicians in need of a refresher who fear "de-skilling" after taking a course on how to prescribe this medication. The tool

proposed was intended to serve as a supplement to published guidelines and online courses, and to provide contact information for specialists in addiction medicine should further support be needed. By empowering physicians to treat opioid use disorder in their own clinics, the resource could reduce referrals to more specialized clinics, which is preferable

according to a meta-analysis published by Srivastava and colleagues, who state that "opioid addiction is best managed in a primary care setting."³ A resource supporting Suboxone use could have important impacts on both individual and public health. Greater access to and acceptance of Suboxone as an opioid substitution therapy initiated by family physicians could increase the number of patients treated for addiction, thus reducing overdose deaths and bloodborne illnesses stemming from use of IV drug paraphernalia. This could also improve treatment retention, a factor associated with higher rates of abstinence.⁴ Finally, greater physician willingness to prescribe Suboxone could lessen the stigma associated with seeking treatment for opioid use disorder, creating opportunities for a stronger therapeutic relationship be-

tween patients with this disorder and their physicians.

Literature review

Studies have shown that treatment with opioid substitution therapy leads to sustained abstinence from opioid use, reduced risk of morbidity and mortality, and better rates of treatment retention when compared with

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abstinence or withdrawal-only therapies.² Suboxone and methadone are considered equally efficacious for opioid substitution therapy and are the two medications recommended in the latest British Columbia guideline. The College of Physicians and Surgeons of BC recommends completing an online Suboxone training program, although this is not required in order to prescribe Suboxone. Still, relatively few family physicians in BC prescribe the medication. Although no studies have been conducted in BC specifically, several qualitative studies elsewhere have examined the barriers that prevent family doctors from prescribing Suboxone to their patients. One of the most commonly cited barriers is a perceived lack of knowledge and confidence in the induction phases of treatment.⁴⁻¹¹ Respondents in a 2012 Australian study identified

“de-skilling” after undertaking Suboxone training as another barrier.⁵ Other barriers frequently identified were a lack of local mental health support services/institutional support,^{7,9,11} a lack of time (and space) in a busy practice,^{5,7-9,11} fear of misuse and diversion of the medication,^{7,8} a lack of interest in prescribing,⁸ and practice partners unwilling to allow Suboxone prescribing in a shared clinic.^{5,7,9} A lack of addiction specialist support was a further barrier highlighted in

tiveness.¹⁶ There was nothing in the literature about using information-at-a-glance guides designed to support physician prescribing of Suboxone for opioid use disorder, making it likely that the resource produced for this Resident Scholar Project is the first of its kind.

Development of resource

We obtained the information included in our resource from provincial guidelines, as well as peer-reviewed

scale (COWS), suggestions for mitigating precipitated withdrawal, and considerations such as urine drug testing (UDT) and take-home doses or “carries” versus daily witnessed ingestions.

The information in our clinical tool is based on *A Guideline for the Clinical Management of Opioid Use Disorder*² published by the British Columbia Centre on Substance Use and the BC Ministry of Health,¹⁷ as well as online Suboxone training.¹⁷ The recommendations within the BC guideline that were used to inform our resource are of moderate to strong quality according to the GRADE criteria for evidence appraisal.²

In order to give clinicians the opportunity to test their knowledge after using our guide, we provided a link to a self-test on Suboxone induction, as well as an email address where they can send feedback they may have for us about the tool itself.

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a number of studies.⁷⁻¹⁰ These studies are from countries comparable to Canada, and we believe the results are generalizable to British Columbia. Therefore, any intervention aimed at encouraging family physicians to become Suboxone prescribers must reduce some of these barriers. While it is not currently known how best to do this, or which barriers should be the focus, there is clearly a knowledge gap that needs to be addressed to help more family physicians prescribe Suboxone.

What little literature could be found regarding physician education for Suboxone prescribing practices tended to focus on chronic pain rather than opioid use disorder,¹² other teaching modalities (e.g., web-based or telehealth-based courses),¹²⁻¹⁵ or standard guidelines and their effec-

articles grounded in evidence-based medicine. In addition, we asked physicians already practising addiction medicine to review our tool to ensure that we were providing only high-quality information. While the project was undertaken at the Nanaimo site of the UBC Family Medicine Residency Program, key stakeholders considered during development included primary care physicians, trainees, and people with opioid use disorder throughout BC.

