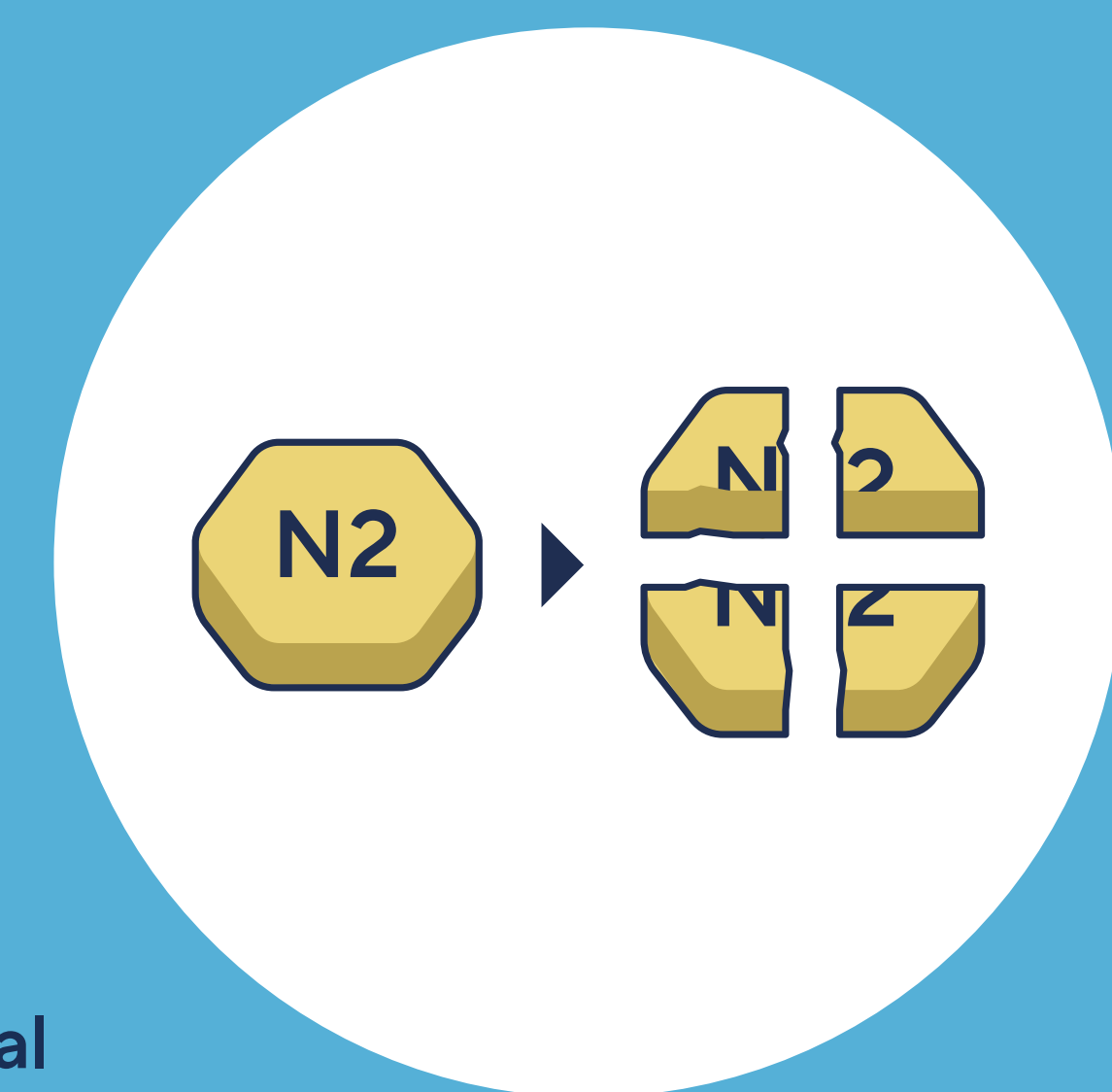
