Family Medicine Grand Rounds

What's New in the Treatment of OUD?

Dr. Ken Lee
London RAAM Clinic
October 2, 2019

Disclosure of Commercial Support

- **This program has received no in-kind support**
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- **No speakers fee for this presentation**

Dr Ken Lee Disclosures

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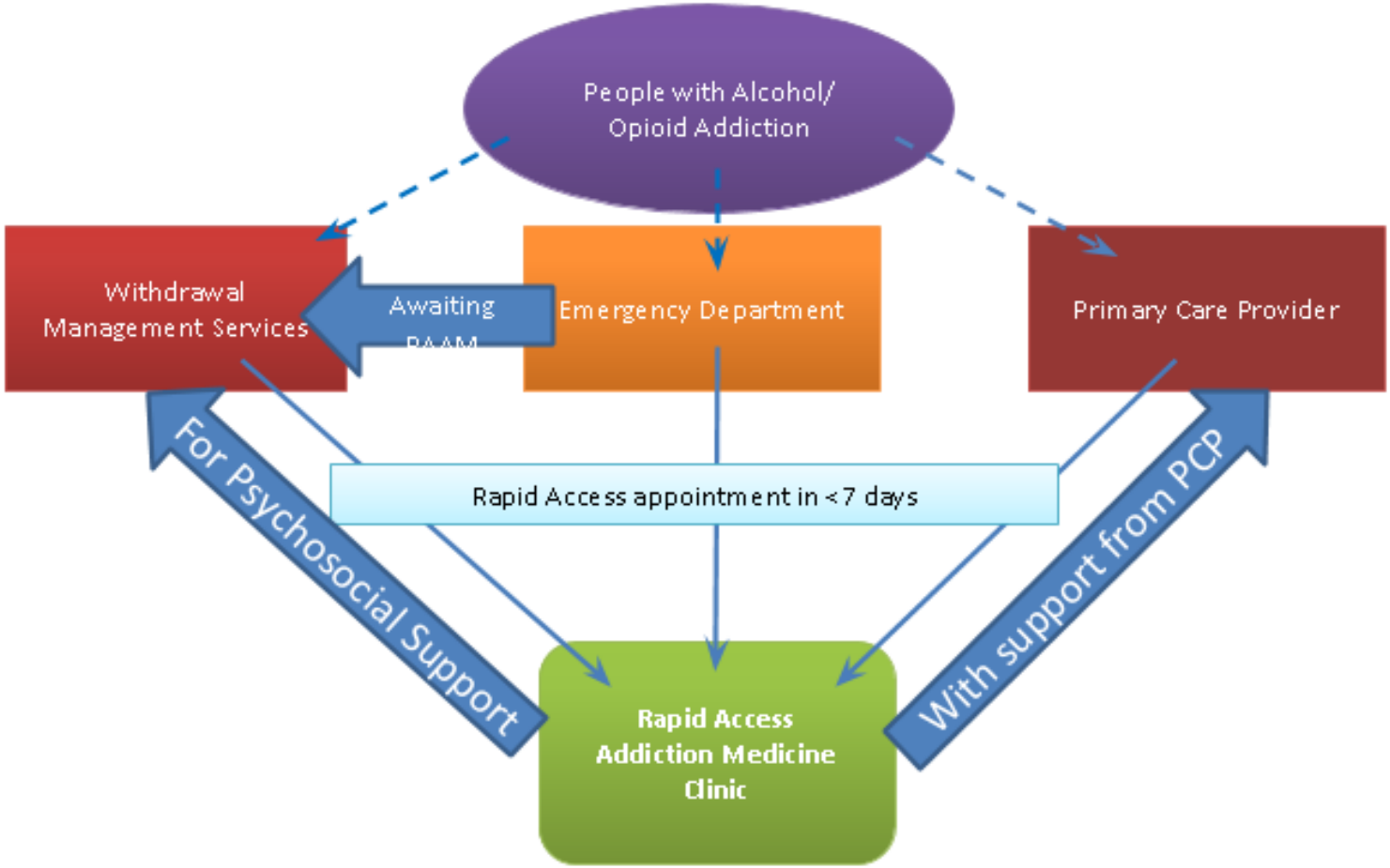
- **Clinical Trial: ARTIC META:PHI Women's College Hospital (funded by MOHLTC)**

META:PHI Care Pathway



CLINIC HOURS

Monday
12:30 p.m. - 3 p.m.

