FAMILY PRACTICE RENEWAL PROGRAM

BUPRENORPHINE & OPIOID USE DISORDER 2023

LEARNING OBJECTIVES (1)

At the end of this session, participants should be able to:

- Explain the basic features of opioid dependency as outlined by the DSM 5
- Recognize the patient with an opioid use disorder (OUD)
- Understand the initial steps in assessment of the patient with OUD
- Plan initial management

LEARNING OBJECTIVES (2)

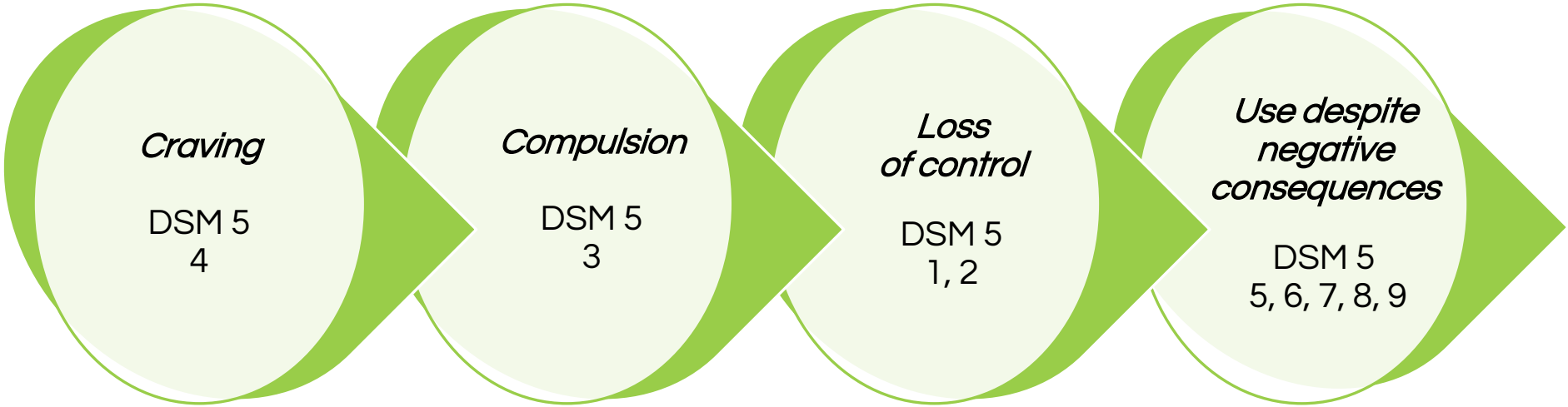
- Initiate treatment with Buprenorphine/Naloxone adhering to prescribed induction protocols.
- Watch for common and uncommon adverse events seen with Buprenorphine/Naloxone and potential drug interactions.
- Evaluate the stability of a patient on ORT with Buprenorphine using the clinical interview and urine drug screen (UDS).

SPEAKERS

Introductions

- Dr. Bruce Hollett
- Dr. Francisco Acevedo
- Dr. Kaitlyn Stanford

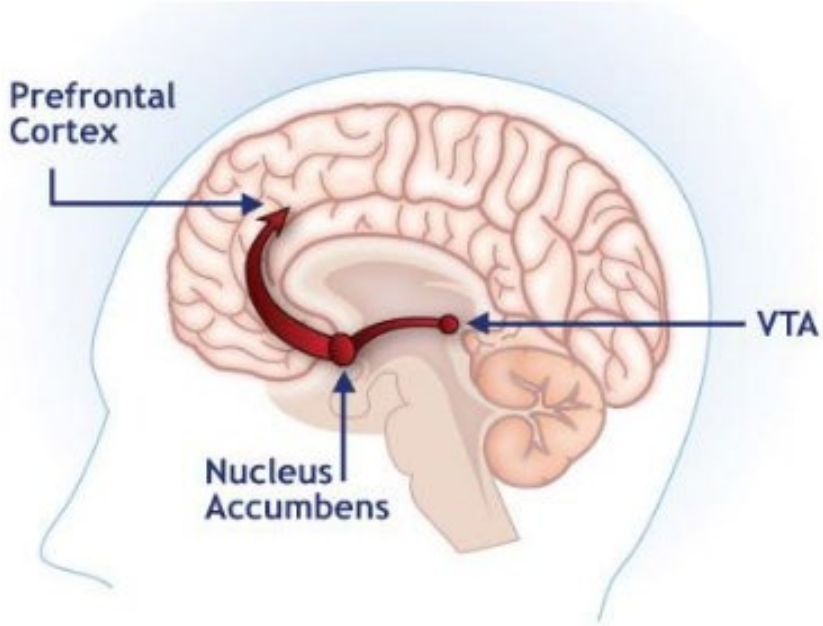
THE FOUR Cs


Craving
DSM 5
4
Compulsion
DSM 5
3
Loss of control
DSM 5
1, 2
Use despite negative consequences
DSM 5
5, 6, 7, 8, 9

SUBSTANCE USE DISORDERS

- Remember: any pattern of mental health symptomatology can be caused by a pattern of substance use.
- Potential substance-induced disorders include the following:
    - Intoxication
    - Withdrawal
    - Substance-induced mental disorders:
        - Delirium or dementia
        - Amnestic disorder
        - Psychotic disorder
        - Mood disorder

THE REWARD PATHWAY



The Ventral Tegmentum Area (VTA) is a heterogeneous group of cells made up of dopamine and GABA-containing neurons

Drugs of abuse act through different mechanisms to activate the dopamine-containing neurons in the VTA to release their dopamine into the synapse

Substances linked to dependence have been found to increase dopamine release in the Nucleus Accumbens, triggering the reward pathway

MAKING THE DIAGNOSIS OF OUD:

DSM 5 Criteria

DSM-5 Clinical Diagnostic Criteria

To be eligible for Opioid Replacement Therapy, patients should meet DSM-5 criteria for opioid use disorder. This requires the presence of at least two of the following criteria with severity dependent on the number of criteria.

- MILD: The presence of 2 to 3 criteria
- MODERATE: The presence of 4 to 5 criteria
- SEVERE: The presence of 6 or more criteria

DSM 5 CRITERIA (1)

1. Opioids are often taken in larger amounts or over a longer period of time than intended. (LOC)
2. There is a persistent desire or unsuccessful efforts to cut down or control opioid use. (LOC)
3. A great deal of time is spent in activities necessary to obtain the opioid, use the opioid, or recover from its effects. (Comp)
4. Craving, or a strong desire to use opioids. (Crav)
5. Recurrent use resulting in failure to fulfill major role obligations at work, school, or home (Conseq)

DSM 5 CRITERIA (2)

6. Continued opioid use despite having persistent or recurrent social or interpersonal problems caused or exacerbated by the effect of opioid (Conseq)
7. Important social, occupational or recreational activities are given up or reduced because of opioid use (Conseq)
8. Recurrent opioid use in situations in which it is physically hazardous (Conseq)
9. Continued use despite knowledge of having a persistent or recurrent physical or psychological problem likely to have been caused or exacerbated by opioids (Conseq)

DSM 5 CRITERIA (3)

10. Tolerance, as defined by either of the following:

    a) A need for markedly increased amounts of opioids to achieve intoxication for desired effect

    b) Markedly diminished effect with continued use of the same amount of an opioid.

11. Withdrawal, as manifested by either of the following:

    a) the characteristic opioid withdrawal syndrome

    b) the same (or a closely related) substance are taken to relieve or avoid withdrawal symptoms

TIME FRAME FOR DIAGNOSIS

- DSM 5 : 12 months
- Real life: ???

CASE STUDY #1 – Alan

- Alan is a 35 y old married man. Works in a labour job. Smokes 1 PPD cigarettes since 10 years old.
- Has been suffering for >15y with recurrent kidney stones.
- Has been taking Morphine PRN since he had his first kidney stone attack in his 20s. In the last 2 years, he had multiple kidney stone attacks that increased his morphine intake to daily.
- His family physician tried to manage his pain with low doses of Morphine IR but after a few months, his daily dose increased to 120 mg/d.
- He would run out of his meds early, usually coming in as a walk-in, at the end of the week, complaining of pain but without other symptoms of kidney stone attacks.

