Medication Assisted Treatment (MAT) and Transitions of Care

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LEARNING OBJECTIVES

- Identify Patients Appropriate for Treatment with Buprenorphine/Naloxone
- Compare Buprenorphine Induction Protocols Clinic vs Home
- Recognize the Process of Stabilizing, Maintaining, Modifying Treatment Plan of Patients on Buprenorphine
- Describe NSS-2 Bridge Device and its Impact on Transitions of Care for OUD

OPIOID USE DISORDER RISK FACTORS

- Risk factors for opioid misuse:
  - Chronic Opioid Use – increased occurrence in adolescent related sports injuries
  - Untreated psychiatric disorders
  - Past or current substance use
  - History of alcohol and/or Benzodiazepine use
  - Youth and adolescents
  - Social or family environments that encourage misuse.
  - Comorbid psychiatric illness
  - Living in rural areas and having low income
  - History of Incarceration
- About 1 in 20 patients treated for a nonfatal opioid overdose in an emergency department (ED) died within 1 year of their visit, many within 2 days.
  - Deaths by overdose/addiction last year increased by 30% (2020) vs prior years. 90,000 deaths reported.
- Two-thirds of these deaths were directly attributed to subsequent opioid-related overdoses.
- Immediate treatment for substance use disorder in the ED that continues after discharge is recommended and in need to reduce opioid-related deaths.

https://www.cdc.gov/rxawareness/pdf/Overview-Rx-Awareness-Resources.pdf

MEDICATIONS FOR OPIOID USE DISORDER

- Long term maintenance therapy (18 months or more)
- 3 FDA approved medications:
  - **Methadone**
  - **Buprenorphine**
  - **Naltrexone**

MEDICATION-ASSISTED THERAPY

Assessment of Patients Appropriate for Buprenorphine/Naloxone

- Screenings first begin when an applicant first contacts an Opioid Treatment Provider
- The time between first contact, initial screening and the subsequent time to clinic visit/virtual visit with a provider impact the success of the patient and their recovery journey
- Federal regulations state that, in general opioid pharmacotherapy is appropriate for persons who are 18 years of age and currently using opiates/addicted at least 1 year
    - A medical provider can invoke the 1 year exception requirement for persons released from correctional facilities (within 6 months of release), pregnant patients, and previously treated patients (up to 2 years after discharge) CFR, Part 8 § 12(e)(3))

PROVIDING RELIEF FOR PATIENTS ON THE DAY YOU SEE THEM… MEDICATION ASSISTED TREATMENT

MAT TREATMENT GOALS

- Decrease illicit opioid use
  - Abstinence vs harm reduction/risk reduction.
- Reduce transmission of Hepatitis C
  - Abstinence of use vs harm reduction/risk reduction via Syringe Services Program
- Reduce transmission of HIV
- Decrease criminal behavior/recidivism
- Reduce high risk sexual behaviors (e.g., trading sex for money/drugs)
- Improve social functioning
- Decrease overdose and death
- Positive Change (patient specific) but include having more tools for more successful contribution to society

MAT TREATMENT GOALS

- Always incorporate a patient's goals when developing a treatment plan, which may include:
  - Current interest in treatment
  - Interest in abstinence based treatment versus MAT
  - Work, community, justice supports
  - Understand risk/benefits of approaches
    - Have they diverted in the past?
  - Agrees to clinic contract, safety precautions
  - Adherence
  - Financial resources – insured vs uninsured. Can be cost prohibitive if uninsured
  - Availability of wrap-around care

PATIENT ASSESSMENT

- Physical Examination
  - Vitals
  - Signs of injection; edema of extremities (methadone induced or puffy hand syndrome)
  - Jaundice
  - Signs of: abscesses, cellulitis, endocarditis, tuberculosis
  - Signs of opioid withdrawal or intoxication
- Lab tests
  - CMP/CBC, Viral Hep B/Hep C, HIV, TB
  - STI Screening