Tuesday
8:00 a.m. - 11:00 a.m.

Wednesday
7:30 a.m. - 10:30 a.m.

CLOSED STATUTORY HOLIDAYS
**Drop-ins are welcome*
**New clients are encouraged to arrive at the beginning of clinic*

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APPOINTMENTS

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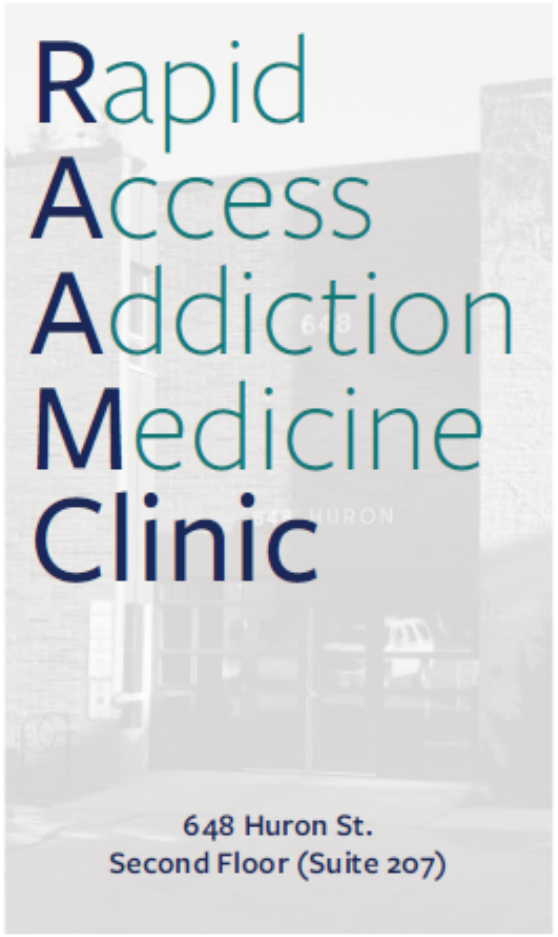
ADSTV is a community-based service. We operate in cooperation with local addiction, mental health and health care agencies, through the South West Local Health Integration Network (LHIN).

Revised January 2019

Rapid Access Addiction Medicine Clinic



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Objectives

1. What does OUD look like in Family Med
2. Buprenorphine Inductions (Standard vs Microdosing)
3. New Buprenorphine Delivery Systems

Canadian Family Physician Journal Sept 2019

COMMENTARY

Canada's hidden opioid crisis: the health care system's inability to manage high-dose opioid patients

Fallout from the 2017 Canadian opioid guidelines

Hance Clarke MD PhD FRCPC James Bao MD Aliza Weinrib PhD Ruth E. Dubin MD PhD FCFP DCAPM Meldon Kahan MD MHSc CCFP FRCPC

Opioid overprescribing, a plausible result of disingenuous marketing practices, has played a role in our current opioid crisis. The release and implementation of the 2017 "Guideline for opioid therapy and chronic noncancer pain" has created a shift in opioid prescribing for chronic noncancer pain, and patients in the years ahead will be protected by the lower-dose to these patients should be investigated with the same rigour applied to those who were prescribing excessive doses. We would even suggest that young physicians be granted an amnesty of sorts if they choose to assume care of or help abandoned patients.

The guideline might create unnecessary risk for patients already prescribed high-dose opioids. Recommendation 9

The 2017 Canadian Guideline for Opioids for Chronic Non-Cancer Pain

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National pain center

2017 Canadian Guideline

- Recommendations 1-7 address patients beginning Long Term Opioid Therapy

- Recommendations 8-10 address patients who are currently using opioids and who have persistent problematic pain and/or problematic adverse effects

Guidance Statement 7

A written treatment agreement may, however, be useful in structuring a process of informed consent around opioid use, clarifying expectations for both patient and physician, and providing clarity regarding the nature of an opioid trial with endpoints, goals, and strategies in event of a failed trial.

