The Conundrum of Managing Pain in Patients with OUD

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Learning Objectives

- Explore how to appropriately assess for pain
- Explain the importance of a holistic approach to chronic pain management
- Summarize important key points on managing pain using buprenorphine
- Discuss using methadone for pain in a patient with OUD

Chronic Pain – The Clash with Addiction

- Chronic pain is "maladaptive" that is not responsive to treatments and lasts for >6 months
- Influenced by growth of several factors <u>distant</u> from initial pain etiology

Psychosocial Factors

- Trauma, depression, anxiety, PTSD, social determinants of health, stigma/shame

Other comorbidities with psychological impact

- COPD, CHF, diabetes, cancer, SUD

Medications

- Polypharmacy increasing risk of ADRs
  - Opioids, benzodiazepines, stimulants, psychotropic medications

Katz J, et al. *Can J Psychiatry*. 2015 Apr;60(4):160-67; Manhapra A, et al. *Med Clin North Am*. 2018 Jul;102(4):745-53.

Appropriate Assessment – "PQRSTU" Method

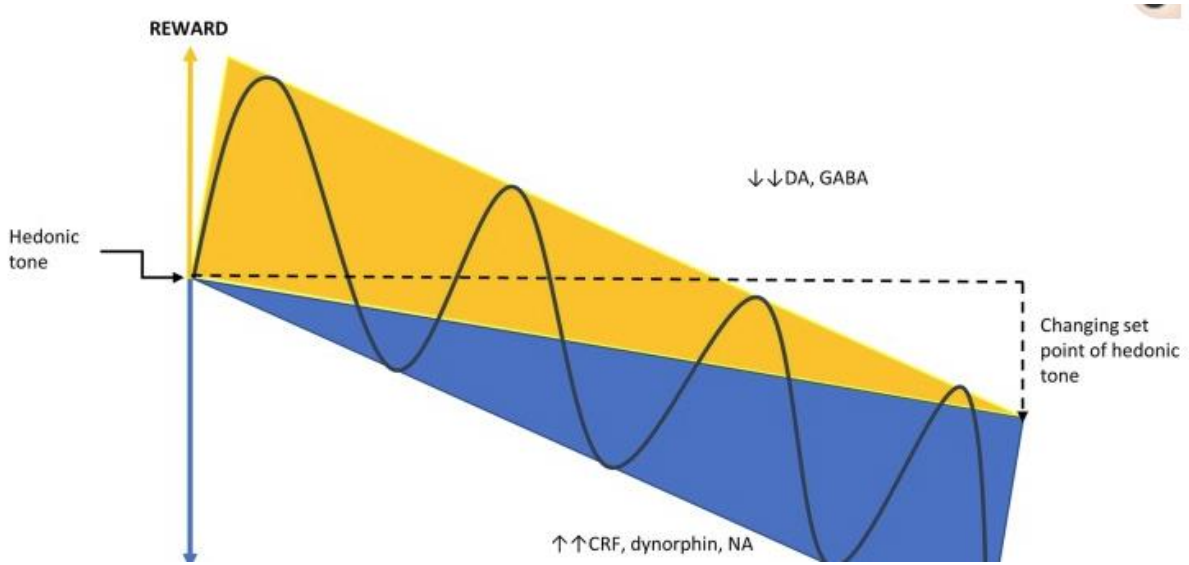
- P = Precipitating and Palliating
- Q = Quality
- R = Region and Radiation
- S = Severity
- T = Temporal
- U = Quality of Life

Focus on a holistic approach

McPherson, Mary Lynn. Demystifying Opioid Conversion Calculations. American Society of Health-System Pharmacists, Inc. *2010*.

