Opioid Harm Reduction: In the Office and in the Hospital

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Faculty/Presenter Disclosure

- **Faculty/Speaker's name: Leslie Lappalainen**
- **Relationships with financial sponsors:**
  - **Grants/Research Support:** research fellowship sponsored by National Institute on Drug Abuse (NIDA) (previous)
  - **Speakers Bureau/Honoraria:** none
  - **Consulting Fees:** none
  - **Patents**: none
  - **Other:** Interior Health, British Columbia Centre on Substance Use (BCCSU)

Disclosure of Financial Support

- **I have NOT received financial support or in-kind support from any commercial interest.**

- **<u>Potential for conflict(s) of interest</u>:**
  - None

Mitigating Potential Bias

- No sources of bias

Objectives

- **Using a case presentation we will:**
  - Review the mechanism of action of buprenorphine/naloxone
  - Review how to initiate buprenorphine/naloxone and provide ongoing care
  - Review general harm reduction strategies around opioid prescribing and opioid use disorder for:
    - in the office and
    - in hospital

Case 1: Graham

- 28 yo M
- Rotator cuff injury 5 years ago → percocet
- Escalating doses, switch to HM
- Break up with GF, job loss → began chewing then snorting HM
- Requesting early refills ++, concerns raised re: overuse → opioids stopped 1 yr ago
- Since → smoking heroin/fentanyl ~ 1g/day
- Good friend had fatal OD last week
- Comes to office, last use: 18 hours ago, wants to go to ‘detox’

Management of Opioid Use Disorder

- Is detox a good idea??
  - Withdrawal management (ie. detox) is NOT recommended as a standalone treatment for OUD
    - ≥ 90% relapse, most within 7 days (Strang et al. 2003)
    - Increased risk of overdose and death (Luty et al. 2003)
    - Associated with increased risk of HIV, HCV infection among PWID (MacArthur et al. 2012)

- Opioid agonist therapy is mainstay of treatment for OUD
  - Buprenorphine/naloxone is recommended first line agent given superior safety data (BCCSU Guidelines 2017)

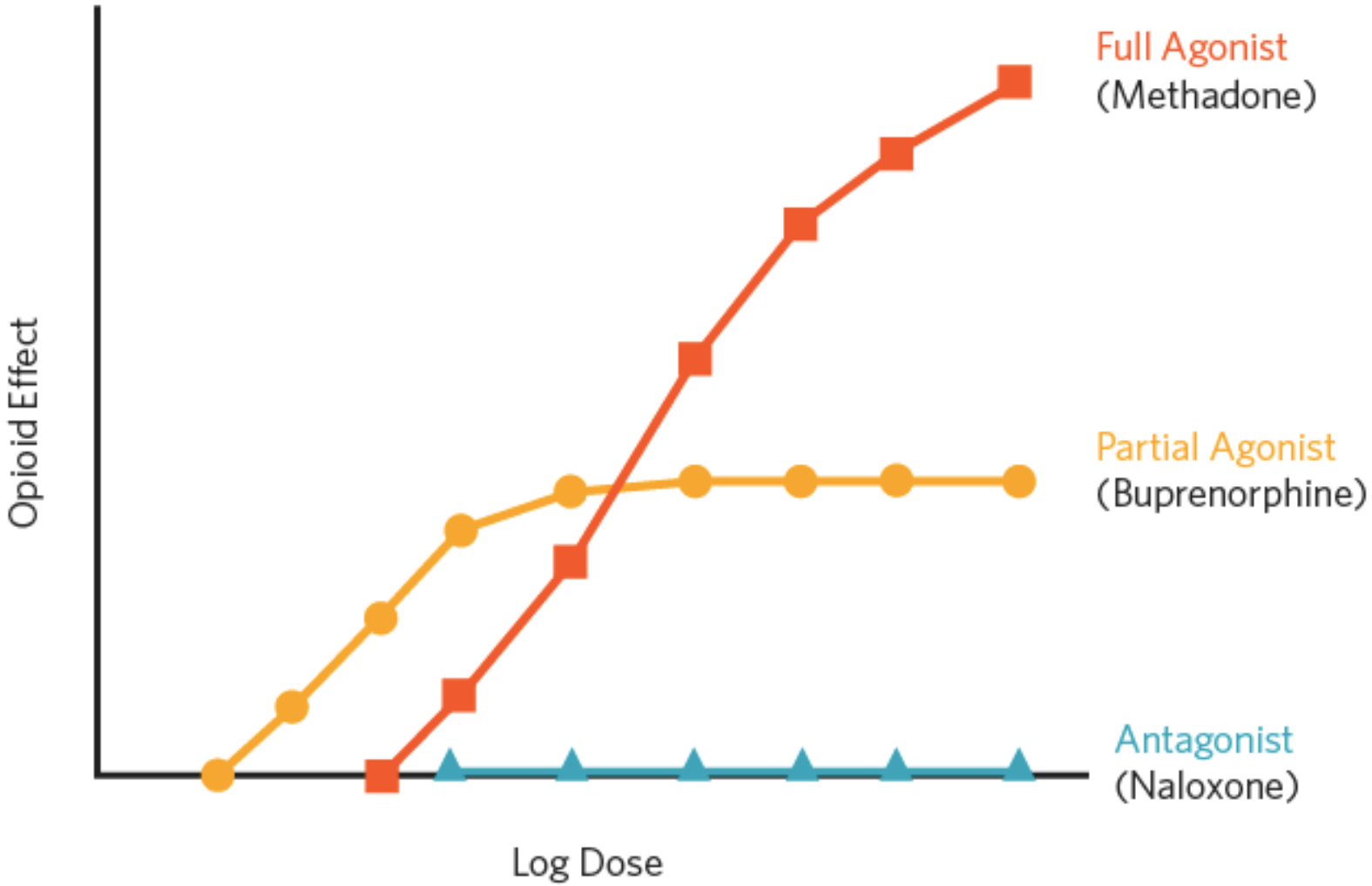
Buprenorphine/naloxone (Suboxone®)

