



**MAT TRAINING**

**PROVIDERS' CLINICAL SUPPORT SYSTEM**  
For Medication Assisted Treatment

# Pain and Addiction

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# James Manlandro, DO, FAOAAM FACOAFP, DABM Disclosures

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- American Academy of Addiction Psychiatry designates this enduring material educational activity for a maximum of 1 (one) *AMA PRA Category 1 Credit™*. Physicians should only claim credit commensurate with the extent of their participation in the activity.
  - Date of Release July 7, 2014
  - Date of Expiration July 31, 2016

# System Requirements

- In order to complete this online module you will need Adobe Reader. To install for free click the link below:
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# Target Audience

- The overarching goal of PCSS-MAT is to make available the most effective medication-assisted treatments to serve patients in a variety of settings, including primary care, psychiatric care, and pain management settings.

# Educational Objectives

- At the conclusion of this activity participants should be able to:
  - Identify common misconceptions of pain patients
  - Be able to effectively identify and treat addictive patients with pain.
  - Have a better understanding of buprenorphine pharmacology and maintenance.



# Outline

- Pain and Addiction
- Buprenorphine
- Acute Pain Management

# Common Misconceptions

- Maintenance opioid agonists provide analgesia
- Use of opioids for analgesia frequently results in addiction relapse
- Additive effects of opioid analgesia and opioid agonist therapy may cause respiratory and CNS depression (in the opioid maintained patients)
- Reporting pain is frequently a manipulation to obtain opioid medication, because of the underlying opioid addiction

# Altered Pain Experience

- Patients with opioid dependence have less pain tolerance than peers in remission or matched controls
- Patients with a history of opioid dependence have less pain tolerance than siblings without an addiction history
- Patients on opioid maintenance treatment (methadone or buprenorphine) have less pain tolerance than matched controls
- Methadone maintained women had increased pain and required 70% more oxycodone equivalents after Cesarean Section delivery

# Which came first?

- THE CHICKEN?
- Born with decreased pain tolerance with higher risk of opioid addiction
- OR THE EGG?
- Opioid addiction altered nervous system resulting in lower pain tolerance

# Pain and Addiction

## Provider Perspective

### 1. Physician Fear of Deception

- Physicians question the “legitimacy” of need for opioid analgesics ( “drug seeking” patient vs. legitimate need

*“ When the patient is always seeking, there is sort of a tone, always complaining and always trying to get more. It’s that seeking behavior that puts you off, regardless of what’s going on, it just puts you off.”*

- Junior Medical Resident

# Pain and Addiction

## Patient Perspective

### 2. No Standard Approach

- The evaluation and treatment of pain and withdrawal is extremely variable among physicians and from patient to patient. There is no common approach nor are there clearly articulated standards

# Pain and Addiction

## Patient Perspective

### 3. Avoidance

- Physicians focused primarily on familiar acute medical problems and evaded more uncertain areas of assessing or intervening in the underlying addiction problem- particularly issues of pain and withdrawal.

# Pain and Addiction

## Patient Perspective

### 4. Patient Fear of Mistreatment

- Patients are fearful they will be punished for their drug use by poor medical care.



# BUPRENORPHINE

## Buprenorphine Pharmacology

- Derivative of morphine alkaloid- *thebaine*
- Partial agonist at *mu* opioid receptor
- Antagonist at the *kappa* receptor
- Slow dissociation-long duration of action
- High Affinity- not easily displaced by antagonists
- Sublingual peak concentration after 3 hours
- Ceiling effect on respiratory depression

# BUPRENORPHINE

## Buprenorphine Duration of Action

- Suppression of opioid withdrawal and drug craving, opioid blockade for 24-48 hours
- Analgesic duration of action 6-8 hours

# BUPRENORPHINE

## Doses and Indications

Trade Name	Route	Dose	FDA Approval
buprenorphine	Sublingual	2-24mg/d	Opiate Dep.
buprenorphine/ naloxone (tabs) Suboxone (film) Zubsolv (tabs)	Sublingual	2-24mg equiv./d	Opiate Dep.
Butrans (patch)	transdermal	5-20mcg/hr	Pain
Buprenex (injectable)	IM	0.3 to 0.6 mg/q6h	Pain

# BUPRENORPHINE

## Buprenorphine as an Analgesic

- In U.S., parenteral formulation is FDA approved for pain but not opioid dependence treatment
- While sublingual formulation is approved for opioid dependence but not for pain treatment
- Small studies in Europe and Asia demonstrate analgesic efficacy of sublingual formulation in opioid naïve post operative patients

# BUPRENORPHINE

## Buprenorphine as an Analgesic

- Differing data on analgesic ceiling effect in animal models
- **No** published data indicating an analgesic ceiling effect humans
- Doubling dose resulted in dose-dependent increase in analgesia without increase in respiratory depression

# Acute Pain Management

- Reassure patients that their addiction will not be an obstacle to aggressive pain management
- Communicate with Buprenorphine prescriber
- Avoid using mixed agonist-antagonist opioids (e.g. Talwin and Stadol) as they may precipitate acute withdrawal
- Careful use and monitoring of combination products containing acetaminophen

# Acute Pain Management

- Buprenorphine maintenance dosed q24h does not confer analgesia beyond 6-8 hours
- Is relapse risk greater for:
  - a. inadequate pain management?
  - b. exposure to opioid analgesics?

