PCSS Medications for Opioid Use Disorders | Providers Clinical Support System

Online Case-Based Learning Collaborative Series on Treating Opioid Use Disorder

Hospital Based Approaches to OUD
April 24, 2024

FACULTY & DISCLOSURES

Name	Role	Financial Relationship Disclosures
Katy Basques, APRN	Moderator & Faculty	No relevant financial relationships to disclose
Dr. Andrew King, MD	Faculty	Consultant/Advisory Board – Community Foundation for Southeast Michigan.

The content of this activity may include discussion of off label or investigative drug uses. The faculty is aware that is their responsibility to disclose this information.

AGENDA

Activity	Length
Orientation and Introductions	5 Minutes
Didactic Presentation	40 Minutes
Didactic Presentation: Facilitated Discussion	15 Minutes
Faculty Real-World Case Scenario & Discussion	15 Minutes
Learner Case Discussion and Q&A	10 Minutes
Closing Announcements	5 Minutes

HOUSEKEEPING

- This event is brought to you by the Providers Clinical Support System – Medications for Opioid Use Disorders (PCSS-MOUD). Content and discussions during this event are prohibited from promoting or selling products or services that serve professional or financial interests of any kind.
- The overarching goal of PCSS-MOUD is to increase healthcare professionals' knowledge, skills, and confidence in providing evidence-based practices in the prevention, treatment, recovery, and harm reduction of OUD.

PARTICIPATION GROUND RULES

1. Please participate!
2. Everyone's experiences differ: Assume the best intentions.
3. Monitor your participation: Everyone is accountable.
4. If someone says something that is not your understanding of the evidence, ask questions and do so respectfully..

AVOID USE OF STIGMATIZING LANGUAGE

The language we choose shapes the way we treat our patients…	
Instead of:	You can say….
addict, junkie, substance abuser	Person with a substance use disorder
Addicted baby	Baby experiencing substance withdrawal
Alcoholic	Person with alcohol use disorder
Dirty vs clean urine	Positive or negative, detected or not detected
Binge	Heavy drinking episode
Detoxification	Withdrawal management, withdrawal
Relapse	Use, return to use, recurrence of symptoms or disorder
substance abuse	Use (or specify low-risk or unhealthy substance use)
Substitution, replacement, Medication assisted treatment	Opioid agonist treatment, medication treatment

Saitz, R., Miller, S. C., Fiellin, D. A., & Rosenthal, R. N. (2020). Recommended Use of Terminology in Addiction Medicine

PARTICIPANT INTRODUCTIONS

Please introduce yourself in the Zoom chat:

1. Name
2. Professional Role
3. Work Setting/ Organization
4. Location

Cases Studies from a Hospital Addiction Medicine Service

Dr. Andrew King, MD
Wayne State University School of Medicine
Michigan Poison and Drug Information Center
Detroit Medical Center
Medical Center Emergency Services

EDUCATIONAL OBJECTIVES

- At the conclusion of this activity participants should be able to:
  - Describe three strategies for effective pain control in patients with OUD on MOUD
  - Review a proposed algorithm for the management of buprenorphine-precipitated withdrawal
  - Examine the various medication approaches and the pharmacokinetic/physiologic rational to help comfortably wean patients from the ventilator

A LITTLE BACKGROUND

DMC™

DETROIT MEDICAL CENTER

Addiction Medicine Service at the DMC

- Started in 2020 with ~200 new consults
- 2023-2024: ~1200 consults
- Medical Toxicology Service “blend”
  - Fellows
  - Peer Recovery Coach support
  - Internal Medicine Residents

Case Mix Evolution

- 2020: opioids only +/- other substances
- 2024: all drugs, ICU-heavy

Hospital Formulary

- Have:
  - Buprenorphine (tabs)
  - IV buprenorphine
  - Methadone tabs
  - Naltrexone tablets
- Have not:
  - Buprenorphine patches
  - SQ buprenorphine
  - SQ naltrexone***

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Service Sit. Rep.