Guidance Statement 6

- A baseline urine drug screen may be useful for patients currently receiving or being considered for a trial of opioids.
- Approximately 30% of urine drug screening will demonstrate aberrant results, largely because of prescribed opioid non-detection and tetrahydrocannabinol
- Cocaine & Crystal Meth are red flags


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Rapid Response
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(+) POSITIVE
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Rapid Response

DSM-V Opioid Use Disorder

1. Larger amounts, longer periods
2. Can't cut down
3. Lots of time spent obtaining, using, recovering
4. Craving / strong desire to use
5. Failure in role obligations (school, work, home)
6. Use despite social or interpersonal problems
7. Important activities given up (social, occupation, recreational)
8. Use when it is physically hazardous
9. Use despite knowledge of physical or psychological problem
10. Tolerance
11. Withdrawal

What does OUD look like in my office?

- Lost or stolen prescriptions
- Dose escalation
- Harasses staff
- Double-doctoring
- Runs out of medication early
- Resists tapering or switching
- Poor functional status on opioid treatment

Aberrant Drug-Related Behaviours

Escalating dose

Altering route of delivery

Illegal activities: multiple doctoring, Rx fraud, buying, selling stealing drugs

Examples of Bad Behaviour?

- Irritable, Angry, Rude
- Self-Centred
- Demanding
- Manipulative
- Lying
- Excuses
- Blame shifting
- Bravado (arrogant, entitled)
- Splitting team members