ALAN: IDENTIFYING OUD

One day his family doctor saw the patient had a recent KUB from the ER showing no kidney stones and sat him down for a longer talk. Patient admitted:

- *He was suffering from pain if he did not take his Morphine.*
- *He had missed work several days a week, as he was not able to get out of bed.*
- *He has been taking more meds than prescribed and that was the reason he would run out of meds earlier than he should*.

ALAN: IDENTIFYING OUD

Patient also admitted:

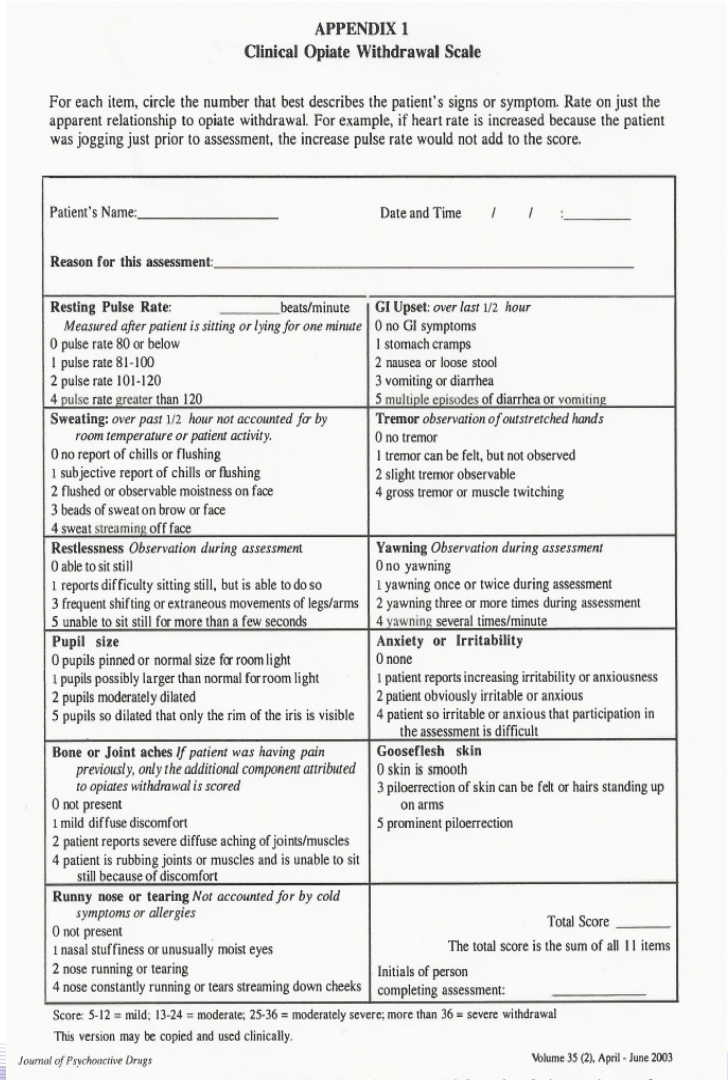
- *He denied craving or desire to use drugs.*
- *He tried to cut down the dose of Morphine but that he had not been successful in the last months.*
- *He has had difficulties with his partner at home as he was not able to help with the daily chores and was always “crooked” and angry.*
- *He had stopped going out and visiting friends in the last year.*

Alan: PHYSICAL EXAM

- Patient looks anxious and agitated, complains that he is not able to sit down for long but you observe that he is able to do it.
- He complains of back and body pain (6-8/10), stomach cramps and cold chills. Denies N/V or diarrhea.
- His pulse is 95x', no sweating is observable, tremor not observed.
- Nose is stuffy and skin is smooth
- Pupils look normal size.
- No needle marks.

COW Scale

See Handout #04



APPENDIX 1
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 1/2 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 1/2 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 or 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

This version may be copied and used clinically.

Journal of Psychoactive Drugs Volume 35 (2), April - June 2003

SOW Scale

Patient Focus:
What does withdrawal mean for them?

See Handout #25

BRITISH COLUMBIA CENTRE ON SUBSTANCE USE
Networking researchers, educators & care providers

SUBJECTIVE OPIATE WITHDRAWAL SCALE (SOWS)[1]

The SOWS is a self-administered scale for grading opioid withdrawal symptoms. It contains 16 symptoms whose intensity the patient rates on a scale of 0 (not at all) to 4 (extremely), and takes less than 10 minutes to complete.

Patient Instructions: please score each of the 16 items below according to how you feel right now. Circle one number only.

Item	Symptom	Not at all	A little	Moderately	Quite a bit	Extremely
1	I feel anxious	0	1	2	3	4
2	I feel like yawning	0	1	2	3	4
3	I am perspiring	0	1	2	3	4
4	My eyes are teary	0	1	2	3	4
5	My nose is running	0	1	2	3	4
6	I have goosebumps	0	1	2	3	4
7	I am shaking	0	1	2	3	4
8	I have hot flushes	0	1	2	3	4
9	I have cold flushes	0	1	2	3	4
10	My bones and muscles ache	0	1	2	3	4
11	I feel restless	0	1	2	3	4
12	I feel nauseous	0	1	2	3	4
13	I feel like vomiting	0	1	2	3	4
14	My muscles twitch	0	1	2	3	4
15	I have stomach cramps	0	1	2	3	4
16	I feel like using now	0	1	2	3	4

IS THE PATIENT READY TO CHANGE?

#1. Patient wants to stay on his meds as usual – MS IR 10 mg (12 tabs/d) and promises that he will try and cut down.

#2. Patient admits he has a problem and wants some help.

1. PATIENT UNWILLING TO CHANGE

Remember you are there to help the patient and practice ***harm reduction***.

- Is he/she/they diverting the meds?
- Do you ask for a urine drug screen?
- If your patient is a woman: Pregnancy test?
- How many opioids will you prescribe?
- FOLLOW UP

2. PATIENT WILLING TO CHANGE

- Set **REALISTIC** and **MEASURABL**E goals with the patient.
  - Focus on what is important for Alan (job, life at home, friends, etc).
- Try to assist with **ACHIEVING STABILITY** in Alan's life.
- **TIME BOUND** goals.
  - It is vital to have regular follow up.

TREATMENT CONTRACT

- Ensure your patient is making an informed decision before initiating treatment.
- Consider a written contract. Define the roles and responsibilities of the patient and the treatment team.
- Include written commitments from all parties and the patient's informed consent.
- Focus on communication with other HPs.

See Handout #06

CONSENT GUIDELINES

- History / PE have been done in previous visit. The consent should be done at that time, as well as the Buprenorphine ***agreement and consent form***.
- Review risks and benefits of different treatment options.
- Advise the patient that induction will not proceed if they are intoxicated/stoned or not in sufficient withdrawal.
- Give them guidelines for discontinuation of opioids.

GOAL SETTING

GOALS for the patient:

- measurable
- time limited
- relevant.

GOALS for you:

- follow CPSNL rules
- structure the visit on your own terms.