- Each tablet contains buprenorphine and naloxone in a 4:1 ratio
  - 2mg tab = 2mg buprenorphine/0.5mg naloxone
  - 8mg tab = 8mg buprenorphine/2mg naloxone
- Given sublingual (SL) – buccal absorption
  - ~ 10 mins to dissolve
  - During this time advise patient: no talking, eating, drinking, patient to try not to swallow saliva
- The naloxone component is included ONLY to prevent diversion and injection.
  - The naloxone component is not bioavailable when taken SL, but is bioavailable if injected or snorted

Buprenorphine/naloxone (Suboxone®)

- Buprenorphine is a synthetic partial opioid agonist
  - Has very high affinity for the mu-opioid receptor (very 'sticky' to the receptor)
    - If buprenorphine is given while patient has full opioid agonists on board it will displace them from the receptor (causing 'precipitated withdrawal')
  - Partial opioid agonist
    - Provides enough opioid receptor stimulation to alleviate opioid withdrawal, reduce cravings, and provides overdose protection especially with dose ≥ 16 mg
    - Has lower intrinsic opioid activity than full agonists
    - Ceiling effect in terms of respiratory depression (safer than methadone, and other full opioid agonists)

Review: Dosage Response of Full Agonists, Partial Agonists and Antagonists



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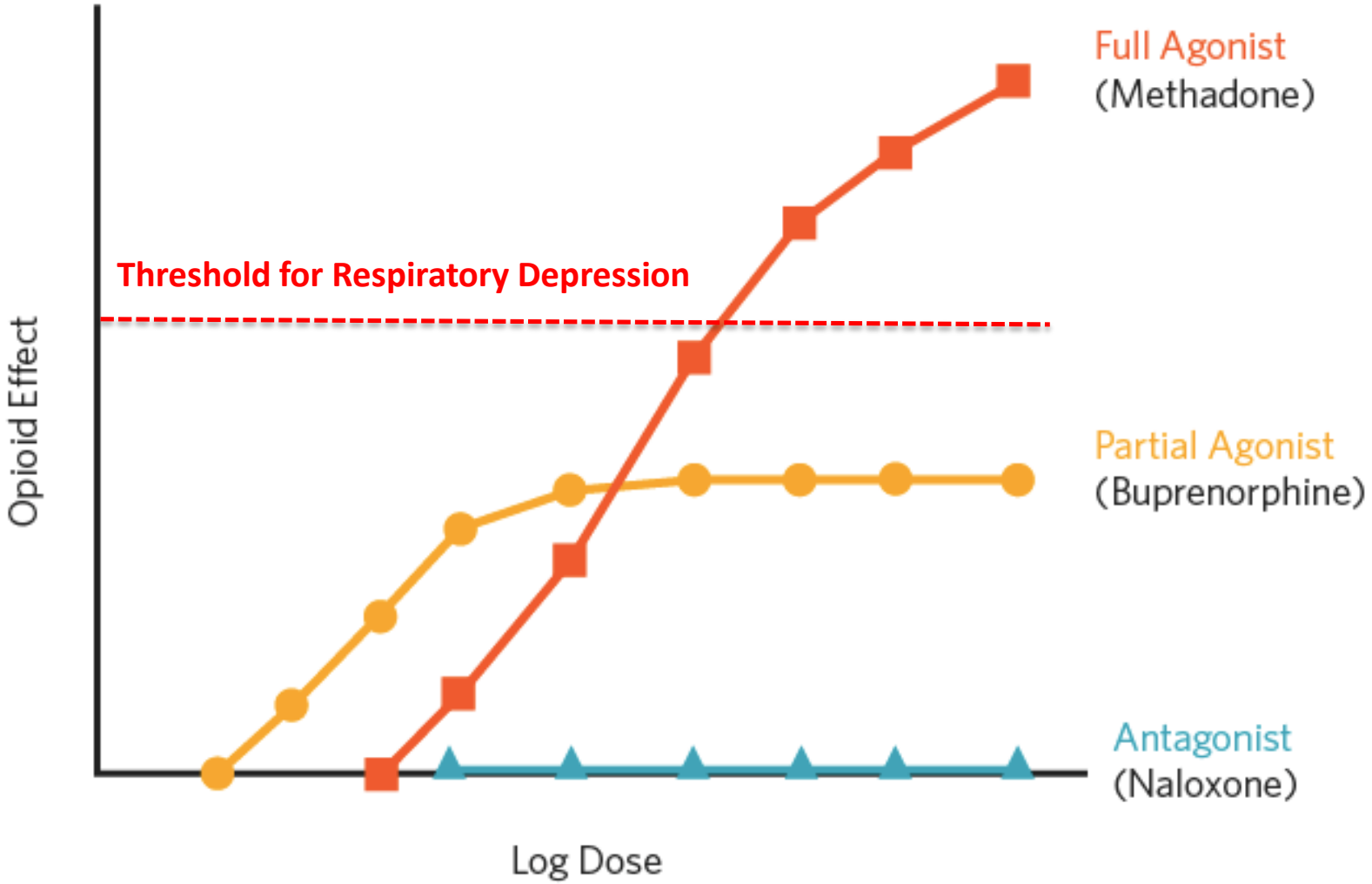
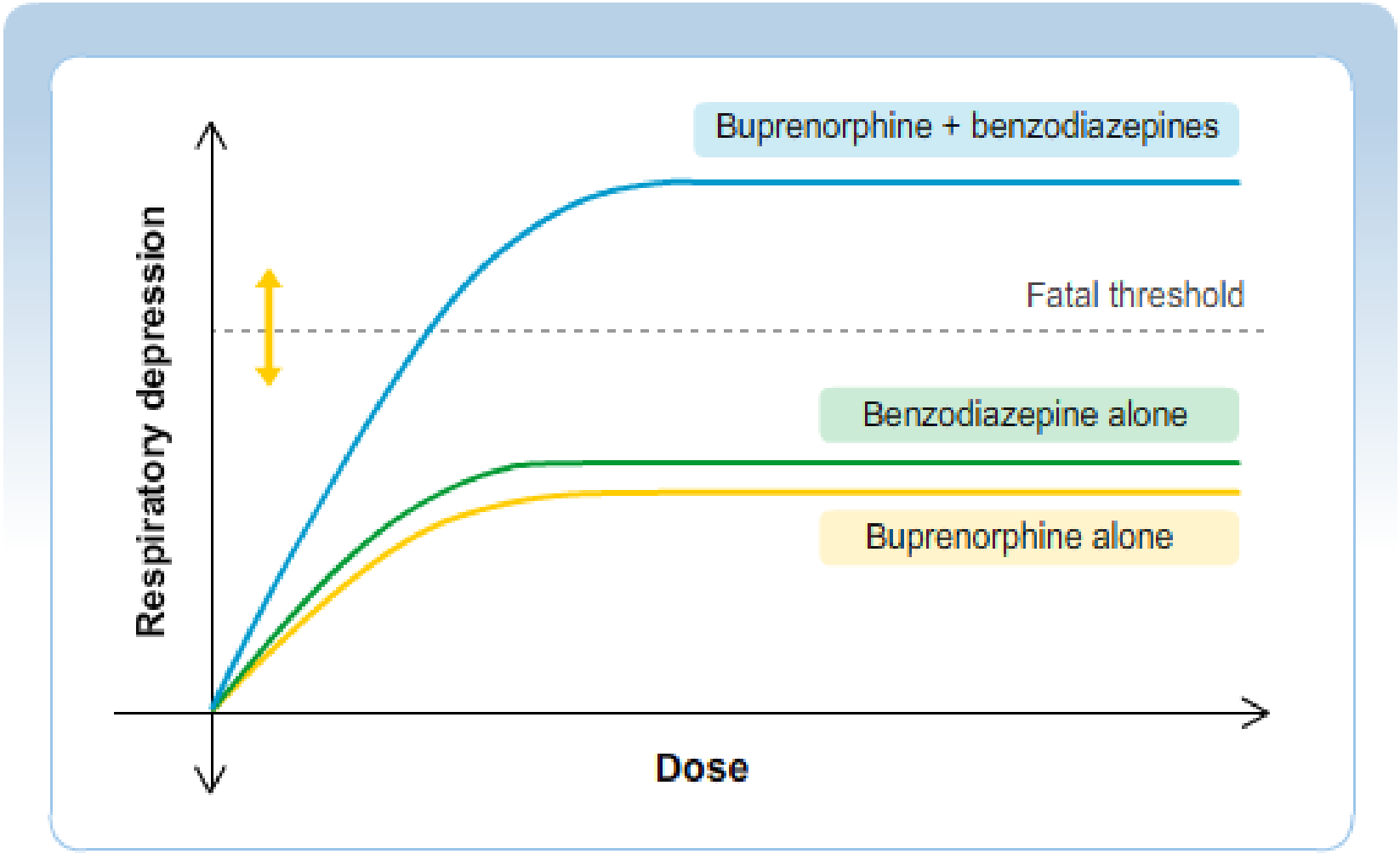
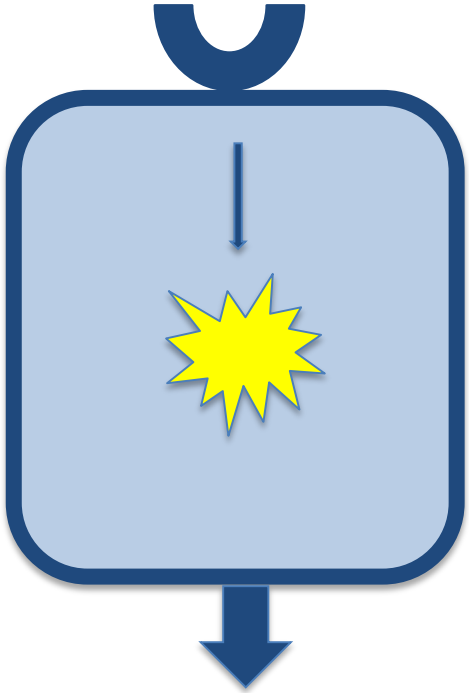