- Detroit demographics
  - Average age: 65 years old
- Inpatient bedside consultation service at our central campus hospitals
  - Detroit Receiving Hospital
  - Harper Hospital
  - Hutzel Hospital
- All levels of service
  - ICU
  - CTICU
  - SICU
  - Burn
  - Floors
  - ED
- No Addiction Medicine clinic (1 partner will accept patients within system on BUP)
- PHIP for referrals
- Peer recovery coaches (AMAZING)

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AGENDA

- Present real cases
- Highlight practice patterns
- Share lessons learned

Case 1

- Mr X is a 28-year-old man who uses 1 gram IV heroin daily
- Admitted for forearm abscess
- Abscess drained at bedside by surgery but admitted to medicine for surrounding cellulitis
- Patient is anxious about admission and worried he will ”go through hell”
- COWS 1

- **Addiction Medicine consulted “Control this guys withdrawal or he will bolt.”**

Case 1

- Discussed various options for MOUD
- Patient refused buprenorphine ("I'm allergic. When I take it, I get violently ill.")
- Has had success with methadone in the past and elects methadone

Case 1

- Options:

SPLITZ METHOD

- Day 1: 20 mg, then 10 in 4 hours, then 10 in next 4 (40 total)
- Day 2: 15 mg po TID
- (Increase by 5 mg daily on of the doses prn time of onset of symptoms + oxycodone supplementation)

MORNING COFFEE METHOD

- Day 1: Methadone 30 mg x 1, then 10 mg in 4 hours
- Day 2: Methadone 40 mg in AM, then 10 mg in PM
- (Increase by 5 mg daily in AM + oxycodone supplementation)

Case 1

- **Elected for ”Morning Coffee”**
- (Hold the actual hospital coffee)
- Remained in hospital for 5 days
- Added gabapentin on HD 2
- Discharged on 60 mg to outpatient clinic with next day follow up

- **“This was the first time I stuck through it the whole time.”**

Takeaways

- Methadone can often be “up-titrated” faster than historically done
- Some centers use much faster up-titrations for fentanyl users

- **Exclusion: CHF, advanced COPD, CKD**
- **Be careful with older folks**

Case 2

- Mr. A is a 31-year-old man with OUD admitted to trauma surgery service for multiple rib fractures, pneumothorax s/p chest tube, and humerus fracture
- Maintained on 8/2 BUP/Nx daily
- No other medical problems and takes no other meds
- **Addiction Medicine (AM) consulted for "pain control in setting of BUP"**

Case 2 – Hospital Course

- 1 mg hydromorphone in the ED
- Nothing administered since admission
- Oxycodone 5 mg q6 is ordered
- Appears uncomfortable and tearful; girlfriend is pacing in the room

Case 2 – General Discussion w/Pt

- Knowledge sharing:
  - mechanisms of pain
  - rationale for multi-modal therapy
  - pain control goals
- Provide reassurance and support
- Offer choice and empower, when possible

Multimodal Pain Control

Table 2. Numerical Rating Scale (NRS) Pain Scores and Decline in Pain Scores by Treatment Group

	NRS Pain Score, Mean (95% CI)[a]				
	Ibuprofen and Acetaminophen[b]	Oxycodone and Acetaminophen[c]	Hydrocodone and Acetaminophen[d]	Codeine and Acetaminophen[e]	*P* Value[f]
No. of patients[g]	101	104	103	103	
Primary end point: decline in score to 2 h	4.3 (3.6 to 4.9)	4.4 (3.7 to 5.0)	3.5 (2.9 to 4.2)	3.9 (3.2 to 4.5)	.053
Baseline score	8.9 (8.5 to 9.2)	8.7 (8.3 to 9.0)	8.6 (8.3 to 9.0)	8.6 (8.2 to 8.9)	.47
Score at 1 h	5.9 (5.3 to 6.6)	5.5 (4.9 to 6.2)	6.2 (5.6 to 6.9)	5.9 (5.2 to 6.5)	.25
Score at 2 h	4.6 (3.9 to 5.3)	4.3 (3.6 to 5.0)	5.1 (4.5 to 5.8)	4.7 (4.0 to 5.4)	.13
Decline in score to 1 h	2.9 (2.4 to 3.5)	3.1 (2.6 to 3.7)	2.4 (1.8 to 3.0)	2.7 (2.1 to 3.3)	.13

[a] Pain intensity was assessed using an 11-point NRS in which a score of 0 indicates no pain and a score of 10 indicates the worst possible pain.
[b] Patients received 400 mg of ibuprofen and 1000 mg of acetaminophen.
[c] Patients received 5 mg of oxycodone and 325 mg of acetaminophen.
[d] Patients received 5 mg of hydrocodone and 300 mg of acetaminophen.
[e] Patients received 30 mg of codeine and 300 mg of acetaminophen.
[f] Calculated using analysis of variance.
[g] One patient in each group had imputed NRS data.