BUPRENORPHINE (SYNTHETIC OPIOID)

Pharmacodynamics/Pharmacokinetics/

Contra-indications/Precautions

BUPRENORPHINE: HOW IT WORKS

- Acts as a partial agonist at the μ-opioid receptors receptor, whereas heroin, methadone, morphine, and oxycodone are full agonists
- As a partial agonist, higher doses of buprenorphine can be given with fewer adverse effects compared to higher doses of full agonist opioids
- Withdrawal syndrome is typically milder than seen with full agonists and may be delayed in onset
- Has low μ-intrinsic activity, meaning its opioid effects are blunted
- Acts as an antagonist at the kappa-opioid receptor, binding to but not stimulating it into activity, resulting in possible antipsychotic and antidepressant effects, although the clinical relevance of these effects remains uncertain

BUPRENORPHINE: PARTIAL MU AGONIST

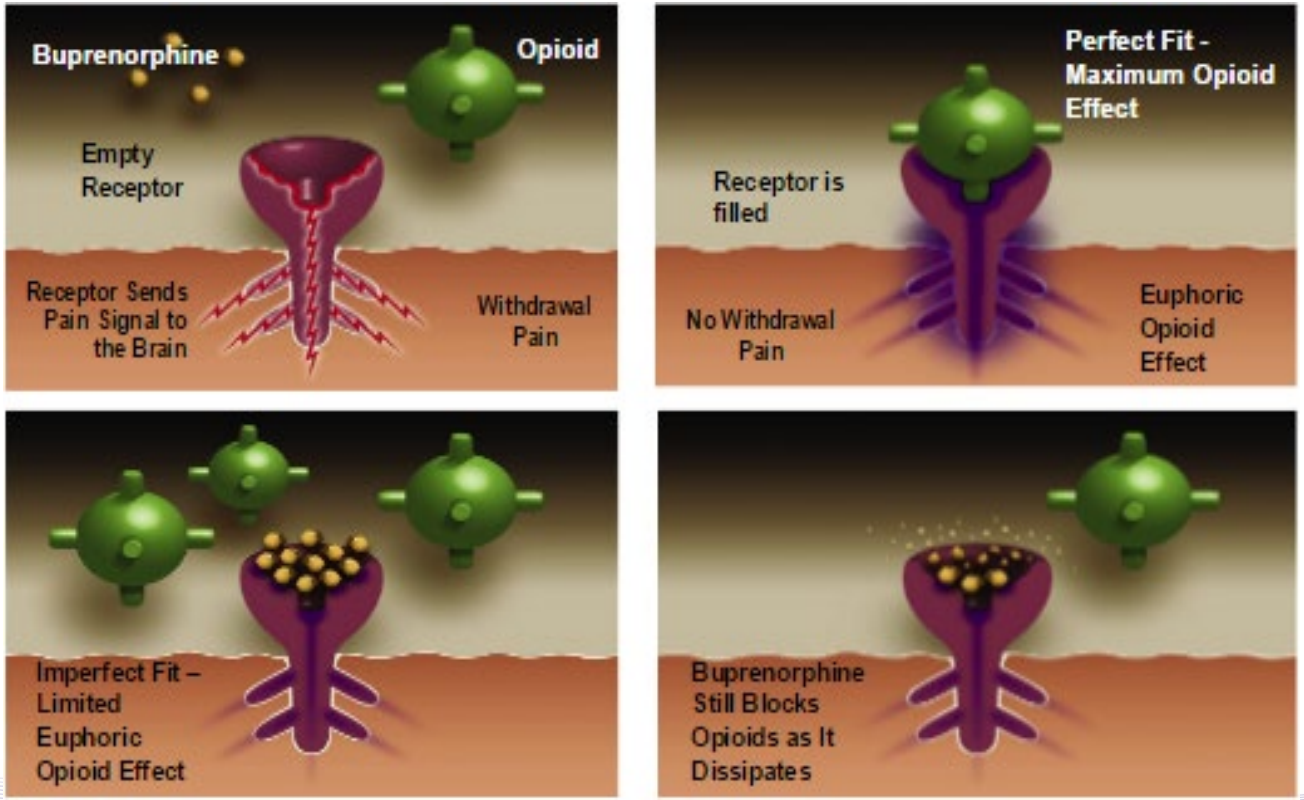
Advantages

- Fewer adverse effects than full agonist opioids
- Milder withdrawal profile
- Buprenorphine has low μ-intrinsic activity, meaning its opioid effects are blunted
- Due to the ceiling effect, buprenorphine produces less respiratory depression. (SAFER)

Disadvantages

- Doses may be suboptimal for individuals with high opioid tolerance
- At high doses, may block the analgesic effect of concurrent opioid medications administered for pain
- Not approved in Canada for the primary purpose of pain control, though moderate evidence of efficacy = OFF LABEL

Mechanics of Action: Partial MU-effect (Efficacy vs. Affinity)



HOW LONG TO WAIT FOR INDUCTION?

- Short acting: [Heroin/Hydromorphone/Oxy IR]
- Intermediate [MS contin; Hydromorph contin]
- Long acting: [Methadone/Fentanyl]

- 12-16 hours since last use
- 17-24 hours since last use
- 30-48 hours since last use

STARTING BUPRENORPHINE

- Do you wait until Alan is in withdrawal (COWS 13)? Yes or No?

- Do you start with micro-dosing? Yes or No?

Alan: IN WITHDRAWAL

Alan decides to go cold turkey for your next clinic day and returns to see you early during your Monday clinic. You had given him Morphine for Friday and Saturday only.

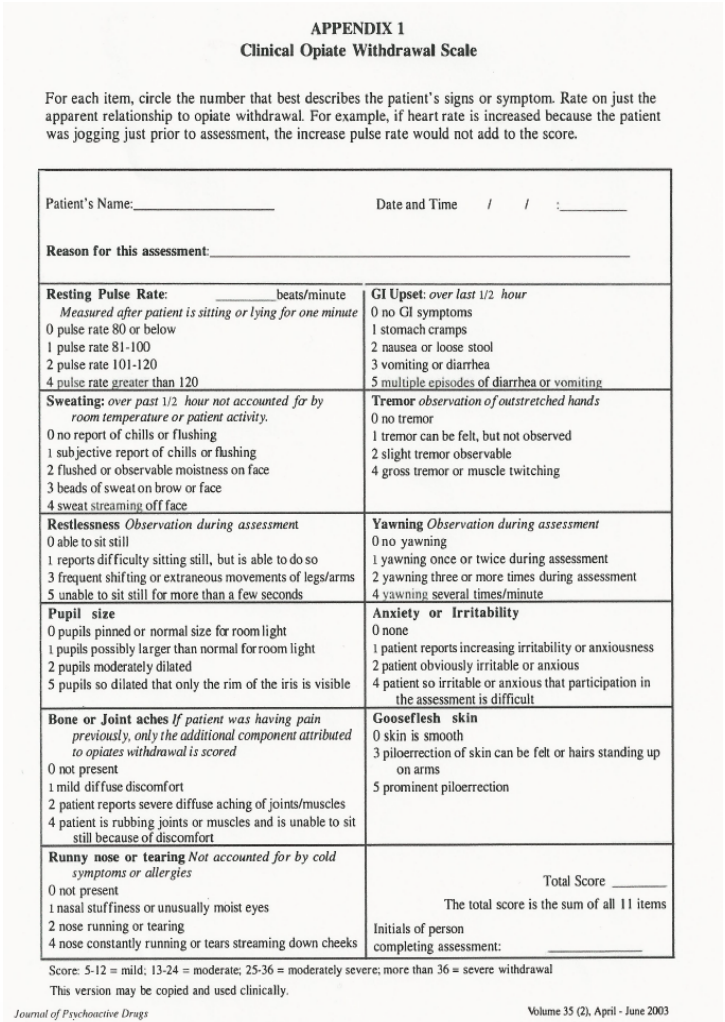
Alan: IN WITHDRAWAL

In your clinic, he looks irritable, shifting all the time on his seat.

- *Complains that he is nauseous and that he has started to vomit during the morning at home.*
- *Has severe aches and pains and has a visibly runny nose and teary eyes. Hands are visibly trembling.*
- *Pupils are dilated 5mm but you can see the iris.*
- *Has beads of sweat all over the face and his arms have piloerection.*
- *HR 119bpm and you noticed him yawning twice.*

COW SCALE

See Handout #04



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Source: Wesson, D. R., & Ling, W. (2003). The Clinical Opiate Withdrawal Scale (COWS). *J Psychoactive Drugs*, 35(2), 253–9.

INDUCTION: DAY ONE

- Plan induction for a week day preferably early in the day. Reassessment required following morning visit.
- At time of first dose precipitated withdrawal risk is much lower if COWS is greater than 12. If lower, postpone until afternoon or next day.
- Start with either 2mg or 4mg depending on COWS scale (see handout)
- Re-assess 1 hour after first dose to check for ”precipitated withdrawal”
- Make sure patients have SOWS to do self assessment
- Re-assess and dose again at intervals of 3-4 hours 1 or 2 more times on day one up to a maximum of 12 mg on the first day.