PATIENT ASSESSMENT

- Psychiatric Assessment
  - Severe, unstable, under/untreated illness
  - Psychoactive medication therapy
- Substance Use
  - Opioid of choice, route, frequency, amount, duration
  - Other Drugs of Use
  - PDMP history
  - Toxicology screen for substances
    - Fentanyl is not screened on a 13 point UDS screening as the test is not CLIA waived. Must send in for confirmation which can be time challenging
- Substance Use Treatment
  - Past treatment types IP vs OP
  - Results of treatment
    - Reduction/cessation of use
    - Duration of cessation

ASSESSMENT OF OPIOID WITHDRAWAL MEASUREMENT TOOLS

Clinical Opioid Withdrawal Scale (COWS)

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

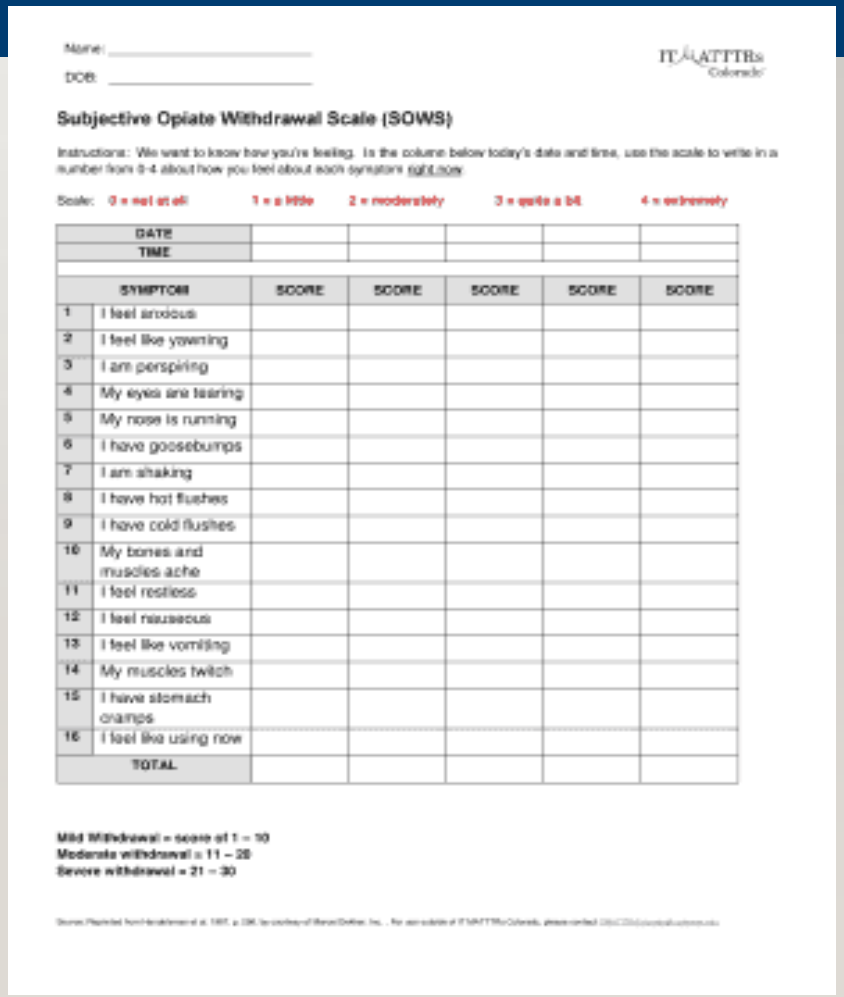
ASSESSMENT OF OPIOID WITHDRAWAL MEASUREMENT TOOLS

- Clinical Opiate Withdrawal Scale (COWS)
  - Clinician-rated tool to assess opioid withdrawal symptoms
  - Items are scored 0 to 4/5 based on intensity of symptoms, higher score, greater intensity
  - Scoring:
    - 5-12 Mild
    - 13-24 Moderate
    - 25-36 Moderately severe
    - >36 Severe withdrawal

ASSESSMENT OF OPIOID WITHDRAWAL MEASUREMENT TOOLS

Subjective Opiate Withdrawal Scale (SOWS)

- Patient-rated tool to assess opioid withdrawal symptoms
- Items are scored 0 to 4 based on intensity of symptoms, higher score, greater intensity
- Scoring:
  - 1-10 Mild
  - 11-20 Moderate
  - >21 Severe



Name: _____

DOB: _____

IT'S ATTTRs Colorado

Subjective Opiate Withdrawal Scale (SOWS)

Instructions: We want to know how you're feeling. In the column below today's date and time, use the scale to write in a number from 0-4 about how you feel about each symptom right now.