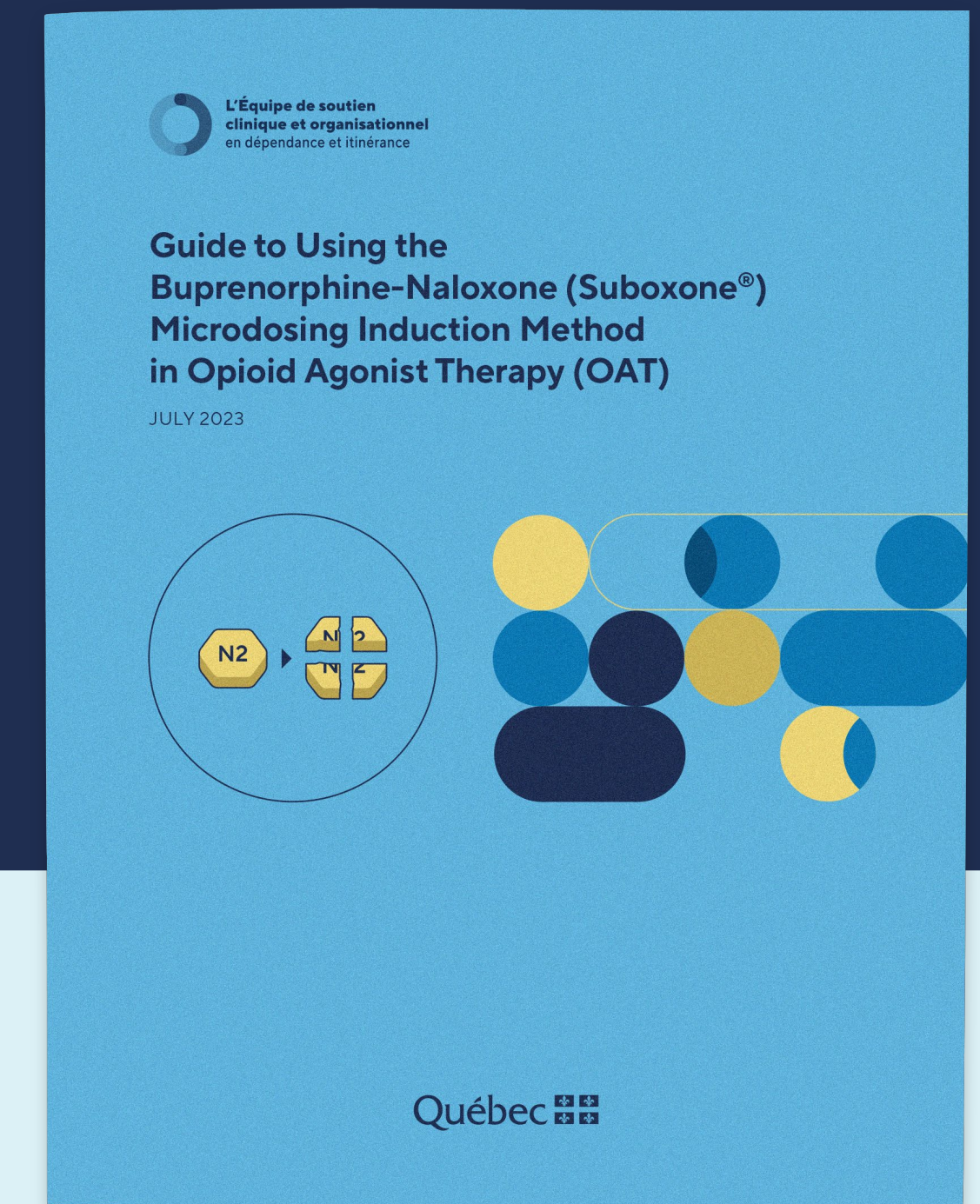