DAY 1	COWS Score	DOSE
900 hrs of day 1 Visit #1	14	4 mg
1200 hrs of day 1 Visit #2	(a) <5 (b) 6-12 (c) >12	(a) 0 (b) 2mg (b) 4 mg
1600 hr of day 1 Visit # 3	(a) <5 (a) 6-12 (c) >12	(a) 0 (b) 2 mg (c) 4 mg Max Dose Day 1 = 12 mg

INDUCTION: DAY TWO

- Start off day two with the total dose for Day One
- Re-assess the pt 3-4 hours after the first dose for day two and consider a second dose depending upon the continued presence of withdrawal symptoms.
- A maximum dose of 16 mg is currently recommended on day 2
- You may need to adjust the dose more than once on Day Two

DAY 2	COWS	DOSE
9:00 hrs of day 2 1st dose	Takes first dose at Pharmacy prior to coming to the clinic	Start with total dose of the previous day – max 12mg
1200 hrs Visit # 1	(a) <5 (a) 6-12 (a) >12	(a) 0 (b) 2 mg (c) 4 mg
1600 hr of day 2 Visit # 2	(a) <5 (a) 6-12 (c) >12	(a) 0 (b) 2 mg (c) 4 mg Max Dose Day 2 = 16 mg

INDUCTION: DAY THREE AND BEYOND…

- As with Day Two, start off Day Three with the total dose given on Day Two
- Re-assess the patient 3-4 hours following the morning dose for signs of persistent withdrawal.
- Dose adjustments may be made in 2-4 mg amounts as required to prevent withdrawal and cravings – up to a maximum of 24 mg/day.

INDUCTION PROTOCOL: SUMMARY

Day One

Aim COWS for 13-14
Twice per day review
Max. 12 mg
Risk precipitated withdrawal

Day Two

Start with total dose Day 1

Review 1-2 times
Max dose 16 mg

Day Three onward…

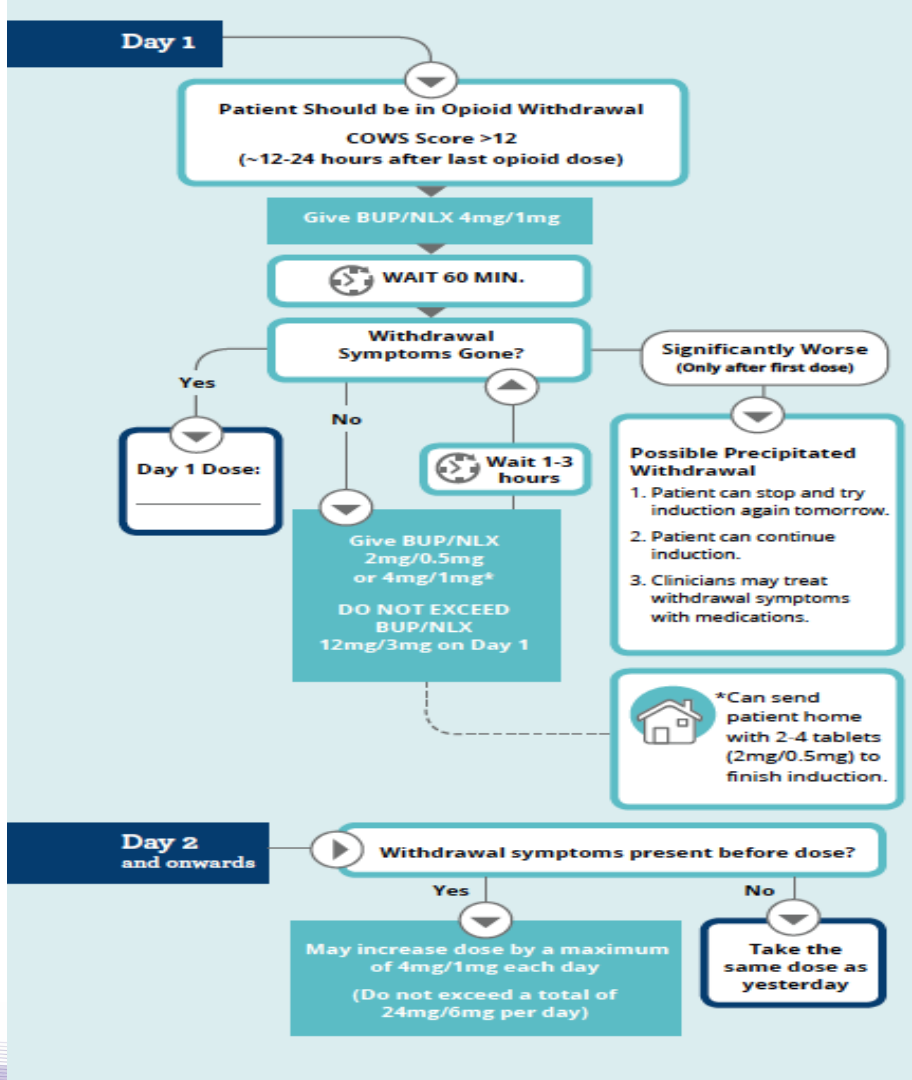
Start with total dose Day 2

Increase by 2-4mg increments based upon symptoms

Review Q 1-2 weeks initially

Max 24 dosage

INDUCTION SUMMARY



MICRODOSING (The Bernese Method)

- Start while the patient is on short acting or on long acting opioids.
- Follow the guide from the Canadian Mental Health Association of Sept 2019 (***See Handout #18)***
- Dosing Options for Short acting or long acting opioids
  - Once Daily Dosing
  - Twice Daily Dosing
- Microdoses apply to the active component buprenorphine, not naloxone

OPTION ONE: ONCE DAILY DOSING

Short-acting Opioid:

Day	Buprenorphine	Opioid
1	0.5 mg daily	Maintain dose
2	1.0 mg daily	Maintain dose
3	1.5 mg daily	Maintain dose
4	2.0 mg daily	Maintain dose
5	2.5 mg daily	Maintain dose
6	3.0 mg daily	Maintain dose
7	4.0 mg daily	Stop short-acting opioid
See the patient on Day 7, after 4mg of Bup/Nlx, and give another 2mg every 1h until comfortable, to a max of 12mg that day. You may instead choose to give an additional 2mg as needed on Day 7, with daily follow-ups thereafter, and increases of 2mg to 4mg/day as needed, until comfortable. Final maximum dose is typically 16mg/day (but often can be less)		

<u>Long-acting Opioid:</u> (Including Fentanyl, Fentanyl Patches, and Methadone)

Day	Buprenorphine	Opioid
1	0.5 mg daily	Maintain dose
2	1.0 mg daily	Maintain dose
3	1.5 mg daily	Maintain dose
4	2.0 mg daily	Maintain dose
5	2.5 mg daily	Maintain dose
6	3.0 mg daily	Maintain dose
7	4.0 mg daily	Maintain dose
If long- AND short-acting opioids, stop short-acting opioids here and maintain long-acting opioid dose. You may also choose to begin a taper of long-acting opioids at this point, though we have not found it necessary		
8	5.0 mg daily	Maintain dose
9	6.0 mg daily	Maintain dose
10	7.0 mg daily	Maintain dose
11	8.0 mg daily	Maintain dose
12	10.0 mg daily	Maintain dose
13	12.0 mg daily	Maintain dose
14	12.0 mg daily	Stop all remaining opioid therapy
Follow-up appointment at Day 7 to monitor progress and outline taper of long-acting opioid if you choose. See the patient on Day 14, after 12mg of Bup/Nlx, and give another 2mg every 1h until comfortable, to a max of 16mg that day.		

OPTION TWO: TWICE DAILY DOSING

Short-acting Opioid:

Day	Buprenorphine	Opioid
1	0.5 mg once daily	Maintain dose
2	0.5 mg twice daily	Maintain dose
3	1.0 mg twice daily	Maintain dose
4	2.0 mg twice daily	Stop short-acting opioid therapy
At 4mg Suboxone, the client may fully stop all short-acting opioids without a taper. The Suboxone dose can then be adjusted as needed, adding 2mg every 1h until comfortable, to a max of 12mg that day.		