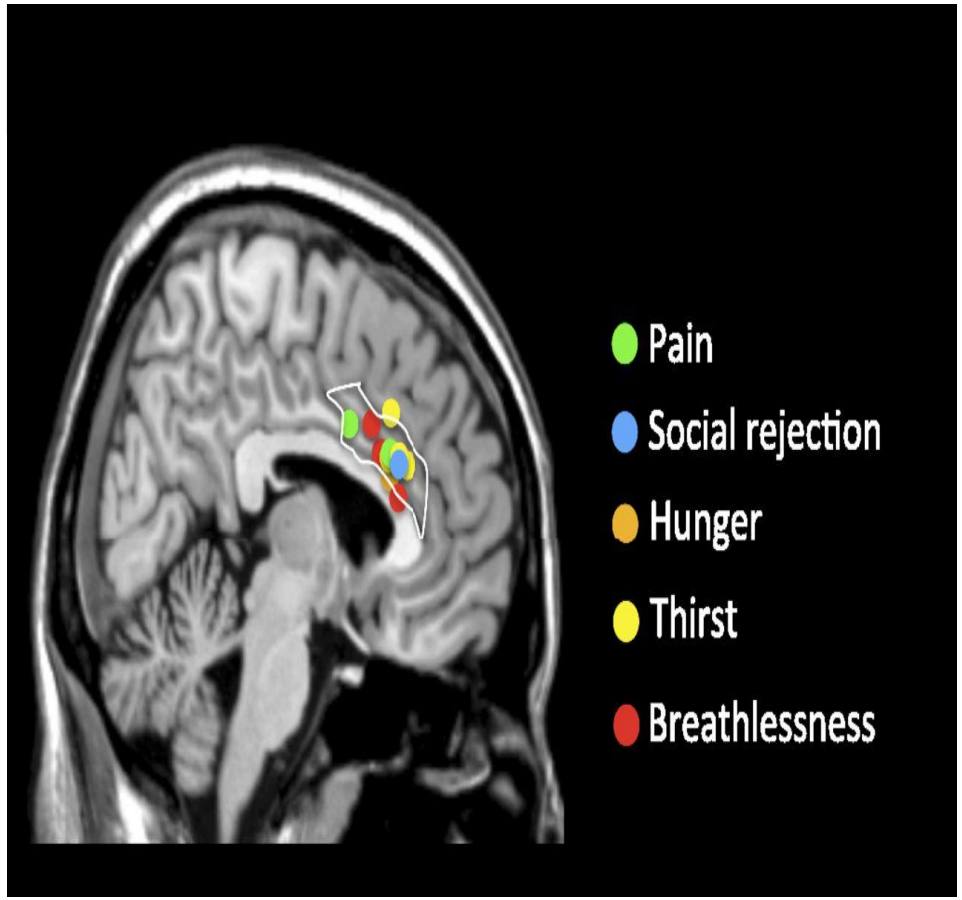
Chronic Pain in Patients with OUD

- 65% had chronic pain conditions often without identifiable cause
  - Enhancement of anhedonia
- Further effects of shame and stigma worsen the chronic pain experience



Hser, Y, et al. *J Subst Abuse Treat.* 2017 Jun;77:26-30; Kakko J, et al. *Front Psychiatry*. 2019 Aug 30:10:592.

Distress and Pain: Dorsal Anterior Cingulate Cortex



https://www.pnas.org/content/112/4/15250

Patients with OUD depend on opioids to get rid of physical **AND** emotional pain

Showing empathy provides similar effects

Chronic Pain Treatment

- Appropriate patient education of what chronic pain is
- Management and control of medical AND psychiatric comorbidities, in addition to SUD treatment
- Eliminate or reducing polypharmacy
- Utilizing non-pharmacological methods such as psychosocial therapy along with treatment
  - Cognitive-behavioral therapy
  - Motivational interviewing
  - Mindfulness
  - Setting realistic goals – NOT eliminating pain altogether
- Using pharmacologic agents judiciously

Buprenorphine

- Highly potent compared to morphine for its analgesic effect
- Does not have a hyperalgesic effect
- Benefits due to its kappa-receptor antagonism
  - Antidepressant/anxiolytic effect
  - Reduces dysphoria
- Doses for analgesia << doses used for OUD
- Use of buprenorphine in patients with OUD may be limited

Key Methadone Pointers

- Synthetic opioid agonist
  - Additional effects on antidepressant and neuropathic pain due to its reuptake of serotonin and norepinephrine and antagonist at the NMDA receptor
- Lipophilic which contributes to its long half-life 8-59 hours which can result in toxicity
  - Takes at least 5-7 days to reach steady-state
  - Should not have **too great** of a positive response before steady-state
  - **Duration of analgesia ≠ Duration of effect**
- Many pharmacodynamic/kinetic drug interactions
- Conversion to/from methadone is NOT linear

Lexicomp Online. Waltham, MA: UpToDate, Inc; July 30, 2021. https://online.lexi.com. Accessed October 6, 2021; McPherson, Mary Lynn. Demystifying Opioid Conversion Calculations. American Society of Health-System Pharmacists, Inc. *2010.*

