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Managing Pain in the Patient with Opioid Use Disorder: Inpatient Management

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Educational Objectives

At the conclusion of this activity participants should be able to:

- Distinguish substance use disorder as a chronic disease
- Identify ways to improve inpatient pain treatment in patients with opioid use disorders
- Describe how to safely use methadone for opioid withdrawal management in the hospital
- Recognize how to manage inpatient pain treatment in patients prescribed buprenorphine

Addiction:
A Chronic Medical Disease

- Outdated view:
  - moral failing, bad choice

- Modern, evidence-based view:
  - Genetic, Environmental factors, and Life experiences are risk factors
  - SUD leads to functional disruption of motivation, reward, learning, and inhibitory control centers
  - Substance use becomes compulsive and often continues despite harmful consequences
  - Addiction is treatable and prevention is possible

Hall, Lancet 2015
American Society of Addiction Medicine, Definition of Addiction, https://www.asam.org/Quality-Science/definition-of-addiction

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Patient Quote

“Most of us that do it can't stand it. I hate the stuff… it is wretched….it's like damned if you do damned if you don’t... when I do it I don't even feel good anymore. Like it takes so much just to be ok, to be normal, it's like when I use it I just feel normal... So they don't understand that.”

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Velez, C, Nicolaidis C, Korthuis PT, et al. J Gen Intern Med., 2017

Patient Perspective

- Patients describe avoiding care due to:
  - Fear of mistreatment
  - Fear of being judged or labeled
  - Fear of withdrawal

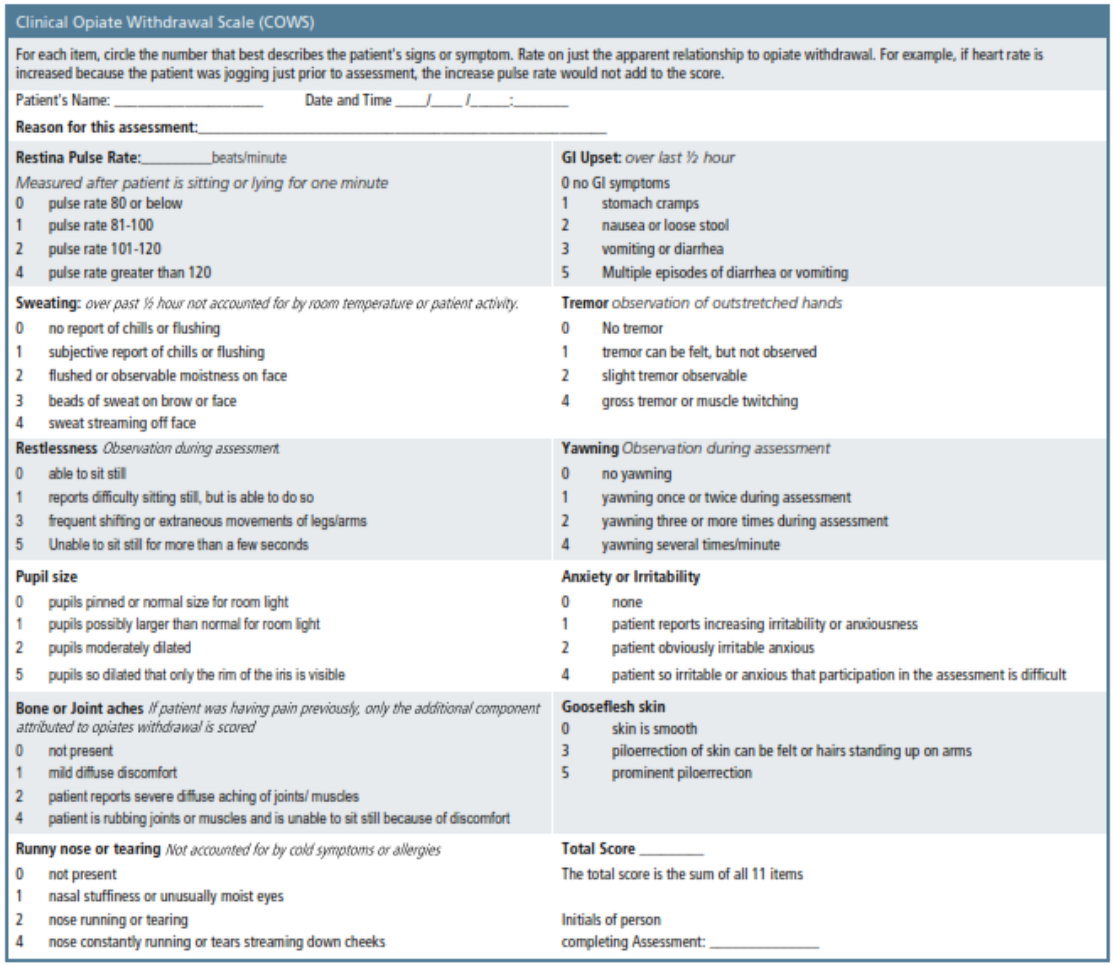
- *You become crippled and sick from the withdrawal of opiates and methamphetamines. Diarrhea, vomiting, sweats, chills - it's like the flu times ten. I would rather go through childbirth.*