Long-acting Opioid: (including Fentanyl, Fentanyl Patches, and Methadone)

Day	Buprenorphine	Opioid
1	0.5 mg once daily	Maintain dose
2	0.5 mg twice daily	Maintain dose
3	1.0 mg twice daily	Maintain dose
4	2.0 mg twice daily	Maintain dose
If long- AND short-acting opioids, short-acting opioids can be stopped here.		
5	3.0 mg twice daily	Maintain dose
6	4.0 mg twice daily	Maintain dose
7	12 mg once daily	Stop all remaining opioid therapy
Follow-up appointment at Day 7 after 12mg of Bup/Nlx, and give another 2mg every 1h until comfortable, to a max of 16mg that day.		

PITFALLS: PRECIPITATED WITHDRAWAL

- Buprenorphine/Naloxone has poor oral and sublingual bioavailability and is not responsible for the withdrawal experienced
- Precipitated withdrawal may happen at the time of the first dose
- It is most likely to occur if the patient takes the first dose of Buprenorphine/Naloxone while affected by another opioid

PRECIPITATED WITHDRAWAL: SYMPTOMS

- Vary considerably in severity
- Sweating, GI symptoms (abdominal cramps, diarrhea, nausea), anxiety, cravings
- Begin from 30 to 60 minutes after first dose of Buprenorphine/Naloxone
- Peak within 90 minutes to 3 hours after first dose and then subside
- May continue after second or third dose
- ***Not an indication for opioid supplementation***

PRECIPITATED WITHDRAWAL: PREVENTION

- To avoid precipitated opioid withdrawal, the patient should show objective signs and symptoms of at least moderate withdrawal prior to induction dosing.
- A useful reference assessment may be a moderate score of withdrawal, >12 on COWS and SOWS
- Advise patient that further opioid use will not relieve withdrawal symptoms.

MANAGING PRECIPITATED WITHDRAWAL: TWO OPTIONS

Option One

- Re-assure the patient
- Discourage use of opioids to treat PW
- Continue with induction of Buprenorphine
- Offer non-opioid symptomatic Tx such as Clonidine, NSAIDS, etc.

Option Two

- Re-assure the patient
- Discourage the use of opioids to treat PW
- Offer non-opioid symptom management
- Re-schedule induction.

OPIOID WITHDRAWAL SYNDROME

Acute withdrawal

- Begins within 6 to 24 hours of last opioid use, methadone over 30-40 hours
- Peaks in severity within 2 to 4 days
- Most physical features resolve within 7 days
- Cravings, sleep, and mood disturbances may persist for weeks

Protracted withdrawal

- Withdrawal features persist for weeks, months, or indefinitely
- Usually triggered by internal mood lability and/or environmental stimuli

Precipitated withdrawal

- Occurs about 1 hour after first dose of buprenorphine/naloxone, if another opioid is in the patient's system

ACUTE WITHDRAWAL

Early symptoms of Opioid Withdrawal include:

- Agitation
- Anxiety
- Increased lacrimation, rhinorrhea, sweating
- Insomnia
- Muscle aches
- Yawning

Late symptoms of Opioid Withdrawal include:

- Abdominal cramping
- Diarrhea
- Dilated pupils
- Goose bumps
- Nausea
- Vomiting

PREGNANCY AND OAT

IMPACTS OF USE OF OPIOIDS DURING PREGNANCY

- Untreated OUD can be associated with
  - Placental abruption
  - Preterm labor
  - Stillbirth
  - Pre-eclampsia
- Concurrent higher risk of STIBBIs
- Increased psychosocial impact and lower overall support
- Polysubstance use is higher
- For the fetus
  - Low birth weight
  - Neonatal withdrawal syndrome
  - SIDS

CASE STUDY #2: Erin

- ERIN is a 23 year old female who just presented to your clinic. You haven't seen her in some time as she's been followed by another physician for her OUD, however you have been her family physician for a number of years.
- She voices that she has noticed some weight gain over the past 2 months and was feeling kind of stomach sick but just thought it was a bug going around.
- You perform a pregnancy test in your clinic and it's positive but she is unable to tell you when her last period is because of long history of irregular periods. At this time you discuss her options at this time and she decides she would like an abortion because she doesn't feel as though she would have the support.
- You have a long discussion with her but she decides this is best for her at this point.

CASE STUDY #2: Erin

- The following Monday you go into clinic and see Erin is booked back in, you assume it's just for follow up for her abortion.
- However, when you walk in she tells you she was too far along to have the procedure. She was actually 27 weeks pregnant when they were going to do the procedure.
- The wheels start turning because not only do you need to do all the routine pregnancy check-up you need to consider the extra monitoring because of her methadone.

ERIN: GOALS FOR TODAY'S VISIT?

1. Routine prenatal BW
2. Dating scan/Anatomy Scan
3. Advise patient to book appointment with OAT; really need the weight change from pregnancy thus far

WITHDRAWAL MANAGEMENT

- **Not recommended** during pregnancy
  - High rate of relapse
    - Up to 90 % in the first month
    - Already a vulnerable time in their life; opioids used to be the safe haven
  - High morbidity and mortality following relapse
  - Fluctuation in use can affect the fetus
    - Preterm labor
    - Miscarriage
    - Long term developmental issue

STANDARD OF CARE: OAT

- Continuity and suppression of withdrawal is important
  - Withdrawal has adverse effects for fetus and pregnancy
- Transitioning between different kinds of OAT is not recommended in pregnancy, especially when stable
- Methadone and Buprenorphine are most common here
  - On the mainland there's also buprenoprhrine, slow release oral morphine, naltrexone, injectable OAT

ERIN: What's next?

So you realize that Erin is continuing with the pregnancy, and at least is getting care.

SCREENING

1. Considering OAT is a daily use, what else would you screen for?
    a. STIBBIs
    b. Concurrent mental health diagnoses
    c. Stable housing
2. Extra screening during pregnancy
    a. St. John's would refer to Maternal Fetal Medicine
        i. Biophysicals every 2 weeks starting 28 weeks to ensure growth
        ii. Looking for the effects of methadone on fetus

METHADONE

- Dosing = same as non pregnant (Depends on the trimester)
- In the 2nd and 3rd trimester, hepatic metabolism increase
  - possible increase dose may be required
- With increased metabolism, some benefit from BID dosing (either Methadone or Buprenorphine)
- NOWS (Neonatal Opioid Withdrawal Scale) on delivery

If on OAT, what can I use for pain control during labour?

Intrapartum – offer epidural or spinal

- Butorphanol, nalbuphine, pentazocine (opioid agonist-antagonist) should be avoided; not used as practice in NL, can precipitate acute withdrawal
- In general will require higher dose of analgesia if using opioids as management
- Continue with OAT during labour; you may split the dose at times to help provide some pain management as well

BUPRENORPHINE DURING PREGNANCY

- Now the first line recommendation if starting during pregnancy
- Extended half life at baseline, likely won't need dose adjustment
- If doing induction then could admit to prevent withdrawal
- Reduced risk of diversion