Structure around opioid prescribing can be viewed along a continuum

low risk patient

actively addicted patient

Baseline controls

Structured Opiate Therapy

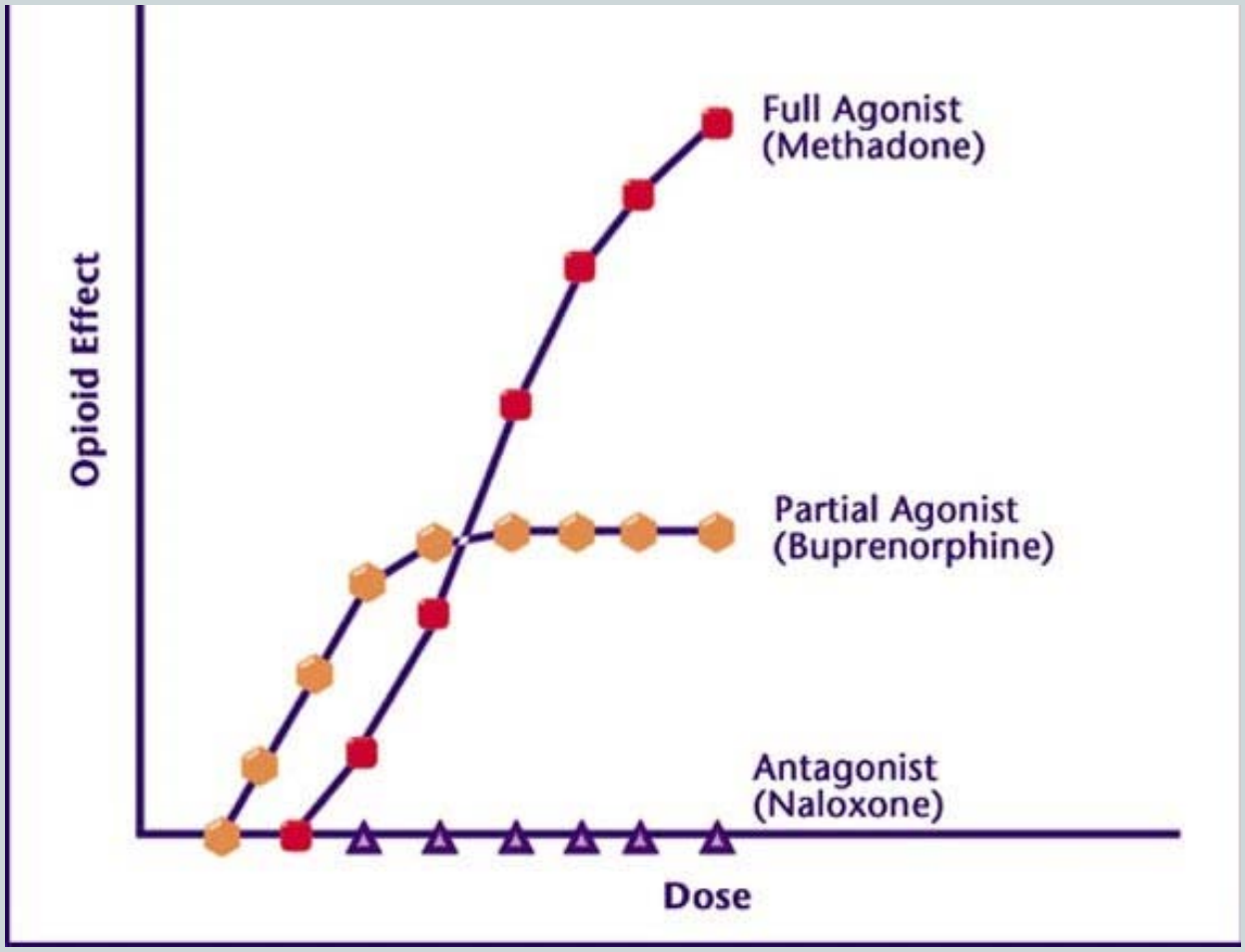
Structured Opioid Therapy

Structured Opioid Therapy can work very well for higher risk patients or patients exhibiting ADRBs

= tighter boundaries, closer monitoring, shorter dispensing interval, establishing that opioid is definitively improving function, +/- UDS

Buprenorphine

Buprenorphine vs Methadone



Buprenorphine Induction Scenarios

1. Standard Induction
2. Microdose Induction
3. Fentanyl Patch Conversions

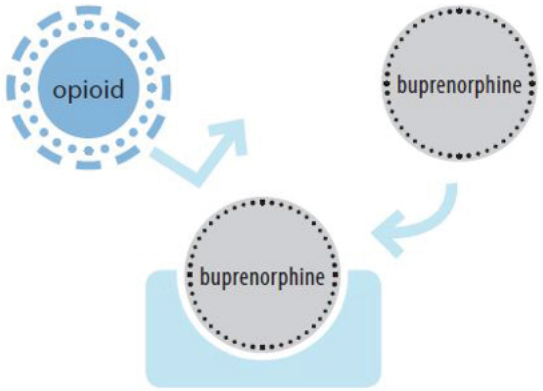
Precipitated Withdrawal

TABLE 1 Mu opioid receptor binding affinity

Drug	K_i (nM)
sufentanil	0.1380
buprenorphine	0.2157
hydromorphone	0.3654
morphine	1.168
fentanyl	1.346
methadone	3.378
oxycodone	25.87
codeine	734.2
tramadol	12,486

K_i denotes the binding affinity of opioid to mu opioid receptor. The smaller the K_i value, the stronger the binding affinity to receptor.

FIGURE 2 Mechanism of action of buprenorphine



buprenorphine has very high affinity for opioid receptors

Clinical Opiate Withdrawal Scale

For each item, circle the number that best describes the patient's signs or symptom. Rate on just the apparent relationship to opiate withdrawal. For example, if heart rate is increased because the patient was jogging just prior to assessment, the increase pulse rate would not add to the score.

Patient's Name:_____ Date and Time ___/___/___:_____

Reason for this assessment:_____

Resting Pulse Rate: _____beats/minute *Measured after patient is sitting or lying for one minute* 0 pulse rate 80 or below 1 pulse rate 81-100 2 pulse rate 101-120 4 pulse rate greater than 120	**GI Upset:** *over last ½ hour* 0 no GI symptoms 1 stomach cramps 2 nausea or loose stool 3 vomiting or diarrhea 5 Multiple episodes of diarrhea or vomiting
Sweating: *over past ½ hour not accounted for by room temperature or patient activity.* 0 no report of chills or flushing 1 subjective report of chills or flushing 2 flushed or observable moistness on face 3 beads of sweat on brow or face 4 sweat streaming off face	**Tremor** *observation of outstretched hands* 0 No tremor 1 tremor can be felt, but not observed 2 slight tremor observable 4 gross tremor or muscle twitching
Restlessness *Observation during assessment* 0 able to sit still 1 reports difficulty sitting still, but is able to do so 3 frequent shifting or extraneous movements of legs/arms 5 Unable to sit still for more than a few seconds	**Yawning** *Observation during assessment* 0 no yawning 1 yawning once or twice during assessment 2 yawning three or more times during assessment 4 yawning several times/minute
Pupil size 0 pupils pinned or normal size for room light 1 pupils possibly larger than normal for room light 2 pupils moderately dilated 5 pupils so dilated that only the rim of the iris is visible	**Anxiety or Irritability** 0 none 1 patient reports increasing irritability or anxiousness 2 patient obviously irritable anxious 4 patient so irritable or anxious that participation in the assessment is difficult
Bone or Joint aches *If patient was having pain previously, only the additional component attributed to opiates withdrawal is scored* 0 not present 1 mild diffuse discomfort 2 patient reports severe diffuse aching of joints/ muscles 4 patient is rubbing joints or muscles and is unable to sit still because of discomfort	**Gooseflesh skin** 0 skin is smooth 3 piloerrection of skin can be felt or hairs standing up on arms 5 prominent piloerrection
Runny nose or tearing *Not accounted for by cold symptoms or allergies* 0 not present 1 nasal stuffiness or unusually moist eyes 2 nose running or tearing 4 nose constantly running or tears streaming down cheeks	Total Score _____ The total score is the sum of all 11 items Initials of person completing Assessment: _____