Velez, C, Nicolaidis C, Korthuis PT, et al. J Gen Intern Med., 2017

Case 1

- 34 yo female with severe opioid use disorder (uses approx. 1g of IV heroin per day) admitted 24 hours ago for a large abscess on her forearm who is complaining of severe pain and anxiety.
- Exam shows tachycardia, hypertension, diaphoresis, and anxiety. She is rubbing her joints and rocking back and forth.
- Pt is requesting IV opioids.
- Expected discharge in 48 hours.

Opiate Withdrawal Assessment: COWS



Clinical Opiate Withdrawal Scale (COWS)

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:_____

Restina Pulse Rate:_____beats/minute

Measured after patient is sitting or lying for one minute

0 pulse rate 80 or below
1 pulse rate 81-100
2 pulse rate 101-120
4 pulse rate greater than 120

GI Upset: *over last ½ hour*

0 no GI symptoms
1 stomach cramps
2 nausea or loose stool
3 vomiting or diarrhea
5 Multiple episodes of diarrhea or vomiting

Sweating: *over past ½ hour not accounted for by room temperature or patient activity.*

0 no report of chills or flushing
1 subjective report of chills or flushing
2 flushed or observable moistness on face
3 beads of sweat on brow or face
4 sweat streaming off face

Tremor *observation of outstretched hands*

0 No tremor
1 tremor can be felt, but not observed
2 slight tremor observable
4 gross tremor or muscle twitching

Restlessness *Observation during assessment*

0 able to sit still
1 reports difficulty sitting still, but is able to do so
3 frequent shifting or extraneous movements of legs/arms
5 Unable to sit still for more than a few seconds

Yawning *Observation during assessment*

0 no yawning
1 yawning once or twice during assessment
2 yawning three or more times during assessment
4 yawning several times/minute

Pupil size

0 pupils pinned or normal size for room light
1 pupils possibly larger than normal for room light
2 pupils moderately dilated
5 pupils so dilated that only the rim of the iris is visible

Anxiety or Irritability

0 none
1 patient reports increasing irritability or anxiousness
2 patient obviously irritable anxious
4 patient so irritable or anxious that participation in the assessment is difficult

Bone or Joint aches *If patient was having pain previously, only the additional component attributed to opiates withdrawal is scored*

0 not present
1 mild diffuse discomfort
2 patient reports severe diffuse aching of joints/ muscles
4 patient is rubbing joints or muscles and is unable to sit still because of discomfort

Gooseflesh skin

0 skin is smooth
3 piloerrection of skin can be felt or hairs standing up on arms
5 prominent piloerrection

Runny nose or tearing *Not accounted for by cold symptoms or allergies*

0 not present
1 nasal stuffiness or unusually moist eyes
2 nose running or tearing
4 nose constantly running or tears streaming down cheeks