Chang AK, Bijur PE, Esses D, Barnaby DP, Baer J. Effect of a Single Dose of Oral Opioid and Nonopioid Analgesics on Acute Extremity Pain in the Emergency Department: A Randomized Clinical Trial. JAMA. 2017 Nov 7;318(17):1661-1667

Multimodal Pain Control

- Same effect size on those with opioid tolerance or dependence?
- Low/no harm intervention
- “Every little bit helps” and re-frame therapeutic nihilism

Case 2 - Advocacy

- Discuss with patient what medications are/will be ordered
- Remember that you must ask for some medications (and how to)
- Address that stigma might occur and be prepared
- Obtain permission to discuss case
  - Trauma surgery
  - Nursing staff

Case 2 - Options

1. **BUP ONLY**
   a) 4 mg BUP SL q 4
   b) Modify dosing prior to discharge
   c) Provide bridge Rx

2. **Full OA only (with multimodal therapy)**
   a) Dosing and frequency
   b) Tapering plan
   c) Transition back to BUP plan

3. **Combination**
   a) Maintain 2-4 mg daily
   b) Use full OA otherwise (see option 2)

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Case 2 - Outcome

- **Mr. A elected BUP only option**
  - BUP 4 mg q4 x 1 days
  - Then only used doses day 2 after CT removed
  - Discharged 16 mg daily and 1-week rx

- Additional therapies:
  - APAP
  - Ibuprofen
  - Costal nerve block
  - Lidocaine patch

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- **“If you weren’t involved, I would have left to pick up again the first day”**

Takeaways

- Anticipatory discussion and education is extremely important
- Let them know we always have options
- Face-to-face discussions with nurses and direct communication with consulting services
- **High fidelity treatment: do what you say and say what you do**

Case 3

- Mr. C is a 68-year-old man with OUD who presented for abdominal pain
- ED providers calculated COWS 8
- 8 mg SL BUP

- **AM consult "This guy doesn't look great. Can you come see him?"**

Case 3 – Hospital Course

- Restless, under the covers, sweating, soiled underwear
- BP 190/110, P 81, RR 22

- COWS >24

- Treatment
  - 16 mg SL BUP
  - 16 mg SL BUP (30 min later)
  - 30 mg IM ketamine

- COWS 5

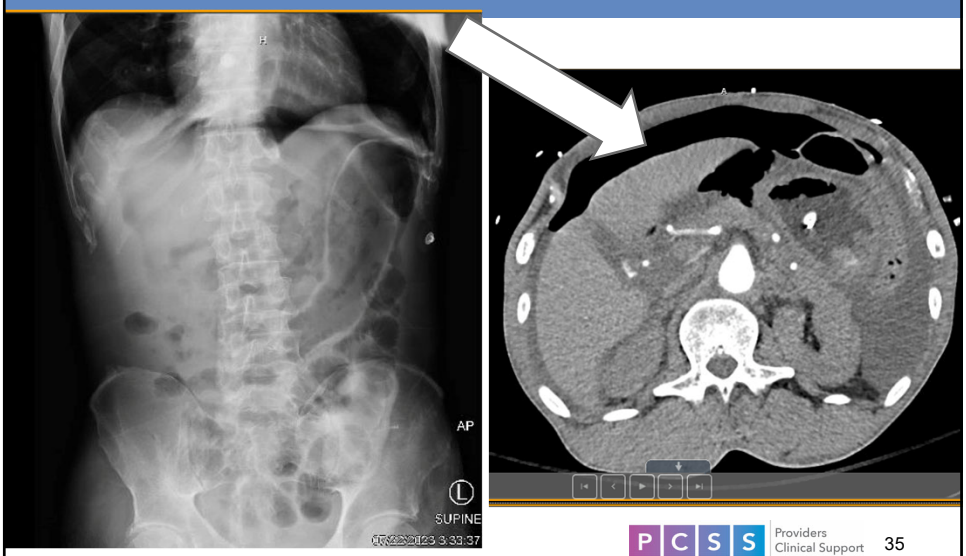
Case 3 – Hospital Course

- Next day, COWS 0
- Pleasant and appropriate
- Eating breakfast
- Referred to clinic
- Rx e-scribed for 1 week until appointment