Score: 5-12 = mild; 13-24 = moderate; 25-36 = moderately severe; more than 36 = severe withdrawal

D:\bup curr update\Cl Tools fr ECS\22 COWS.doc

Patient presents in Withdrawal

- 35 year old using HydroMorph Contin several times a day
- Last used 12 hours ago
- COWS score 18 (moderate withdrawal)

Standard Induction

- Buprenorphine 2 mg to start (COWS > 13)
- Then Buprenorphine 2 mg q1h until comfortable to a max dose of 12 mg on day 1
- Follow up on day 2 and titrate up to 16 mg as needed

LHSC ER Suboxone Power Plan Active as of Sept 17, 2019

ED - Suboxone (buprenorphine/naloxone) for opioid withdrawal			
PowerPlan Flexed For: LHSC-UH / LHSC-VH			
Produced: 2019/08/13 12:02			
Alerts			
		INCLUSION: COWS score greater than or equal to 12. At least 12 hours since last short acting opioid (Hydromorphone, Heroin, Percocet). At least 24 hours since last long acting opioid (Hydromorph Contin, OxyNeo, MS Contin). At least 72 hours since last methadone dose. Consents to receiving buprenophine/naloxone treatment. (Note)	
		EXCLUSION: Allergy or hypersensitivity to buprenorphine or nalaxone; decreased level of consciousness; currently on active methadone with plan to continue methadone therapy or on buprenorphine/naloxone treatment with active prescription; inability to provide informed consent; severe liver dysfunction; acute alcohol intoxication or acute alcohol withdrawal; acute severe respiratory distress; paralytic ileus. (Note)	
		If patient presents with request for buprenorphine/naloxone but are not presenting with a COWS of greater than or equal to 12, refer to the RAAM clinic (Note)	
Vital Signs			
		Document in patient record Opioid(s) used and last time used (Note)	
Incl		Vital Signs	LHSC-UH / LHSC-VH
		q1 hour., as indicated for Clinical Opiate Withdrawal Scale (COWS)	
Patient Care			
Incl		Clinical Opiate Withdrawal Scale (COWS)	LHSC-UH / LHSC-VH
		Initiate COWS for Opiate withdrawal q1h to maximum of 4 assessments.	
Incl		Notify Provider	LHSC-UH / LHSC-VH
		to reassess patient when COWS less than 10 OR when maximum buprenorphine/naloxone given (8 mg buprenorphine)	
Medications			
Incl		buprenorphine-naloxone 2 mg-0.5 mg sublingual tablet	LHSC-UH / LHSC-VH
		1 tab, SL tab, subLINGUAL, as directed PRN for withdrawal, for: 4 dose, Stop: T:N+480	
		Comments - follow COWS q1h assessment schedule for maximum 4 medication doses. Observe patient until buprenorphine/naloxone is fully dissolved under the tongue. Hold further prn doses and notify MD if COWS increased post last buprenorphine/naloxone administration. Stop PRN once COWS less than 10.	
Other Medications			
		ondansetron	LHSC-UH / LHSC-VH
		4 mg, tab, ORAL, ONCE, PRN nausea or vomiting, for: 1 dose (Def)	
		4 mg, DIS tab, ORAL, ONCE, PRN nausea or vomiting, for: 1 dose	
		acetaminophen	LHSC-UH / LHSC-VH
		975 mg, tab, ORAL, ONCE, PRN pain	
		Comments - max 4 g acetaminophen in 24 hr from all sources	
		ibuprofen	LHSC-UH / LHSC-VH
		600 mg, tab, ORAL, ONCE, PRN pain, for: 1 dose	
		loperamide	LHSC-UH / LHSC-VH
		4 mg, DIS tab, ORAL, as directed, PRN diarrhea	
		Comments - may give second dose for continued loose stools	
Patient Education			
Incl		Patient Education	LHSC-UH / LHSC-VH
		Discharge instructions for Opioid withdrawal management	
Incl		Patient Education	LHSC-UH / LHSC-VH
		Medications for Opioid use disorder - A quick guide for patients	
Incl		Patient Education	LHSC-UH / LHSC-VH
		Opioid use Disorder - A quick guide for patients	
		Patient Education	LHSC-UH / LHSC-VH
		Chronic Pain and Opioid use Disorder	
Discharge Planning			
Incl		Discharge Instructions	LHSC-UH / LHSC-VH
		Provide prescription for buprenorphine/naloxone for the total amount administered in the ED as a single daily dose under direct observed therapy, until next RAAM clinic appointment.	
		Comments - see quick orders page	
Incl		Generic Outpatient Referral ED	LHSC-UH / LHSC-VH
		Less than 1 week, Mental Health - RAAM, Initiated Subloxone treatment for Opioid withdrawal in the ED	
Legend:			
Incl		This orderable is prechecked but can be unchecked	
Pers		This is a persistent note	
Req		This orderable is required and can NOT be unchecked	
Produced: 2019/08/13 12:02			