Based on the information collected and analyzed, we developed a document to assist physicians with in-office assessment, Suboxone induction, and maintenance (**Figure**). The resource includes induction algorithms for Day 1 and Day 2, advice on gauging withdrawal severity using the clinical opiate withdrawal

Strengths and limitations of resource

The novel resource that we developed for the project is portable, easy to reproduce, easy to use, and has the potential to influence clinician prescribing practices. Creating the tool provided us with the opportunity to further refine our skills as physician-teachers and physician-leaders. The time-limited nature of the project restricted uptake of the resource throughout the community despite our best efforts, and also meant we were unable to quantitatively assess the impact of our tool on physician prescribing.

Further improvement of resource

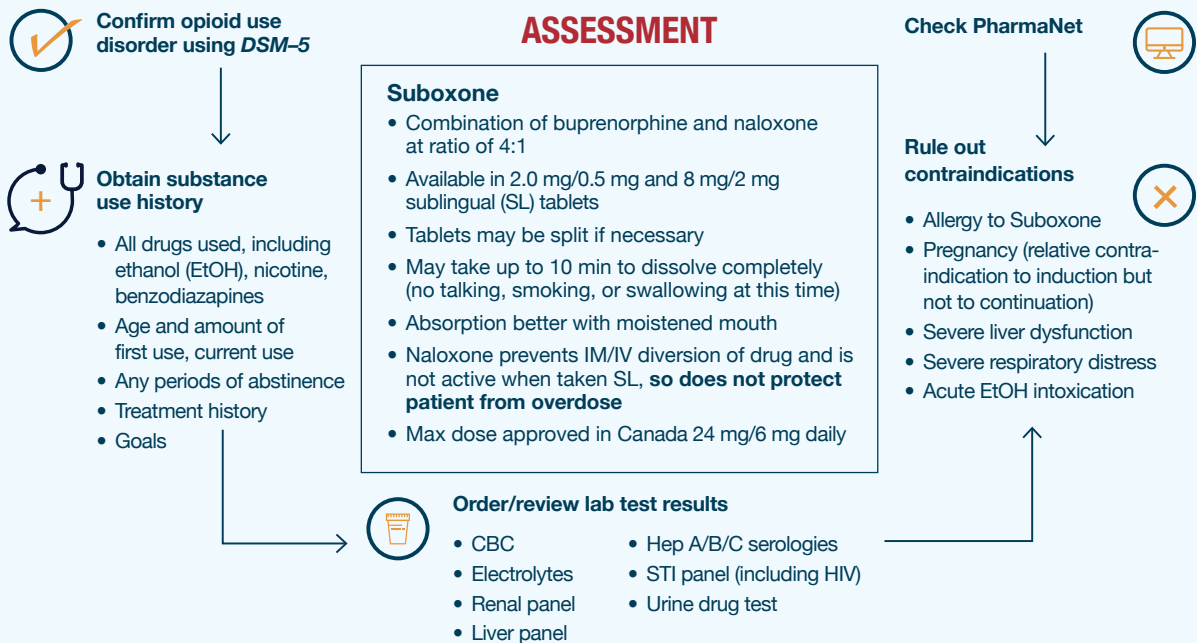
We plan to collect feedback from users of the quick-reference guide and hope to implement suggested improvements in future iterations of

PRESCRIBING SUBOXONE IN THE OUTPATIENT SETTING

A QUICK-REFERENCE GUIDE TO IN-OFFICE INDUCTION

By Patricia Caddy, MD, and Kesh Smith, MD

Adapted from *A Guideline for the Clinical Management of Opioid Use Disorder* published by the British Columbia Centre on Substance Abuse and the BC Ministry of Health, June 2017



INDUCTION: DAY 1

- 1–2 days required for baseline assessment and initiation
- Day 1 max dose 12 mg/3 mg

Confirm

- ✓ COWS* score > 12
- ✓ No contraindications
- ✓ No long-acting opioids used for > 30 hours

Give Suboxone SL 4 mg/1 mg

~ 2 hours

Withdrawal symptoms gone?