Scale: 0 = not at all 1 = a little 2 = moderately 3 = quite a bit 4 = extremely

	DATE					
	TIME					
	SYMPTOM	SCORE	SCORE	SCORE	SCORE	SCORE
1	I feel anxious					
2	I feel like yawning					
3	I am perspiring					
4	My eyes are tearing					
5	My nose is running					
6	I have goosebumps					
7	I am shaking					
8	I have hot flushes					
9	I have cold flushes					
10	My bones and muscles ache					
11	I feel restless					
12	I feel nauseous					
13	I feel like vomiting					
14	My muscles twitch					
15	I have stomach cramps					
16	I feel like using now					
	TOTAL					

Mild Withdrawal = score of 1 – 10
Moderate withdrawal = 11 – 20
Severe withdrawal = 21 – 30

MAT : PLACE IN THE “TOOLBOX”

- One of the many tools in the “recovery toolbox”
- Reduce cravings which can help stabilize & strengthen coping capacity
- Increase periods of abstinence & instill a sense of self-efficacy
- Allows patients to focus on behavioral therapies
- Improve clinical outcomes for patients & reduce impact on families

TIMING BUPRENORPHINE INDUCTION TREATMENT

- Short Acting Opioid
  - 12 hour since last use of heroin/fentanyl
  - 12 hours since last nasal ingestion (OxyContin)
  - 12-24 hours since last oral ingestion of short acting opioids
- Last Long Acting Opioid
  - 36-72 hours since last oral ingestion of long acting opioids

BUPRENORPHINE CLINIC INDUCTION & TREATMENT

- COWS score of 6-10 is observed. Others prefer a score of 11-12.
- SOWS score 12 or greater
- Administer the first dose 2-4 mg under observation
- Keep patient in office for at least an hour to determine effect of first dose. Administer 2nd dose if symptomatic
- Day 1 dosing: ~ 8-12 mg/day
- Day 2 dosing: the total amount of buprenorphine the patient took on day 1. Maximum Day 2 dose: 12-16 mg
- Day 3 dosing: the total amount of buprenorphine the patient took on day 2. Day 2 dose = Day 3 dose
- Day 4-7 dosing: the total amount of buprenorphine the patient took on Day 2.
- Patients contact and/or come to office day 2-3 for follow up
- Provide sufficient medication for 3-4 days until the next visit

- Family member or similar to go to pharmacy for Buprenorphine prior to induction
- Urine specimen @ each visit, clinic agreement
- Psychosocial treatment strongly recommended
- Referral for SUD assessment
- When stable, advance treatment
  - Initial 1 week supply and graduate to increased time between appointments
- If relapse, resume weekly visits

BUPRENORPHINE HOME INDUCTION & TREATMENT

- SOWS score should be ≥ 17 (higher if tolerated) before taking the first dose of buprenorphine
  - Minimum of 3 withdrawal symptoms (restlessness, heavy yawning, dilated pupils, rhinorrhea, myalgia, tremor, piloerection, anxious, chills/sweating, gi/gu symptoms)
- Day 1:
  - 8-12 mg buprenorphine. Most people feel better the first day after 8-12 mg
  - Step 1:
    - Take 1st dose – 4 mg. Wait 1 hour.
  - Step 2:
    - Still feeling ill – take 2nd dose – 4 mg. Wait 2 hours
      - Most feel better after 2 doses or 8 mg
  - Step 3:
    - Still uncomfortable – take 3rd dose – 4 mg. Wait 2 hours
      - Take the 3rd dose only as needed.
  - Step 4:
    - Still uncomfortable – take 4th dose – 4 mg. STOP. If symptoms persist, take a fourth dose (4 mg). – If symptoms persist, call to talk with the provider or office staff. Maximum Day 1 dose: 16 mg total.
    - Assign provider or office staff member to check in with patient by phone throughout day.
- Day 2:
  - 8-12 mg buprenorphine. Most people feel better the following day after 8-16 mg. If feels well, take same dose as day 1. if withdrawal symptoms present, take the dose from day 1 with 4 mg. If symptoms more than 2 hours after initial 4 mg, can take additional 4 mg every 2 hours up to 16 mg/day.