Case 3 – Hospital Course

- Call 1820: “Hey, I think Mr. C is having more withdrawal. He’s throwing up and complaining of severe abdominal pain. What should I do?”
- Me: “Sounds fishy…Please look for other causes”

Case 3 – Hospital Course



Case 3 – Hospital Course

- Surgery
- Chose full opioids
- Microinduction post-op day 2
  - Buprenex 300 mcg IV q4 hours x 4 doses
  - BUP 2 mg SL q 4 hours x 4 doses
  - BUP 4 mg SL q 4 hours

Case 3 - Readmissions

- Developed recurrent ascites
- Maintained on BUP
- Continues to do well and has a new “dad joke” for us every time.

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Takeaways

- Proposed buprenorphine-precipitated withdrawal algorithm

- 1. Buprenorphine 16 mg q 30 minutes (up to 60 mg)
- 2. If not improved after 32 mg add:
  - PO 1-2 mg lorazepam OR
  - Droperidol 2.5 mg IM

  - Consider
  - 30-50 mg IM ketamine OR
  - 0.15 – 0.3 mg/kg ketamine infusion (requires ICU)

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Takeaways

- Once drug use/withdrawal is controlled, REASSESS
- **"Signal-to-noise ratio" improves and disease is uncovered**
- We've seen
  - Cancer (hepatic, lymphoma, colon)
  - Ulcers
  - Spinal infections (epidural abscess, osteomyelitis)
  - CAD
  - Severe aortic regurgitation

Case 4

- Mr D is a 63-year-old man with OUD admitted for pneumonia
- Intubated for respiratory distress
- Pneumonia resolved
- MICU unable to extubate due to "severe agitation and increased WOB"
- **AM consulted: "Can you help us get him off the ventilator? If we can't get him off soon, he will get a trach."**

Case 4 – Management

- Current therapies
  - Fentanyl infusion
  - Midazolam infusion
  - Methadone 30 mg TID
- Previously attempted
  - Dexmedetomidine
  - Propofol

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Case 4 - Recommendations

- Buprenorphine microinduction
  - Buprenorphine 300 mcg IV q 4 x 4 doses
  - BUP 2 mg SL q 4 x 4 doses
  - BUP 4 mg SL q4 x 4 doses
- Phenobarbital
  - 10 mg/kg IV load
  - Then, 130 or 260 mg q 4 - 6 hours prn

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Case 4 - Outcome

- Fentanyl infusion stopped next day
- Midazolam infusion decreased after PB load
- Passed SBT and extubated day 2.
- Consolidated BUP to BID
- Discharged to SAR with 4-week script

Takeaways - Opioids

- **There does not appear to be a dose of opioid we cannot transition to BUP**
- Our highest MME transitions:
  - Methadone 240 mg daily +
  - Hydromorphone infusion at 10 mg/hour +
  - Oxycodone 5 q 4
- Some nursing homes/SARs are reluctant to take MOUD

Takeaways - Sedatives

- Propofol & midazolam are short-acting
- Phenobarbital prevents/treats acute SH withdrawal
- PB kinetics are incredibly predictable
- We are NOT seeing hypotension or prolonged coma from PB use

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- Daniel Taylor, MD – MCES President
- All the staff and nurses at the DMC in general

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FACULTY REAL-WORLD CASE SCENARIO & DISCUSSION

Katy Basques

YOUR CASE

- Ms B is a 55-year-old woman with OUD on 70 mg methadone, admitted for abscess
- Seen previously by our service w/husband for withdrawal
- Last dose yesterday
- No THs; denies additional opioid use
- PMHx: Anxiety, PTSD
- Medications: Prazocin, sertraline

- **AM consult: "Pt is threatening to leave AMA if you're not involved"**

YOUR CASE – GENERAL RECS

- Methadone pain control options
- Offer to stagger methadone doses (BID, TID); offer choice
- Ok to give opioids, may require higher dosing
- Plan for dose reduction after 1-3 days
- Maximize ALTO

YOUR CASE – Hospital course

- Discussion and education session with reassurance
- Day 1
  - Hydromorphone 2 mg po q 4 (3 doses)
  - APAP/ibuprofen
- Day 2
  - Hydromorphone 1 mg po q4 (1 dose)
  - APAP/ibuprofen
  - Discharged in PM. Refused further pain medications. “I’m good.”