Total Score _____

The total score is the sum of all 11 items

Initials of person completing Assessment: _____

Clinical Opiate Withdrawal Scale (COWS):

Score 5-12 mild,
13-24 mod,
25-36 mod severe,
36-48 severe

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Wesson, Ling, J Psychoactive Drugs, 2003

General Principles

- Opioid withdrawal worsens other painful conditions
- Treating opioid withdrawal symptoms can improve pain management
- Giving opioids will not worsen a patient's substance use disorder
- Patients who use opioids like heroin or high potency synthetic opioids are highly tolerant to prescribed opioids
- It is important to determine if the patient is currently receiving medication for opioid use disorder (methadone, buprenorphine or naltrexone)

General Approach

- Consider a Urine Drug Test
- Treat the opioid “debt”
  - Adjuvant treatments
  - Methadone or Buprenorphine
- Use known effective pain treatments
  - ketorolac, acetaminophen, immediate release opioids
- Recognize that you may need to prescribe higher doses of opioids

Inpatient Opioid Withdrawal Management

- Methadone or Buprenorphine are good choices!

- Other supportive medications
  + Clonidine 0.1mg TID PRN (hyperadrenergic state)
  + Hydroxyzine 25-50mg Q4-6H PRN (agitation/insomnia)
  + NSAIDS or Tylenol (muscle cramps and pain)
  + Dicyclomine or Hyocosamine (abdominal cramps)
  + Bismuth subsalicylate (diarrhea)
  + Zofran
  + FLUIDS

  Avoid Benzodiazepines unless otherwise indicated

Inpatient Methadone Dosing Guidelines

(Patient not on Methadone Treatment)

- Start with 10-20 mg of methadone PO
  - Consider a lower dose (5mg) in patients who use prescription opioids
- Reassess q 2-3 hours, give additional 5-10 mg until opioid withdrawal signs abate
- Do not exceed 40 mg in first 24 hours
- Monitor for CNS and respiratory depression
- Monitor ECG for QTc prolongation
  - Avoid for QTc >500ms

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Inpatient Methadone Dosing Guidelines

- On following day, give total dose from day prior as one dose
- Goal is to alleviate acute opioid withdrawal
- Patient may continue to crave opioids
- Patient may continue to have pain, methadone is treating opioid withdrawal primarily
- Discuss methadone taper vs. maintained dose w/ patient daily
- Referral for long-term substance use disorder treatment

Inpatient Methadone Dosing Guidelines

- Continued treatment dosing
  - Recommended when a referral is available
  - Give same dose each day including day of discharge
  - Allows 24-36 hour withdrawal-free period after discharge
  - Prescribe naloxone at discharge and discuss reduced opioid tolerance

- Tapered dose option
  - Detoxification strategies alone are not recommended, but may be necessary if a referral is not available
  - If patient requests a taper, decrease by 5 mg per day and stop taper if patient requests it
  - Don't prolong hospitalization to complete taper
  - Prescribe naloxone at discharge and discuss reduced opioid tolerance

- Do not prescribed methadone at discharge; refer or arrange for opioid use disorder treatment at a local opioid treatment program

Sample Pain Regimen for Case 1

- 40mg of methadone oral liquid (providing 4-6 hours of analgesia only)
  - This is primarily for treatment of opioid withdrawal
- Ketoralac 60mg IM
- Scheduled acetaminophen
- Oxycodone IR 15-20mg every 4 hours prn
- Ice and heat prn
- Patient controlled analgesia (PCA) is another option

Case 1: Continued

- Patient goes on to develop severe sepsis from acute, native valve aortic valve endocarditis
- Ends up needing an emergent valve replacement
- Complains of severe pain post-op

Pre-op and Post-op Pain Options

- Ask for pre-op anesthesia consult
- Ask for nerve block, if possible
- Change methadone to BID or TID
  - Provide this option to patient
  - Continues to primarily treat withdrawal and starts to stabilize opioid receptors for her opioid use disorder
- Ketamine infusion
- PCA
- Gabapentin 600mg TID
- Acetaminophen scheduled

Case 2

- 27 yo man with opioid use disorder and sarcoma of the left thigh. He will be undergoing resection of the tumor in the next week.