MONITORING DURING PREGNANCY

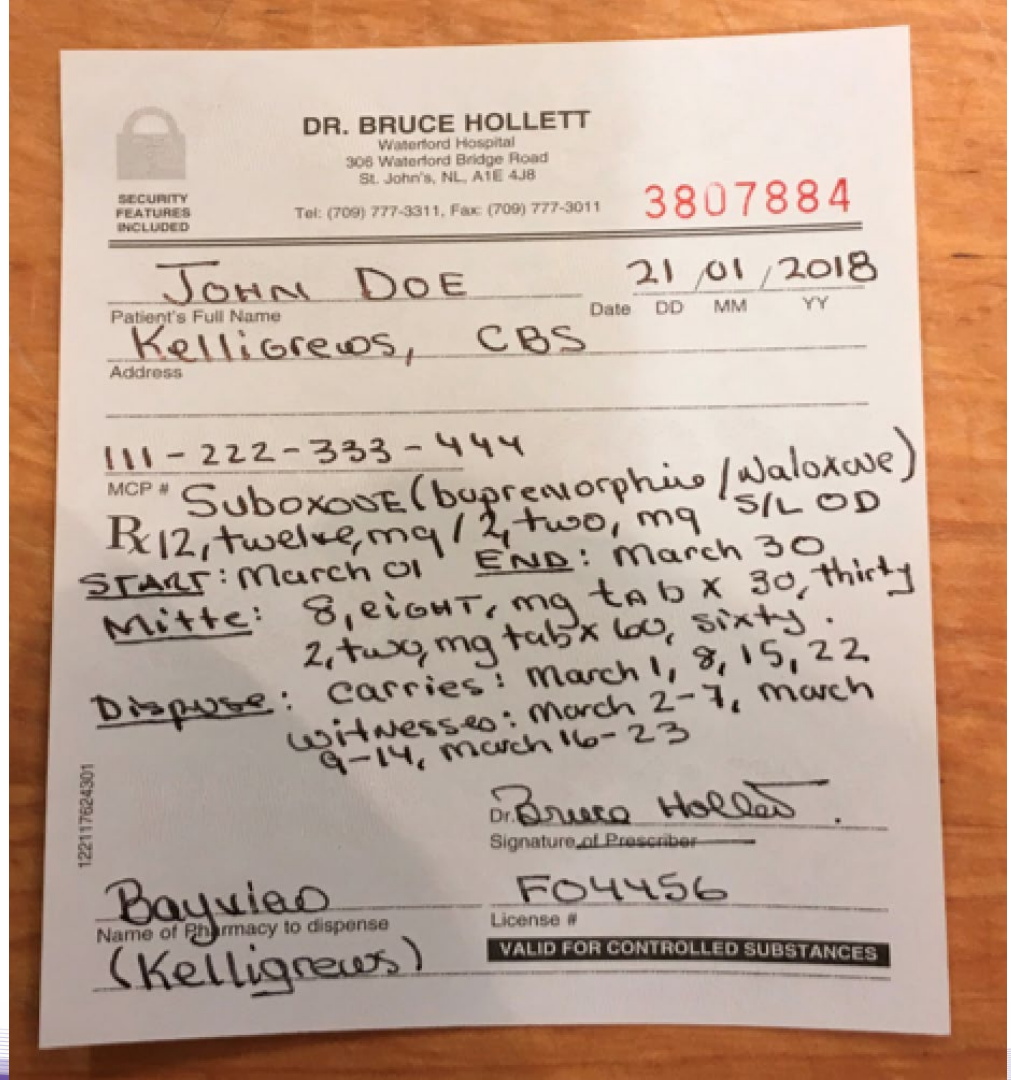
- Same guidelines as methadone
- Given longer half life the more recommended now - in the last 5 years
- No dose change is likely to be needed
- Still in the process of guidelines formation, however change to methadone not recommended

BUPRENORPHINE & OPIOID USE DISORDER

Patient Logistics

WRITING THE RX

- ❑ Date
- ❑ Patient’s full information including MCP number
- ❑ Prescriber’s information
- ❑ Name of Drug
- ❑ Dose in alpha/numeric eg. (four/4)
- ❑ Start dates and end dates
- ❑ Dosing instructions: i.e. witnessed or carries
- ❑ Physician's signature



DR. BRUCE HOLLETT
Waterford Hospital
306 Waterford Bridge Road
St. John's, NL, A1E 4J8
Tel: (709) 777-3311, Fax: (709) 777-3011

SECURITY FEATURES INCLUDED

3807884

JOHN DOE
Patient's Full Name

21/01/2018
Date DD MM YY

Kelligrews, CBS
Address

111-222-333-444
MCP #

Suboxone (buprenorphine/Naloxone) S/L OD
Rx 12, twelve, mg/2, two, mg
START: March 01 END: March 30
Mitte: 8, eight, mg tab x 30, thirty
2, two, mg tab x 60, sixty.
Dispose: Carries: March 1, 8, 15, 22
Witnessed: March 2-7, March 9-14, March 16-23

Dr. Bruce Hollett
Signature of Prescriber

1221176243O1

Bayview
Name of Pharmacy to dispense
(Kelligrews)

F04456
License #

VALID FOR CONTROLLED SUBSTANCES

WORKING UP THE PATIENT

- History of substance use
- Polysubstance use
- Laboratory workup

MAINTENANCE VISITS

- Initially Q1-2 weeks
- Time frame ultimately dependent upon clinical stability
- Maximum between visits in a highly stable patient should not normally exceed 12 weeks
- Visits assess clinical stability through interview and UDS

STABILITY includes:

- Substance use i.e. UDS results
- Psychiatric symptoms (depression, mania, anxiety, etc)
- Employment
- Social relationships
- Participation in recovery activities (counselling/12-Step groups etc)

WWCWYTD?

1. Complete a course on opioid dependency/addiction
2. Complete a course on Buprenorphine
3. Seek help from other more experienced prescribers (ODT spokes and hubs)
4. Continue with CME/CPD
5. Check with HealthE-NL/Pharmacy Network
6. Be familiar with CPSNL guidelines for Opioid Prescribing for Opioid Use Disorder
7. Document discussion of addictions services and counselling.

MY VISIT STRUCTURE

1. Discuss goal/s (future and past)
2. Review Healthe-NL (last pick-up date of medication)
3. Review total dose of medication
4. Does it control cravings? Patient ability to handle triggers?
5. Discuss side effects of medication (constipation, etc)
6. Any other meds that may be interacting with Buprenorphine?
7. Assess misuse risk (early refills, using more frequently than prescribed, seeing other prescribers, etc)
8. Other dependencies that need to be addressed?

MAINTENANCE ISSUES

- Urine Testing
- Carries
- Missed Doses
- Tapering
- Acute Pain Management

URINE TESTING

- Urine testing should be performed (where possible) prior to induction and at regular intervals during maintenance therapy.
- Weekly urines are advised in the initial stages and then clinical considerations will dictate frequency.
- Urine test results help ensure compliance and safety and provide an opportunity for harm reduction discussions with the pt when needed.
- Point of care (POC) testing may need to be supplemented by confirmatory chromatography if clinically warranted.

SUMMARY OF UDS

- Immunoassays (POC tests) are open to ”detection” errors (eg. synthetic opioids) and cross-reactivity errors (eg. Quinolone and opiates).
- If immunoassays are used all positive screens should be confirmed with chromatography.

	Immunoassay	Chromatography
Opioids	• Detection window 3-5 days • Can't distinguish different opioids. Misses synthetic opioids eg oxycodone, fentanyl, methadone. • A specific immunoassay is available for oxycodone	• Detection window 1-2 days • Identifies specific opioids, including synthetic opioids. • Codeine metabolized to morphine • Monoacetylmorphine (MAM) very specific for heroin use
Cocaine/BEG	• Detection window for BEG is 3-5 days • Very specific for cocaine use	• Detection window for cocaine 1-2 days • Very specific for cocaine use
Benzodiazepines	• Regular diazepam use detected for up to 30 days. • Lorazepam & other intermediate-acting benzos often missed • Clonazepam poorly detected at moderate doses	
Cannabis	• Regular daily use: Can detect up to 10-28 days	

URINE DRUG SCREEN INTERPRETATION

- Excellent review by foundation for medical practice education
- Source: Practice Based Small Group(PBSG) at McMaster University (Must be a member)
- https://fmpe.org/

CARRIES

- Take home doses or “carries” are determined on the basis of clinical “stability”
- Stability is assessed by means of urine testing and the clinical interview and involves all aspects of the patient’s life
- Health Canada recommends that no take home doses be given for the first 2 months apart from weekends or holidays when some pharmacies might be closed (a methadone principle; Buprenorphine guided by clinical stability)

MISSED DOSES

The pharmacy will contact you if your patient has missed a scheduled witnessed dose. The protocol below can be used to gauge whether the following doses need to be adjusted.