OFFICE BASED INDUCTION VS UNOBSERVED (HOME) INDUCTION? WHICH IS RIGHT FOR THIS PATIENT:

- For patients with good support system: home induction may be appropriate.
  - Strong support system preferred
  - Patients may feel more comfortable
  - Transportation barriers
  - COVID-19 TeleHealth Services
- For patients without good support systems, clinic induction may be appropriate
  - An opportunity for building networks, connection, trust
  - Waiting long enough for full withdrawal can be difficult at home. Patients may not be in full withdrawal when they start treatment, increasing the chance of precipitated withdrawal
- Interesting statistic:
  - Drop out rate similar between both home and clinic induction as measured by those who did not return for clinic follow in one week.

BUPRENORPHINE MAINTENANCE

- Maintenance dose ~8-24mg per day
- Patients can successfully be maintained at lower doses
- Typically take oral dosage forms daily, but can take every other day (T1/2=36 hours)
- Concerns of risk of diversion at higher levels

- Possible Adverse Effects:
  - Diaphoresis
  - Constipation
  - Headache
  - Insomnia
  - Nausea / Vomiting
  - Hypotension
  - Sexual dysfunction
    - >Male related vs female
  - Seizures
  - Hepatitis, hepatotoxicity

TRANSITIONS OF CARE - CANDIDATES FOR ORAL OR LAI NALTREXONE (ANTAGONIST) BUT HOW TO GET THEM THERE

- Patients not able to be on agonist (buprenorphine or methadone)
  - High motivation for abstinence
  - Profession where treatment with agonist controversial
- Patients successful on agonist but want to try abstinence
- Failed prior treatment with agonist
- Abstinent, but at risk for relapse
- Patients for whom relapse would be disastrous
- Patient with less severe form of disorder
  - Short history of use, lower level of use

TRANSITIONS OF CARE: NSS-2 BRIDGE DEVICE

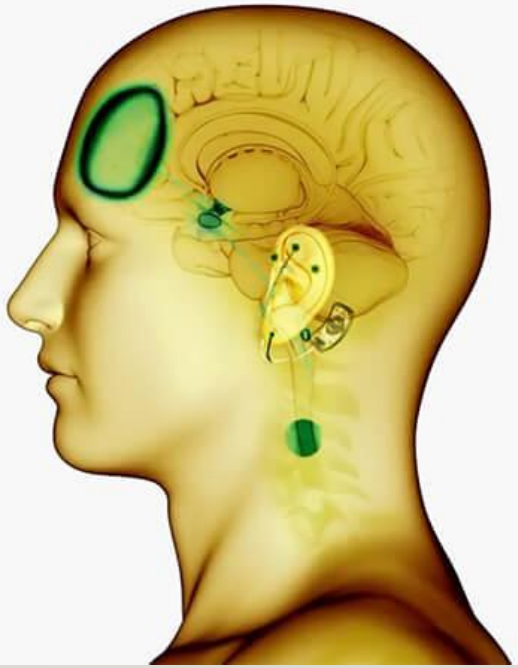
NSS-2 BRIDGE

A New Device to Reduce Opiate Withdrawal Symptoms

The NSS-2 Bridge is the latest technology to assist in alleviating many of the uncomfortable symptoms associated with withdrawal and its effects can be felt in as quickly as 30 minutes.

EVIDENCE BASED: All treatment is scientifically researched and proven.