- He has been taking buprenorphine/naloxone 8/2mg once a day for 6 months and is afraid to go off of it.

Buprenorphine/Naloxone

- Partial opioid agonist (plateau effect)
- High *mu* receptor binding affinity, slow dissociation
- Less euphoric effect than other opioids
- Provides 4-6 hours analgesia
- Paired with antagonist to prevent misuse through injection
- Office based prescribing available

Sample Pain Regimen for Case 2*

- Pre-op gabapentin 600mg TID
- Acetaminophen 650mg QID
- Epidural
- Continue buprenorphine and change Buprenorphine/naloxone to 4mg BID
  - Alternative buprenorphine/naloxone TID
  - Alternative increase buprenorphine/naloxone dose
- Possible adjunctive use of Hydromorphone 4-6mg every 4-6 hours prn
  - Alternative fentanyl IV
  - Close monitoring
  - *Both fentanyl and hydromorphone have binding affinities that will competitively compete with buprenorphine at the mu receptor*

*Expert opinion recommends continuation of buprenorphine in the perioperative setting.

Buresh, Ratner, Zgierska, Gordin, Alvanzo, et al. J Gen Intern Med, 2020.

Alford, et al. (2006) Ann Intern Medicine;144:127-134.

Case 3

- 45 yo female with persistent neck pain who is prescribed high dose opioids for the last 10 years.
- Admitted for nausea, vomiting, and abdominal pain.

General Principles

- Existing opioid Rx will not cover acute pain
- Unlike the patient using heroin, they may have already tried many existing pain treatments
- Multimodal approach most successful
- Consider a diagnosis of opioid use disorder
  - Check prescription drug monitoring program to confirm dose and prescriber
  - Consider urine drug test to confirm opioid adherence
  - Confirm patient has an opioid agreement with the PCP
  - Discuss with family, consider opioid withdrawal as a cause of her symptoms

General Approach

- Rule out medication harm
- Maintain existing opioid regimen
- Provide short acting opioid for acute pain
- Treat opioid side effects
  - Withdrawal mediated cyclic vomiting
  - constipation
- Discuss pain regimen and discharge plan with PCP
- Discharge with naloxone

Case 4

- 58 yo woman with COPD, opioid use disorder, diabetes and chronic Hepatitis C admitted for hypoxia (SpO2 85%). She states she is treated at an opioid treatment program and takes 120mg of methadone daily with 3 take outs a week.

What dose of methadone should you prescribe and why?

Methadone Basics

- Always confirm dose with the opioid treatment program
- Reasons to reduce the methadone dose
  - Hypoxia
  - QTc >500ms
  - Benzodiazepine use
  - Somnolence
  - Severe constipation
- 10-20% reductions are usually well tolerated
- Do not prescribe methadone at discharge
- Prescribe naloxone at discharge

Other General Principles

- If needed, only provide a short supply of IR opioids at discharge
- Avoid benzodiazepines during and after hospitalization, unless otherwise indicated
- Consider possible risks of your opioid prescription
- Communicate with PCP
- Communicate with Opioid Treatment Program during hospitalization and at discharge with patient consent

What if her urine drug test was positive for morphine?

- Suspect ongoing heroin use
- Discuss case with her opioid treatment program with her consent
- Continue to treat pain as needed
  - Recognize that she might have opioid withdrawal contributing to some of her pain
- Prescribe naloxone at discharge

Summary

- Pain can be well treated in patients with substance use disorders
- Multimodal treatment is the most effective
- Treat opioid withdrawal effectively for improved pain outcomes
- Be mindful of opioid risks at discharge and prescribe naloxone

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- PCSS Mentor Program is designed to offer general information to clinicians about evidence-based clinical practices in prescribing medications for opioid use disorder.
- PCSS Mentors are a national network of providers with expertise in **addictions, pain, evidence-based treatment including medications for opioid use disorder (MOUD)**.
- 3-tiered approach allows every mentor/mentee relationship to be unique and catered to the specific needs of the mentee.
- No cost.