No

Additional doses needed

Yes

Go to Day 2

***COWS = clinical opiate withdrawal scale**

A validated clinical tool used to determine severity of opiate withdrawal, available free online at www.bccsu.ca/wp-content/uploads/2017/06/BC-OUD-Guidelines_June2017.pdf (see Appendix 6 of *A Guideline for the Clinical Management of Opioid Use Disorder*)

Precipitated withdrawal

- Can occur due to replacement of full opioid receptor agonist (e.g., heroin, fentanyl, morphine) with partial agonist that binds with a higher affinity (e.g., Suboxone, methadone)

Symptoms

- Similar to opiate withdrawal (i.e., increased heart rate, sweating, agitation, diarrhea, tremor, unease, restlessness, tearing, runny nose, vomiting, goose flesh)
- Can range from mild to severe
- Can be very distressing and discouraging for patients
- Largely reversible with higher doses of Suboxone or other opioid
- Avoid by ensuring adequate withdrawal before induction (COWS > 12), starting Suboxone at a lower dose (2.0 mg/0.5 mg), and reassessing more frequently

Treatment

- Explain what has happened
- Provide empathetic/compassionate/apologetic support
- Manage symptoms with clonidine, loperamide. Avoid benzodiazepines
- Encourage/motivate patient to try again soon

Figure (Page 1 of 2). In-office assessment, Suboxone induction, and maintenance document

INDUCTION: DAY 2 ONWARDS

- If adequate symptom relief not achieved over Day 1 and 2, additional days (usually no more than 2) may be required
- Day 2 max dose 16 mg/4 mg

Withdrawal symptoms recurred since last dose?

No

- Give Day 1 total dose again to complete induction. This will be the ongoing daily dose
- Consider titration up to optimal dose (≥ 12 mg/3 mg) for improved retention in treatment
- May increase dose every 1–3 days, or less frequently

Yes

- Give Day 1 total plus another dose Suboxone SL 4 mg/1 mg

~ 2 hours

Withdrawal symptoms gone?

~ 2 hours

Yes

- Induction complete
- Give Day 2 total as ongoing dose, or titrate up to ≥ 12 mg/3 mg for improved retention in treatment

No

- Additional doses needed
- Give Suboxone SL 4 mg/1 mg

MAINTENANCE

Goal = once-daily dosing, no withdrawal between doses. Ideally, dose ≥ 12 mg/3 mg



Monitor

- Check PharmaNet regularly to ensure prescriptions are filled, no doctor shopping, etc.

- Order urine drug testing (UDT)
- Assess for readiness for take-home dosing (“carries”), see below

CONSIDERATIONS



Urine drug testing (UDT):

- Urine drug testing expected for patients on Suboxone to objectively document licit/illicit drug use
- UDT not to be used punitively but to facilitate open communication
- Perform point-of-care UDT at least monthly
- Consider ordering confirmatory testing for unexpected results (false positives do occur)



TAKE-HOME DOSES (“CARRIES”)

- Suboxone ingestion commonly witnessed at the pharmacy but take-home doses may be prescribed
- Take-home “carries” appropriate for patients who demonstrate biopsychosocial stability, have not missed doses, are abstinent from illicit drugs, have a secure place to store their medication

FOR ADDITIONAL SUPPORT AND RESOURCES...

To speak to an expert in BC:

Rapid Access to Consultative Expertise (RACE) line: 1 877 696-2131

To see the latest guidelines, research, and provincial resources:

British Columbia Centre on Substance Use
www.bccsu.ca

To test your new knowledge of Suboxone induction, go to www.surveymonkey.com/r/BXHVVVT

To help us improve this guide, please send your feedback to SuboxoneInfographic@gmail.com. Sender information will not be included when feedback is considered.

Figure (Page 2 of 2). In-office assessment, Suboxone induction, and maintenance document

the resource. We also hope that in future we or another resident group can quantitatively assess the effectiveness of this resource and its impact on prescribing practices in the community.