Patient not in Withdrawal

- 35 year old using HydroMorph Contin several times a day
- Last used this morning
- COWS score zero (not in withdrawal)

Bernese Method (Buprenorphine Microdoses).pdf - Adobe Reader

File Edit View Window Help

Substance Abuse and Rehabilitation

Dovepress

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CASE SERIES

Use of microdoses for induction of buprenorphine treatment with overlapping full opioid agonist use: the Bernese method

This article was published in the following Dove Press journal:
Substance Abuse and Rehabilitation
20 July 2016
Number of times this article has been viewed

Robert Hämmig[1]
Antje Kemter[2]
Johannes Strasser[2]
Ulrich von Bardeleben[1]
Barbara Gugger[1]

Background: Buprenorphine is a partial μ-opioid receptor agonist used for maintenance treatment of opioid dependence. Because of the partial agonism and high receptor affinity, it may precipitate withdrawal symptoms during induction in persons on full μ-opioid receptor agonists. Therefore, current guidelines and drug labels recommend leaving a sufficient time period since the last full agonist use, waiting for clear and objective withdrawal symptoms, and reducing pre-existing full

2:06 PM
2018/11/16

Dr Robert Hammig (Bern, Switzerland)

Buprenorphine/Naloxone Microdosing: The Bernese Method

A Brief Primer for Clinicians

Dosing schedules adapted from the PHS Health Care Columbia Street Community Clinic and St. Paul's /VGH/RAAC clinicians

The theoretical background of this method is based on the following hypothesis:

- Repetitive administration of very small buprenorphine doses with sufficient dosing intervals should not precipitate opioid withdrawal
- Because of the long receptor binding time, buprenorphine will accumulate at the opioid receptor
- Over time, an increasing amount of a full μ-agonist will be replaced by buprenorphine at the opioid receptor

- References:
- Hämmig, R., Kemter, A., Strasser, J., von Bardeleben, U., Gugger, B., Walter, M., Dürsteler, K.M. and
- Vogel, M., 2016. Use of microdoses for induction of buprenorphine treatment with overlapping full opioid
- agonist use: the Bernese method. *Substance abuse and rehabilitation*, *7*, p.99. [see attached]
- *Dosing schedules adapted from the PHS Health Care Columbia Street Community Clinic and St. Paul's*
- */VGH/RAAC clinicians*

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Thames Valley Family Health Team

Buprenorphine/Naloxone Microdosing: The Bernese Method

A Brief Summary for Primary Care Clinicians

Disclaimer:

Microdosing principles are currently not included in any clinical practice guidelines for the management of Opioid Use Disorder, rather it is an off-label practice that has been included in clinical practice amongst addiction specialists. It is therefore important to obtain informed consent prior to initiating it with a patient. Microdosing is frequently used at the London Rapid Access and Addictions Medicine (RAAM) Clinic with good results.