Table 1: Suggestions for Managing Missed Doses [19]

Buprenorphine Dose	Number of Consecutive Days Missed	New Starting Dose
> 8 mg	> 7 days	4 mg
> 8 mg	6–7 days	8 mg
6–8 mg	6 or more days	4 mg
2–4 mg	6 or more days	2–4 mg

TAPERING BUPRENORPHINE

- There is no predetermined time frame for Buprenorphine therapy. If therapy is meeting the goals of the patient and physician it may go on indefinitely.
- Occasionally tapering may be requested by the patient or initiated because the treatment is deemed to have failed or to be unsafe.
- In either case, the recommended taper is no more than 2 mg/maximum and may require more gradual (2 mg/month) approach.

ADDICTION TREATMENT

The Goals and the Options for OUD

"An optimal dose is one where, among other things, the patient is free of opioid withdrawal symptoms for the full 24-hour dosing interval without experiencing intoxication or sedation from the medication."

ADDICTION TREATMENT IS …

1. Any intervention or program that:
    - Is designed to help people deal with a problem related to substance use
    - Assists patients in reducing the risk of harm by reducing or eliminating risky behaviours
    - Deals with issues beyond substance use (e.g. health, social, psychological and support issues)

2. Treatment may or may not lead to abstinence:
    - Setting a goal of abstinence limits treatment options and may undermine outcome in some patients. Instead, treatment goals exist along a continuum.

ADDICTION TREATMENT SHOULD:

- Focus on improving patient outcomes rather than whether a certain drug is present in the toxicology screen
- Treat the person, not the problem
- Be geared toward the patient's current life situation and place in the community
- Involve and engage the patient in developing the treatment plan, and
- Assist the patient in achieving stability in life

Note: As with other chronic health conditions (e.g. diabetes, asthma), if outcome of treatment is poor, the treatment plan should be adjusted rather than abandoned.

CHRONIC PAIN IN ADDICTION

- Beyond scope of this training course
- eConsult
- Atlantic Mentorship Network

SPECIAL ISSUES/PATIENT POPULATIONS

Future programs will be able to help you:

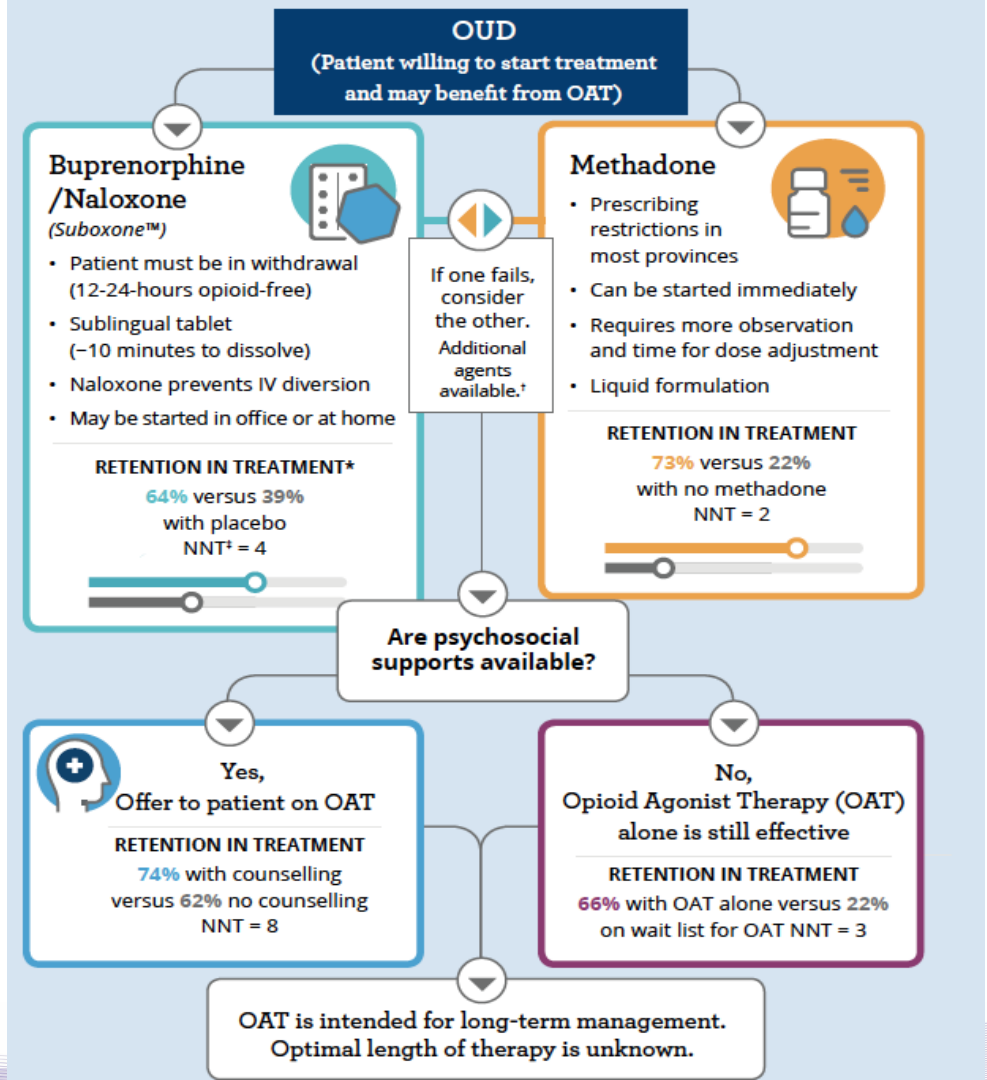
- Recognize and support the treatment of concurrent mental health challenges in patients with opioid dependence and addiction
- Recognize and support the treatment of patients in special situations, including
  - Incarcerated patients
  - HIV or HCV infection

Other Issues

- Alcohol Addiction
- Benzodiazepine
  - Benzodiazepine Withdrawal can be life-threatening: early recognition and treatment is crucial.
    - Managing benzodiazepine prescriptions
    - General principles for taper
- Sublocade

Choosing ORT

Source: Korowynk et., al., CFP Vol 65 May 2019



Case Study #3: BRIAN

BRIAN is a 34 year old father of two who works as an Engineer is in for a blood pressure check. He normally sees a colleague of yours who has recently retired. During the conversation he admits to being under a lot of stress. When you probe a little deeper he starts to break down and admits to snorting 8-10 Percocet on average per day for the past two years. He has tried a number of times in the past year to cut down and /or stop but cannot. At times it is the withdrawal that makes him start but at other times he has this overwhelming desire to use. He spends a good part of his day seeking out his next “fix”! He feels he is losing control of his life. He tells you he has not been going to any of his daughter’s hockey games because he is usually getting his drugs for the day at that time. He feels quite guilty about this. He has also been arguing with his wife who has threatened to leave if he doesn’t stop but he persists in using. In the past three months he has had a number of problems at his workplace due to his poor work performance and erratic attendance. His boss pulled him aside last week and asked him if everything was ok? He offered him the services of the EAP program if he was under stress. He is asking for your help today.

CHAT TASK: Does Brian meet the diagnostic criteria for substance use disorder? How would you rate it in terms of severity? Use Handout #03

DSM 5 CRITERIA

"He has tried a number of times in the past year to cut down and/or stop but cannot. "	Criteria # 2
"At times it is the withdrawal…"	Criteria #11
"… he has this overwhelming desire to use… "	Criteria #4
"… he spends a good part of his day seeking out his next "fix"	Criteria #3
"… he has not been going to any of his daughter's hockey games because he is usually getting his drugs…"	Criteria #7
"He has also been arguing with his wife… she is threatening to leave"	Criteria #6
"… problems at his workplace …"	Criteria #5
Total	7 Criteria = Severe

CHAT TASK: What other information do you need from Brian?

OTHER ISSUES

- Other drug use
- Medical hx (Asthma/Hep C/HIV status known)
- Psychiatric hx
- Medications
- Allergies
- Prior treatment (detox, rehab, including prior methadone/buprenorphine treatment etc)?
- Relative contraindications to buprenorphine (ETOH; ASTHMA; BZD; etc.)