Summary

A quick-reference guide for physicians that supports Suboxone induction in the outpatient setting was proposed to encourage prescribing of this medication to mitigate the many harms resulting from opioid use disorder. Data for the resource were obtained from *A Guideline for the Clinical Management of Opioid Use Disorder*, as well as other provincial guidelines and peer-reviewed articles. The needs of primary care physicians, trainees, and people with opioid use disorder were considered during development, and feedback was obtained from physicians with an interest in addiction medicine. The clinical tool that resulted from the project is intended to be a supplementary resource, not a stand-alone one. Further improvement of the tool is expected as physicians using the resource participate in a self-test survey and feedback process. **BMJ**

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Competing interests

None declared.

References

1. BC Coroner Service. Fentanyl-detected illicit drug overdose deaths January 1, 2012 to December 31, 2017. Accessed 12 July 2018. www2.gov.bc.ca/assets/gov/public-safety-and-emergency-services/death-investigation/statistical/fentanyl-detected-overdose.pdf.
2. British Columbia Centre on Substance Use. A guideline for the clinical management of opioid use disorder. Accessed 12 July 2018. www.bccsu.ca/wp-content/uploads/2017/06/BC-OUD-Guidelines_June2017.pdf.
3. Srivastava A, Kahan M, Nader M. Primary care management of opioid use disorders: Abstinence, methadone, or buprenorphine-naloxone? *Can Fam Physician* 2017;63:200.
4. Hser Y, Evans E, Grella C, et al. Long-term course of opioid addiction. *Harv Rev Psychiatry* 2015;23:76.
5. Longman C, Temple-Smith M, Gilchrist G, Lintzeris N. Reluctant to train, reluctant to prescribe: Barriers to general practitioner prescribing of opioid substitution therapy. *Aust J Prim Health* 2012;18:346-351.
6. Huhn AS, Dunn KE. Why aren't physicians prescribing more buprenorphine? *J Subst Abuse Treat* 2017;78:1-7.
7. Andrilla CHA, Coulthard C, Larson EH. Barriers rural physicians face prescribing buprenorphine for opioid use disorder. *Ann Fam Med* 2017;15:359-362.
8. DeFlavio JR, Rolin SA, Nordstrom BR, Kazal LA Jr. Analysis of barriers to adoption of buprenorphine maintenance therapy by family physicians. *Rural Remote Health* 2015;15:3019.
9. Hutchinson E, Catlin M, Cheng DM et al. Barriers to primary care physicians prescribing buprenorphine. *Ann Fam Med* 2014;12:128-133.
10. Li X, Shorter D, Kosten TR, Taenzer P, et al. Buprenorphine in the treatment of opioid addiction: opportunities, challenges and strategies. *Expert Opin Pharmacother* 2014;15:2263-2275.
11. Walley AY, Alperen JK. Office-based management of opioid dependence with buprenorphine: Clinical practices and barriers. *J Gen Intern Med* 2008;23:1393-1398.
12. Dubin RE, Flannery J. ECHO Ontario chronic pain & opioid stewardship: Providing access and building capacity for primary care providers in underserved, rural, and remote communities. *Stud Health Technol Inform* 2015;209:15-22.
13. Kahan M, Gomes T, Juurlink DN, et al. Effect of a course-based intervention and effect of medical regulation on physicians' opioid prescribing. *Can Fam Physician* 2013;59:e231-239.
14. Webster J. Prescriber education on opioids. *Ann Intern Med* 2012;157:917.
15. Stoner SA, Mikko AT, Carpenter KM. Web-based training for primary care providers on screening, brief intervention, and referral to treatment (SBIRT) for alcohol, tobacco, and other drugs. *J Subst Abuse Treat* 2014;47:362-370.
16. Pinto D, Heleno B, Rodrigues DS, et al. An open cluster-randomized, 18-month trial to compare the effectiveness of educational outreach visits with usual guideline dissemination to improve family physician prescribing. *Implement Sci* 2014;9:10.
17. INDIVIOR Canada Ltd. Welcome to the Suboxone training program. Accessed 12 July 2018. www.suboxonetrainingprogram.ca/en/.