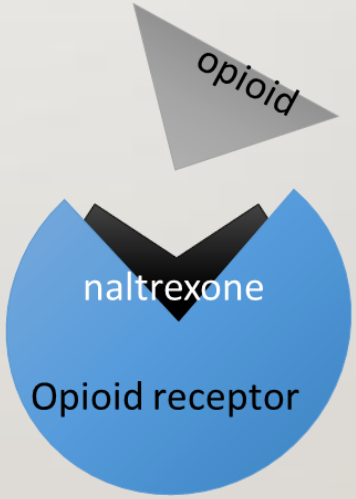
CALL (800) 444-1838 TO FIND OUT HOW THE NSS-2 CAN HELP YOU



NSS-2 BRIDGE DEVICE

ORAL NALTREXONE OR LAI VIVITROL

- Limitations: **requires completed withdrawal (7-14 days)** from opioids (will precipitate withdrawal if taken with opioids in the system); requires highly motivated patient. Helpful to incorporate application of the Bridge Device.
- Benefits: prevents opioid intoxication and dependence, reinforces abstinence, efficacy in opioid use disorder, no addiction potential, long acting injectable, drop out rate as high as 70-80% due to withdrawal as necessity prior to initiation. 39% drop out with injectable.
- Risks***: may have increase risk of death from overdose due to decrease in tolerance with receptor blockade (depending upon dose of opioid used in relapse)***



ANTAGONIST: no activation, blocks opioids

NALTREXONE INDUCTION

- No single best method but rather a set of approaches/tools that can be individualized to patient and the treatment team
- Effective method will balance the degree of discomfort and the duration of treatment
- Available as PO and long-acting injectable product
    - PO rarely used in treatment of OUD
- Side effects:
    - Nausea/vomiting
    - Injection site reactions
    - Serious adverse effects: Hepatic injury @ high dose, suicidality
- Contraindications/Monitoring
    - Elevated LFTs/Hepatic dysfunction – ok to use in patients with liver enzymes <3-5 times the threshold of normal. Risk vs benefit conversation.
    - CrCl < 50ml/min
    - Recent opioid use (requires opioid wash out 7-14 days)
    - Pain requiring opioids

RESOURCES FOR THE CLINICIAN

- Medication-Assisted Treatment of Opioid Use Disorder Pocket Guide
  - https://store.samhsa.gov/system/files/sma16-4892pg.pdf
- Opioid Treatment Program Directory
  - https://dpt2.samhsa.gov/treatment/
- Buprenorphine Waiver Management (X Waiver or DATA 2000)
  - https://www.samhsa.gov/programs-campaigns/medication-assisted-treatment/training-materials-resources/buprenorphine-waiver
- Implementing Medication-Assisted Treatment for Opioid Use Disorder in Rural Primary Care:
  - https://integrationacademy.ahrq.gov/sites/default/files/mat_for_oud_environmental_scan_volume_1_1.pdf
- Lee, J. D., Grossman, E., DiRocco, D., & Gourevitch, M. N. (2009). Home buprenorphine/naloxone induction in primary care. *Journal of general internal medicine*, *24*(2), 226–232. https://doi.org/10.1007/s11606-008-0866-8
- Prescribe to Prevent
  - https://prescribetoprevent.org/

CLINICAL PEARLS

LEARNING ASSESSMENT

1. NSS-2 Bridge Device can be utilized to bridge onto what antagonist medication for OUD?
    1. Buprenorphine
    2. Methadone
    3. Naltrexone
2. Naltrexone and/or LAI Vivitrol medication side effects may include all except:
    1. Nausea/Vomiting
    2. Increased risk for overdose of opioids due to decrease in tolerance
    3. Non-addictive and not a narcotic
    4. Does not require opioid Detox
3. True or False? There is limited data supporting that the patient remain under direct observation during buprenorphine induction.
4. What is the difference between SOWS and COWS measurement tools?
5. True or False? The drop out rates for both home and clinic induction for week 1 scheduled follow-ups are similar.
6. True or False? MAT is another tool in the “tool” box of recovery and can reduce cravings which can help stabilize & strengthen coping capacity.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Questions or Comments

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