LEARNER CASE DISCUSSION AND QUESTIONS

Katy Basques and Dr. Andrew King

PCSS-MOUD MENTORING PROGRAM

- PCSS-MOUD Mentor Program is designed to offer general information to clinicians about evidence-based clinical practices in prescribing medications for opioid use disorder.
- PCSS-MOUD Mentors are a national network of providers with expertise in **addictions, pain, and 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.

For more information visit:
https://pcssNOW.org/mentoring/

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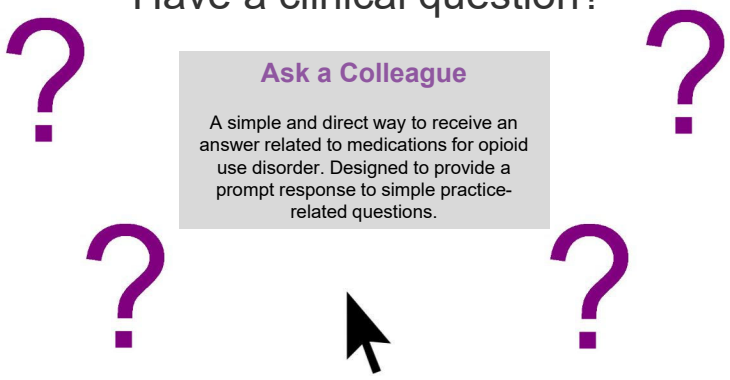
PCSS-MOUD DISCUSSION FORUM

Have a clinical question?



Ask a Colleague

A simple and direct way to receive an answer related to medications for opioid use disorder. Designed to provide a prompt response to simple practice-related questions.

http://pcss.invisionzone.com/register

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PCSS-MOUD is a collaborative effort led by the American Academy of Addiction Psychiatry (AAAP) in partnership with:

Addiction Policy Forum	American College of Medical Toxicology
Addiction Technology Transfer Center*	American Dental Association
African American Behavioral Health Center of Excellence	American Medical Association*
American Academy of Addiction Psychiatry*	American Orthopedic Association
American Academy of Child and Adolescent Psychiatry	American Osteopathic Academy of Addiction Medicine*
American Academy of Family Physicians	American Pharmacists Association*
American Academy of Neurology	American Psychiatric Association*
American Academy of Pain Medicine	American Psychiatric Nurses Association*
American Academy of Pediatrics*	American Society for Pain Management Nursing
American Association for the Treatment of Opioid Dependence	American Society of Addiction Medicine*
American Association of Nurse Practitioners	Association for Multidisciplinary Education and Research in Substance Use and Addiction*
American Chronic Pain Association	Coalition of Physician Education
American College of Emergency Physicians*	College of Psychiatric and Neurologic Pharmacists
	Black Faces Black Voices

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Columbia University, Department of Psychiatry*	Partnership for Drug-Free Kids
Council on Social Work Education*	Physician Assistant Education Association
Faces and Voices of Recovery	Project Lazarus
Medscape	Public Health Foundation (TRAIN Learning Network)
NAADAC Association for Addiction Professionals*	Sickle Cell Adult Provider Network
National Alliance for HIV Education and Workforce Development	Society for Academic Emergency Medicine*
National Association of Community Health Centers	Society of General Internal Medicine
National Association of Drug Court Professionals	Society of Teachers of Family Medicine
National Association of Social Workers*	The National Judicial College
National Council for Mental Wellbeing*	Veterans Health Administration
National Council of State Boards of Nursing	Voices Project
National Institute of Drug Abuse Clinical Trials Network	World Psychiatric Association
Northwest Portland Area Indian Health Board	Young People In Recovery

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Thank you for Attending!

Sign up for a future session and complete the session evaluation here:

https://elearning.asam.org/oud-learning-collaboratives

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