Bonus Question: If Brian tells you he drinks – how could you assess this?

Answer: You could use the AUDIT-C or AUDIT and discuss with Brian.

WHAT'S NEXT?

- Brian's history is positive for anxiety and hypertension. He currently takes Coversyl for BP control and Paxil for anxiety.
- You confirm that Brian has an OUD based upon the DSM criteria. You give him information on Buprenorphine and review the Buprenorphine treatment agreement with the patient.
- You decide to start induction the following morning.

CHAT TASK:

Based upon the drugs used, what instructions do you give Brian in terms of preparation for the following morning?

Instructions for Brian

- At least 12 hours drug free
- Arrive early in the am
- Be prepared for a couple of visits to the clinic on day 1 – have someone to drive you.

BRIAN'S FIRST VISIT

- Brian arrives the next day at the clinic. The patient is in the office when you arrive. He appears comfortable but says he does feel some mild joint pain. He also reports feeling restless and chilled and says he is "shaking" inside and is more irritable and anxious. He denies any gut or bowel symptoms.
- On exam, Brian is sitting still in your office. His resting pulse is 74 and there is no evidence of tremor or flushing. His pupils are small for the room light. There is mild nasal stuffiness. He has yawned once since coming into your office. His skin is smooth to touch.

CHAT TASK: Based upon this description,

what would Brian's COWS score be? What's the next step for Brian?

Use Handout #04

BRIAN

Induction Day 1:
Visit 1 (0830)

COWS = 7

Patient's Name: BRIAN Date and Time 3/21/ : 9:00am

Reason for this assessment: INDUCTION DAY 1 VISIT #1

Resting Pulse Rate: 74 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 1/2 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 1/2 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 or 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 7 The total score is the sum of all 11 items Initials of person completing assessment: _____

BRIAN DAY 1: VISIT # 2 (12:30)

Brian returns 4 hours later. He still reports mild joint pains but now has gut cramping. He reports feeling quite anxious. On exam he is still able to sit still but says it is more difficult. During the interview he yawned once. His pulse is now 96 bpm. His pupils appear somewhat larger than normal. He is obviously flushed with observable moisture on his face and neck. He has some nasal stuffiness and mild gooseflesh can be felt on the arm. The patient also has slight tremor when his arms are extended.

CHAT TASK: Based upon this description,
what would Brian's COWS score be and what would you do next?

DAY 1 VISIT #2

A: COWS scale = 15

APPENDIX 1
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: BRIAN Date and Time 03/21 1:00pm

Reason for this assessment: INDUCTION DAY 1 VISIT # 2

Resting Pulse Rate: 96 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 1/2 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 1/2 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 or 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 15 The total score is the sum of all 11 items Initials of person completing assessment: SJD

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

This version may be copied and used clinically.

BRIAN DAY 1: VISIT #2

CHAT TASK: What dose do you start with? When do you re-assess the patient again?

BRIAN

A: You give Brian **4 mg of Buprenorphine/Naloxone** and ask him to come back in **one hour** after taking the dose.

DAY 1	COWS Score	DOSE
900 hrs of day 1 Visit #1	14	4 mg
1200 hrs of day 1 Visit #2	(a) <5 (b) 6-12 (c) >12	(a) 0 (b) 2mg (b) 4 mg
1600 hr of day 1 Visit # 3	(a) <5 (a) 6-12 (c) >12	(a) 0 (b) 2 mg (c) 4 mg Max Dose Day 1 = 12 mg

Brian Day 1: Visit #3 (1:30pm) & Visit #4 (4:30pm)

Brian comes back to your office in an hour and is stable with no signs of precipitated withdrawal. You ask him to go again and come back in 2-3 hours. When Brian comes back at the end of your office clinic, he says that the pill seemed to help somewhat but he is still feeling sick. You repeat the COWS and the score is 12.

CHAT TASK: What dose do you offer Brian at this time? How do you plan to deal with Brian's symptoms overnight?

BRIAN DAY 1: VISIT #4 (4:30PM)

- His COWS score is still high at 12 – you Rx another 4mg of Buprenorphine/Naloxone. It is later in the day and your office closes @ 5pm. You may either:
  - i) see Brian in another 3 hours in your office (8pm or so) and dose him accordingly at that time
- OR
  - ii) give Brian the SOWS (Subjective Opioid Withdrawal Scale) scale and a Rx for 2 x 2 mg tabs to take home to use 2 -3 hours apart if the SOWS >/= 17 on each assessment.

DOSE: 4mg (1pm) + 4mg (4pm) + 2mg (8pm) + 2mg (10-11pm) = 12mg = **Max dose for Day 1**

BRIAN DAY 2: VISIT #1 (8:30 AM)

Brian sees you early on the second day. He took both take home doses you gave (for a total of 12mg on Day 1) and feels good. He still feels some withdrawal but nothing significant. He does not report any excess drowsiness or nausea and is happy to continue.

CHAT TASK: What is Brian's starting dose on Day 2?

When do you ask Brian to come back in?

BRIAN DAY 2: (VISIT #1)

Answer: You give Brian the total dose for Day 1. That is, 12mg as a single starting dose for day two and arrange to see him 3-4 hrs after the dosing.

BRIAN DAY 2: VISIT #2 (3PM)

You see Brian in your office @ 3pm on day 2 and repeat the COWS score. He feels the 12 has worn off a little and his COWS score has gone up to 7.

CHAT TASK: What do you do next?

When do you see Brian again?

BRIAN DAY 2 (VISIT #2)

Answer: You can give Brian another 2 (or 4) mg at the pharmacy. You write his Rx for the first morning dose on Day 3 to reflect the total dose taken on Day 2, that is, 14 to 16 mg. You arrange to see him later in the day on Day 3.

BRIAN DAY 3: VISIT #1 (3:30PM)

Brian comes back to see you mid afternoon on Day 3. He took the total dose for Day 2 (14mg) as a single dose this am and is feeling great. He has no signs or symptoms of withdrawal (COWS <5) and says the first thing he thought about this morning was breakfast!

CHAT TASK: What dose will you write for Brian moving forward? When do you want to see him again?

BRIAN DAY 3

Answer: You continue Brian @ 14mg daily at the pharmacy (i.e. witnessed dosing) and see him within the next 7 days if possible.

Induction Summary

	Visit	Time	COWS	DOSE	Total Daily Dose
Day One	1	8:30 am	7	0mg	
	2	12:30 pm	15	4mg	
Check for PW	3	1:30 pm	15	0mg	
	4	4:30 pm	12	4mg + 2 x 2mg TH	12mg
Day Two	1	8:30 am	Not Done	12mg	
	2	3:30pm	7	2mg	14mg
Day Three	1	1:30pm	<5	0mg	14mg
Days Four to Seven					14mg

Case Studies

Urine Drug Screens (Dr. Hollett)
Carry Doses (Dr. Stanford)
Resistant Patients (Dr. Acevedo)

Handout #021 SAD Case Studies

PROVINCIAL RESOURCES

Provincial Opioid Dependence Treatment Centre of Excellence

- Supporting the implementation of the provincial ODT Hub and Spoke Model
- Supporting the implementation of evidence-informed ODT practices
- Strengthening ODT performance monitoring and evaluation
- Increasing opportunities for stakeholder collaboration
- Strengthening Harm Reduction education, program, policy and practice development
- Increasing opportunities for knowledge exchange and care provider development

Project ECHO NL: Opioid Use Disorder

- Virtual community of practice advancing care and treatment for opioid use disorder in Newfoundland and Labrador
- Supporting primary care providers and their teams build capacity in the treatment and management of opioid use disorder
- Certified by the College of Family Physicians of Canada and the Newfoundland and Labrador Chapter for up to 10 Mainpro+ credits
- More information about **Project ECHO NL: Opioid Use Disorder**, including frequently asked questions, can be found at **https://mha.easternhealth.ca/echo**

Provincial ODT Hub and Spoke Model