Additive effects of buprenorphine and benzodiazepines



Full Agonist
(i.e. heroin, methadone, morphine)

Partial Agonist
(i.e. buprenorphine)



Partial activation

Opioid withdrawal

- bup/nlx is started when a patient is in opioid withdrawal (to minimize risk of precipitated withdrawal)
- Time course
  - Symptoms start ~ 6 hours after last use of short-acting opioids, and peak at 2-3 days, and physical symptoms resolve by 5-7 days (psychological symptoms, such as craving can last much longer)
- Physical symptoms = ‘bad flu’
  - chills, sweating, nausea/vomiting, loose stools, piloerection (goosebumps), myalgias/arthralgias
- Physiological symptoms
  - Anxiety, irritability, drug craving, insomnia

Opioid withdrawal

- Can use the Clinical Opioid Withdrawal Scale (COWS) to quantify withdrawal
  - Analogous to a CIWA for alcohol withdrawal

Resting Pulse Rate: (record beats per 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				
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				
Restlessness *Observation during assessmen*t 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				
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				
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				
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				

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				
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				
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				
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				
Gooseflesh skin 0 skin is smooth 3 piloerrection of skin can be felt or hairs standing up on arms 5 prominent piloerrection				
Total scores **with observer's initials**				

Bup/nlx induction

- To avoid precipitated withdrawal, patient should not be given bup/nx until:
  - **at least 12 hours since last opioid use (24 hours if using long-acting opioids) AND**
  - **patient has withdrawal symptoms (COW scale ≥ 13)**
- Initial dose of bup/nlx 2-4mg given SL
- Patient reassessed using COW Scale 60 mins after initial dose
  - As long as COWS score decreasing – give 2-4mg SL q60-90 min PRN to max dose of 12mg on day 1
    - Reasonable to give as take home doses

Case 1: Graham

- Agreeable to buprenorphine/naloxone start
- Last use: 18 hours ago, COWS score: 22
- Takes 4 mg, and score decreases to 16
- Given 4 x 2mg take home doses
- See him the following morning, used all doses (12 mg total), mild-mod cravings
- Increase dose to 16mg and cravings improve, no illicit use
  - Improved treatment outcomes ≥ 16mg (Mattick et al. 2014)

Ongoing care for bup/nlx

- Blister pack with 1 WI/week for most patients with overall clinical and social stability
- See monthly (more frequently until stable)
- Random UDS 4x/year
- Helpful resources:
  - BCCSU/UBC CPD Course → bup/nlx modules
  - BCCSU guidelines on management of OUD
  - BCCSU practice support tools re: MSP billing codes
  - Provincial RACE line
  - Local: OAT Clinic/Rapid Access clinic, KGH addiction docs

HARM REDUCTION PRINCIPLES

General Harm Reduction Principles for in the Office

- **Chronic pain patients on opioids**
  - Gradual tapers preferable
    - 10-15% at a time, q2-4 weeks
  - Avoid co-prescription of benzos and opioids
  - Urine Drug Screens
    - Can be a tool to have a conversation
    - Know their limitations
    - Consider having point of care cups (with fentanyl testing!)
  - If concerns re: overuse or other illicit drug use:
    - closer monitoring and tighter dispensing intervals (think of how you would manage a 'sick' patient)
    - Dispense biweekly, weekly or even daily
    - Consider DWI slow release oral morphine if + concerns

General Harm Reduction Principles for in the Office

- **Opioid Use Disorder (OUD):**
  - Encourage opioid agonist therapy as 1st line treatment
  - Recommend AGAINST withdrawal management as standalone intervention
  - Take Home Naloxone Kit (towardstheheart.ca)
  - Encourage to not use alone (stigma!)
  - Encourage overdose prevention site/supervised consumption site

General Harm Reduction Principles for in Hospital

- ER/hospital visit can be catalyst for change
  - OAT start whenever possible
- For patients with OUD:
  - Hospital can be a risky environment
    - Difficult to access harm reduction supplies, inject in unsafe places because of fear (locked bathrooms, alleys, etc.)
  - Consider morphine oral liquid PRN for opioid withdrawal or cravings to:
    - Prevent from leaving AMA
    - Prevent illicit use in hospital

Thank you