Cardiac Risk with Methadone

- Risks for QTc prolongation → torsades
  - Structural heart disease
  - History of arrhythmia
  - History of syncope
  - Electrolyte abnormalities (potassium, magnesium)
- Assess benefits vs. risks with QTc between 450-500 ms
- Avoid initiation in those with QTc greater than 500 ms

Lexicomp Online. Waltham, MA: UpToDate, Inc; July 30, 2021. https://online.lexi.com. Accessed October 6, 2021; McPherson, Mary Lynn. Demystifying Opioid Conversion Calculations. American Society of Health-System Pharmacists, Inc. *2010.*

Candidates for Using Methadone for Chronic Pain

- Those who have both OUD and chronic pain especially with an identifiable source
- Neuropathic pain
- Refractory to other opioids
- Cost
- Those who may have difficulty swallowing oral pills and need a long-acting opioid

Lexicomp Online. Waltham, MA: UpToDate, Inc; July 30, 2021. https://online.lexi.com. Accessed October 6, 2021; McPherson, Mary Lynn. Demystifying Opioid Conversion Calculations. American Society of Health-System Pharmacists, Inc. *2010.*

Patient Case #1

SUD/MAT ECHO

Please Note: Project ECHO® case consultations do not create or otherwise establish a provider-patient relationship between any ECHO clinician and any patient whose case is being presented in a Project ECHO® setting. *Complete this form **to the best of your ability** and email to Theresa Hughes at **th638@rwjms.rutgers.edu**.*

Please de-identify cases so that ECHOs can remain HIPAA compliant.

Date:	10/08/2021
Presenter Name:	Nicholas Beam
Organization Name:	RWJ Barnabas Health Institute for Prevention and Recovery
County of Practice:	Essex
Presentation Type:	Case Presentation
Patient Demographics and Story: *Please introduce us to your patient: Age, sex, race, ethnicity, medical history, social history, motivations, barriers, education, previous traumas*	**Current situation:** • **Patient is a 44- year- old African American female who currently resides in Essex County, NJ. Patient reported to the emergency department for evaluation associated with opiate withdrawal. The patient reported a previous medical history of fibromyalgia, PTSD, anxiety, and herniated cervical and lumbar disks. Patient reports taking 60 mg of PO morphine every day for her fibromyalgia but states she has been unable to refill her medications for the past several days and is experiencing withdrawal symptoms. The patient stated that she ran out of her medication early. Patient reports chills, nausea, diarrhea and anxiety over the past few days which is now worsening prompting ED visit.** • **Patient was referred to the Peer Recovery Program via COWS score of 24. A Peer Recovery Specialist responded to bedside and offered patient recovery support to which she accepted. Patient requested patient navigation services to help with connection to community and aftercare resources.** **Medical History:** • **In 2016 patient presented to the emergency department and reported a one-month history of pain, numbness, and tingling to the left arm. Patient had reported that the numbness and tingling had gotten worse in the fingers of the left hand. Patient reported that the pain w worse at night and that she is unable to sleep in certain positions.** • **Patient notes that she has a history of fibromyalgia, PTSD, anxiety, and herniated cervical and lumbar disks dating back to 2014.** • **Patient reported completing physical therapy in 2014.** • **Patient notes that she usually comes to the ED and received Dilaudid to address her acute pain.** • **Patient reported a hx of alcohol and marijuana use**

	Social History: • **Patient is currently living with her adult daughter in an apartment** • **Patient is currently unemployed and looking for work** • **Patient does not have extensive support network** **Motivations:** • **Patient wants her quality of life to improve for her and her family** **Barriers/Risks:** • **Patient reported that she is currently on pain management and ran out of her medications early** • **Despite her pain not being managed, the patient would like to discontinue her medications without alternatives** • **Patient did not discuss plan to discontinue medication with her current prescriber** • **Prescribed narcotics can be a barrier to patient accessing substance use disorder treatment**

Patient's History: *Please include any previous/current treatments and regimens, including results, and necessary lab values*	• **Patient states that she takes morphine, oxycodone, pregabalin and acetaminophen with minimal relief of pain and no relief of the numbness.** • **Patient is also prescribed fluoxetine and uses an albuterol inhaler** • **Patient has no prior history of substance use disorder treatment.**

	Questions/Concerns for the SUD/MAT ECHO Panel
1.	How can we bridge the gap for patients on a pain management protocol that are seeking substance use disorder services?
2.	Is a referral to substance use disorder treatment appropriate for this patient?
3.	What alternative treatments can be considered for her pain?