What is Microdosing?

The Bernese Method uses the principle of Microdosing to initiate a patient onto buprenorphine/naloxone (bup/nlx) maintenance therapy. The theoretical background of this method is based on the following hypotheses:

1) Repetitive administration of very small buprenorphine doses with sufficient dosing intervals (e.g. 12 hours) should not precipitate opioid withdrawal
2) Because of the long receptor binding time, buprenorphine will accumulate at the opioid receptor
3) Over time, an increasing amount of a full μ-agonist will be replaced by buprenorphine at the opioid receptor

Therefore, overlapping induction of buprenorphine with ongoing use of opioids, from the unregulated drug market or prescription, including maintenance doses of a full μ-agonist (e.g. methadone or sustained release oral morphine), should be possible without precipitating severe opioid withdrawal. Mild withdrawal symptoms may be experienced during the induction.

Although dosing schedules vary, principles of the Microdsoing method include:

1) Prescriber starts with a low dose of buprenorphine, overlapping with other opioid use
2) Small daily buprenorphine dose increases
3) Abrupt cessation of opioid use at sufficient dose of buprenorphine

Why use it, and who is a good candidate?

Microdosing may have considerable advantages despite taking longer for the overall induction than the traditional protocol. It may be useful for <u>most</u> patients. In more detail:

- It may be helpful for patients fearing withdrawal or experiencing severe symptoms during conventional induction, or who have failed conventional induction due to inability to tolerate withdrawal symptoms

May 2019

Buprenorphine Microdosing Induction

- Day 1 0.5 mg
- Day 2 1.0 mg
- Day 3 1.5 mg
- Day 4 2.0 mg
- Day 5 2.5 mg
- Day 6 3 mg
- Day 14 4 mg

Buprenorphine Microdosing Induction

- Day 8 5 mg
- Day 9 6 mg
- Day 10 7 mg
- Day 11 8 mg
- Day 12 9 mg
- Day 13 10 mg
- Day 14 12 mg

Buprenorphine Microdosing Induction

At Buprenorphine 4 mg:

- Stop the short-acting opioids

Buprenorphine Microdosing Induction

At Buprenorphine 8 mg:

- Can start tapering long-acting opioids (or not)

Buprenorphine Microdosing Induction

At Buprenorphine 12 mg:

- Stop all opioids
- Titrate Buprenorphine up by 2 mg q1h if needed (up to 16 mg total daily dose)

Fentanyl Patch Conversions

Fentanyl Patch Conversions – Plan A

- d/c Fentanyl patch 48 hrs and cover with short-acting opiate equivalents
- No short-acting opiates after midnight
- Proceed with a Standard Induction in the morning

Fentanyl Patch Conversions – Plan B

- Microdose BUP to 4 mg
  - Stop all short-acting opioids
- Continue BUP microdosing to 8 mg
  - Start tapering the Fentanyl patch daily
- Continue BUP microdosing to 12 mg
  - Stop all remaining Fentanyl patches

Fentanyl Patch Conversions – Plan C

- Microdose BUP to 12 mg
  - Cold stop all Fentanyl Patches
  - Titrate up from BUP 12 mg in the standard 2 mg increments

Accelerated Microdosing

	AM	PM
Day 1	0.5 mg once/day	
Day 2	0.5 mg	0.5 mg
Day 3	1 mg	1 mg
Day 4	2 mg	2 mg
Day 5	3 mg	3 mg
Day 6	4 mg	4 mg
Day 7	12 mg once/day	

Probuphine

- 6 month implant
- For patients on Buprenorphine 8 mg or less
- Cost $1800
- Private insurance, NIHB

Sublocade

- 28 day subcutaneous injection in the abdomen
- For patients on Buprenorphine 8-24 mg
- Health Canada approved, but there are delays in coming to market

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OTN e-Consult (Addiction Medicine)

OCFP MMAP

https://www.surveymonkey.com/r/C58RCBB