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https://pcssNOW.org/mentoring/

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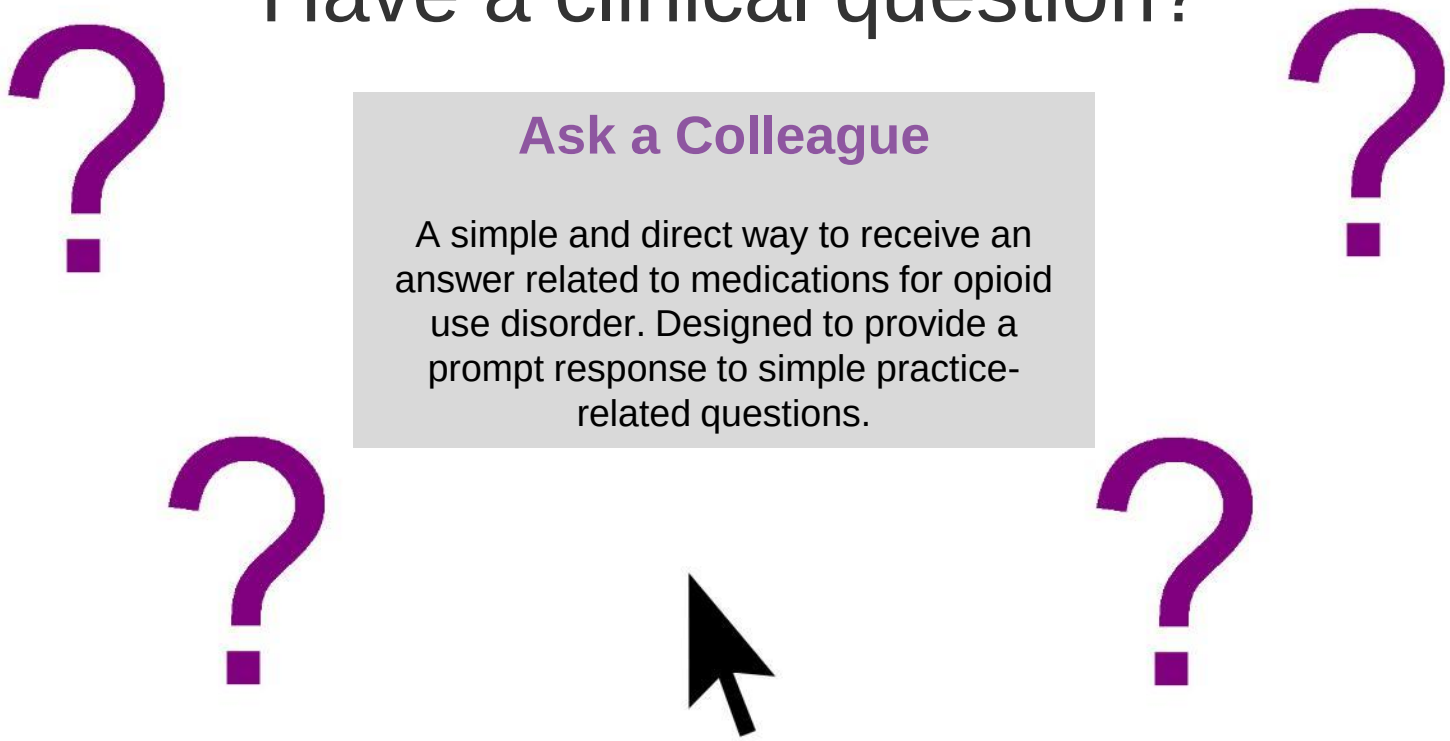

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