DSM-5 Criteria – Diagnosis of Substance Use Disorder

1. Taking the substance in larger amounts or for longer than you're meant to.
2. Wanting to cut down or stop using the substance but not managing to.
3. Spending a lot of time getting, using, or recovering from use of the substance.
4. Cravings and urges to use the substance.
5. Not managing to do what you should at work, home, or school because of substance use.
6. Continuing to use, even when it causes problems in relationships.
7. Giving up important social, occupational, or recreational activities because of substance use.
8. Using substances again and again, even when it puts you in danger.
9. Continuing to use, even when you know you have a physical or psychological problem that could have been caused or made worse by the substance.
10. Tolerance
11. Withdrawal

Mild symptoms: 2-3 **Moderate symptoms: 4-5** **Severe symptoms: 6+**

1) DSM-5 Criteria. Available from: https://www.asam.org/docs/default-source/education-docs/dsm-5-dx-oud-8-28-2017.pdf. Accessed on: August 24, 2020

Patient Case #2

Case – Patient X

- 41 YO female presenting to the ED in September 2021 after being discharged just one day earlier with a **chief complaint of "no methadone at rehab"**
- Past Medical History:
  - **IV drug use (40-60 bags of "heroin"/day)**
  - Multiple DVTs 2/2 protein C/S deficiency and Factor V Leiden mutation
  - Atrial fibrillation (non-compliant with her anticoagulation therapy)
  - Left vertebral artery aneurysm s/p stenting
  - CVA (2007)
  - PTSD / Anxiety 2/2 trauma - prostitution
  - **Sternal osteomyelitis requiring debridement and skin flap (2019) and previously admitted from August-September 2021 for osteomyelitis.**

Relevant History from Admission

- **August 2021:** Admitted for spine osteomyelitis and noted to have OUD – 50 bags daily IV heroin and smoking cocaine, reports sex work and previously had been to inpatient rehab
  - Withdrawals: N/V/D, anxiety, chills, nasal congestion, tearing, yawning
  - Patient also with severe low back pain and intermittent chest pain
- Patient revealed "my life sucks" – reports feeling depressed and anxious given her current circumstances
  - IVDU, medical problems, unsafe living environment/domestic abuse, trauma history, PTSD d/t childhood sexual abuse
  - Afraid of becoming a paraplegic

Relevant Medication Regimen from Admissions

- Patient started on 8mg buprenorphine in the ED with a total dose of 32mg
- Indomethacin 25mg TID
- Acetaminophen 650mg every 4 hours PRN
- Oxycodone 10mg every 4 hours PRN → Oxycodone 10mg every 6 hours → Oxycodone 5mg every 6 hours PRN (needing 3 times a day)
- Buprenorphine 8mg TID + PRN for high COWS
  - Changed to Methadone 30mg once daily due to no improvement in pain
  - Changed to Methadone 10mg QID; QTc 438 ms
  - 7 days after, Methadone 10mg BID, 15mg BID (AM and PM)
  - Methadone 50mg daily for easier dispensing at SAR
  - Methadone 20mg TID given continued back pain → delayed transfer to next SAR
- Lorazepam 1mg every 6 hours PRN
- Diphenhydramine 25mg every 6 hours PRN → PO QHS
- Quetiapine 75mg QHS → not continued
- Ambien 10mg QHS PRN
- Gabapentin 400mg every 6 hours
- Prazosin 1mg daily

Assessment

- Osteomyelitis of sternum and thoracic spine 2/2 to hematogenous spread from bacteria due to IVDU
- Low back pain 2/2 osteomyelitis with possible lung involvement
  - Severe during previous admission with high anxiety
  - Shortness of breath 2/2 anxiety vs. aspiration pneumonia
- Opioid Use Disorder

Last Addiction Medicine Consult Note

- Given still having pain on methadone 20mg TID → increased to 25mg TID
- Goal taper off oxycodone
- Continue alternative pharmacological agents

Discussion Questions?

- How do you monitor this patient for both pain and opioid use disorder in the outpatient setting?
- Would you approach this patient's management differently?
- How would you manage this patient's continuity of care?
- How would a therapist/clinician assist the care of this patient?

Thank you!
Questions & Discussion