# A Guide to Using Buprenorphine-Naloxone Microdosing as an Induction Method in Opioid Agonist Therapy (OAT)

Équipe de soutien clinique et organisationnel en dépendance et itinérance (ESCODI), CIUSSS du Centre-Sud-de-l'île-de-Montréal  
Goyer ME, Schurter E, Hudon K, Thommeret-Carrière AS, Ferguson Y



Buprenorphine/naloxone (BUP-SL) is one of the standard OAT options that has been proven as an effective strategy to lower the incidence of hepatitis C and drug-related harms in people who inject drugs. However, its recommended method of induction, which requires the patient to be in moderate to severe withdrawal before starting, can be challenging and therefore limits access to this treatment.



In recent years there has been an increased interest from practitioners in the use of alternative induction methods such as microdosing. Despite indicated off-label, microdosing of BUP-SL consists of introducing repeated low doses of buprenorphine, in concomitance with the current full agonist opioids for a period of about 7-13 days.

Available knowledge and clinical expertise have demonstrated BUP-SL microdosing induction to be feasible, and to allow patients to transfer from a full agonist opioid to a buprenorphine formulation with minimal withdrawal symptoms while still being administered both opioids during the process.

## GENERAL PRINCIPLES

- The standard induction protocol requires the individual to be in moderate to severe withdrawal. For some individuals this requirement may be difficult to meet, effectively limiting access to this drug.
- Is an alternative, off-label method of induction involving repeated administration of low doses of buprenorphine-naloxone, in conjunction with the opioids used.<sup>1</sup>
- The opioids are discontinued gradually, or after 7-13 days.
  - ⇒ The slow accumulation of buprenorphine at mu type ( $\mu$ ) opioid receptors allows for the gradual replacement of pure opioid agonists by buprenorphine without causing significant withdrawal symptoms.<sup>1</sup>
- Usual average duration of microdosing = 7 or 13 days, compared with 2 days for standard induction protocols.<sup>2-3</sup>

## METHODS

Using a rigorous rapid review process, current literature has been collected from six medical databases and analysed by outcomes. Grey literature has also been summarised through a review of 13 clinical practice guidelines from Canada, USA and Europe. The guide was then developed with an Expert Review Committee composed of doctors, pharmacists and a nurse.

### Collected articles

37 articles

29 case reports

3 cohort studies

1 feasibility study

4 literature reviews

### Outcomes

- Withdrawal symptoms
- Treatment retention
- Opioid and other substance use
- Quality of life
- Patient preference
- Acceptability
- Mental and physical health
- Cravings
- Adverse events
- Etc.

Collected clinical microdosing protocols

13 clinical practice guidelines from Canada, USA and Europe

## Examples of buprenorphine-naloxone microdosing protocols in OAT

Day	Short protocol		Long protocol	
	BUP dosage	Other opioid dosage	BUP dosage	Other opioid dosage
1	0.5 mg DIE	Maintenance	0.5 mg DIE	Maintenance
2	0.5 mg BID	Maintenance	0.5 mg DIE	Maintenance
3	1 mg BID	Maintenance	1 mg DIE	Maintenance
4	2 mg BID	Options: ⇒ Discontinuation of short-acting opioids and/or ⇒ Reduction of long-acting opioids	1.5 mg DIE	Maintenance
5	3 mg BID	Maintenance	2 mg DIE	Maintenance
6	4 mg BID	Maintenance	3 mg DIE	Maintenance
7	12 mg DIE	Discontinuation of other opioids	4 mg DIE	Options: ⇒ Discontinuation of short-acting opioids and/or ⇒ Reduction of long-acting opioids
8	Adjust BUP dose until a comfort dose is reached.		5 mg DIE	Maintenance
9			6 mg DIE	Maintenance
10			7 mg DIE	Maintenance
11			8 mg DIE	Maintenance
12			10 mg DIE	Maintenance
13			12 mg DIE	Discontinuation of other opioids
14			Adjust the BUP dose until a comfort dose is reached.	

Adapted from: McHealth<sup>1</sup>, Marwah and al.<sup>4</sup> and Patel and al.<sup>5</sup>.

The Guide to Using Buprenorphine-naloxone Microdosing as an Induction Method is one more step towards meeting people's needs – offering more flexibility that could result in less drug-related harms while providing guidance to clinicians.

Scan the QR code to get our guide



To join our team:

[dependanceitinerance.ca](http://dependanceitinerance.ca)

[escodi.ccsmtl@sss.gouv.qc.ca](mailto:escodi.ccsmtl@sss.gouv.qc.ca)



- Hämmig R, Kemter A, Strasser J, von Bardeleben U, Gugger B, Walter M, et al. Use of microdoses for induction of buprenorphine treatment with overlapping full opioid agonist use: the Bernese method. *Subst Abuse Rehabil.* 2016;7:99-105.
- Institut national d'excellence en santé et services sociaux. Guide d'usage optimal – Traitement par agonistes opioïdes [Internet]. Montréal (Québec) : Institut national d'excellence en santé et services sociaux (INESSS) ; 2021 [cité 21 janv. 2022].
- MacHealth. Buprenorphine Reference Guide v3.0 [Internet]. Toronto, ON: University of Toronto & McMaster University; 2021 [cité 15 nov. 2021].
- Marwah R, Coons C, Myers J, Dumont Z. Microdosage de buprenorphine-naloxone : Outils pour l'induction du traitement par agoniste des récepteurs opioïdes. *Can Fam Physician.* déc 2020;66(12):e302-6.
- Patel P, Dunham K, Lee K. Buprenorphine/Naloxone Microdosing: The Bernese Method [Internet]. Canadian Mental Health Association; 2019 sept [cité 23 sept. 2021].