# Acute Pain Management

## The “Opioid Debt”

- Patients who are physically dependent on opioids (buprenorphine or methadone) must be maintained on daily equivalence before ANY analgesic effect is realized with opioids used for acute pain management
- Full mu agonists may result in analgesic effect when they stimulate unoccupied (buprenorphine) receptors in buprenorphine maintenance treatment..



# Acute Pain Management

Theoretical Concern.....

Buprenorphine may....

- antagonize the effects of previously administered opioid analgesics
  - depends on proportion of receptors occupied
  - depends on time interval since last opioid analgesic dose
- Block the effects of subsequent administered opioid analgesics

# Buprenorphine Maintenance

## Acute Pain Management Five Options

1. Continue Buprenorphine and titrate short-acting opioid analgesic
2. Discontinue Buprenorphine, use opioid analgesic, then re-induce with Buprenorphine
3. Divide Buprenorphine to Q 6-8 hours
4. Use supplemental doses of Buprenorphine
5. If inpatient, d/c Buprenorphine, start ER/LA opioid (debt and pain), use IR/SA opioid analgesics, then re-induce with Buprenorphine

# Acute Pain Management

Inpatient: Severe Pain, (e.g., trauma)

1. Discontinue Buprenorphine on day of surgery
2. Methadone 30 mg/daily (or other ER/LA opioid) for “opioid debt”
3. IR/SA opioid analgesics (including PCA) until pain resolves
4. Discontinue methadone (or other ER/LA opioid) and re-induction with Buprenorphine

# The “5 day” Rule

## University of Michigan Protocol

- **If moderate-severe post op pain is anticipated,** discontinue Buprenorphine and transition to short-acting opioid for 5 or more days prior to surgery
- **But this protocol...**  
risks causing a disruption in the patient’s recovery from opioid addiction by stopping Buprenorphine in the preoperative period and has never been evaluated and is based on a theoretical concern of pharmacological principles

# Management Guidelines

## Peri-procedure management WITH expected need for opioid analgesics

- Take last Buprenorphine dose on the morning of the day prior to the procedure
- Hold Buprenorphine dose on day of surgery
- Pre-procedure: give single dose of ER/LA opioid (e.g., SR Morphine 15 mg) on the day of procedure

# Management Guidelines

## Peri-procedure management WITH expected need for opioid analgesics

- Post procedure: Opioid analgesics should be started using standard dosing protocols but pain management should be carefully monitored since patients with opioid dependence often have decreased pain tolerance and cross-tolerance to opioid analgesics resulting in a need for higher opioid doses and shorter dosing intervals

# Management Guidelines

- Because of high affinity at the opioid receptor, Fentanyl should be the opioid of choice for analgesia during surgery and in PACU for these patients

# Management Guidelines

## Post procedure INPATIENT analgesia with opioids

- Continue to hold Buprenorphine
- All patients should be placed on an ER/LA opioid(e.g., SR morphine 15 mg BID) to address the patient's baseline opioid requirements and for sustained pain control



# Management Guidelines

- If patient also requires parenteral analgesia for breakthrough control use PCA (fentanyl, dilaudid, or morphine) with no basal dose
- If patient does not require parenteral analgesia for breakthrough pain control use IR/SA opioids (e.g., oxycodone, morphine.) Continue ER/LA opioid

# Management Guidelines

Post procedure **OUTPATIENT** analgesia with opioids

- Continue to hold Buprenorphine
- All patients should be continued on ER/LA opioid
- Treat breakthrough pain with IR/SA opioids (e.g., oxycodone, morphine)
- Schedule patient to be seen by their Buprenorphine provider within 1 week to be considered for restarting Buprenorphine maintenance

# Recommendations

- Reassure patient that addiction history will not prevent adequate pain management and discuss the plan for pain management in a non-judgmental manner. Use conventional analgesics, including opioids, to aggressively treat the painful condition
- Be aware that opioid cross tolerance and the patient's increased pain sensitivity will often necessitate higher opioid analgesic doses that may have to be administered at shorter intervals

# Recommendations

- Write continuous scheduled dosing orders, rather than PRN orders
- Avoid using mixed agonist and antagonist opioids as they can precipitate withdrawal
- Continue the usual dose (or equivalent) of opioid agonist therapy
- Methadone or Buprenorphine maintenance doses should be verified by the clinic or prescribing physician

# Recommendations

- Notify the addiction treatment program or prescribing physician regarding the patient's amount and time of last maintenance opioid dose
- Inform the addiction treatment program or prescribing physician of any medications given to the patient, as they may show on routine urine drug screening

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# Pain and Addiction Case Vignette:

*James J. Manlandro, DO, FAOAAM, FACOFP, DABM  
American Osteopathic Academy of Addiction Medicine*

Patient is a 40-year old married African-American female with past history of opioid dependence. She had been a daily marijuana smoker in high school and started using cocaine at 17-years old. Her opiate use started a year later in an attempt to come down from cocaine. By 20-years old, she was using heroine by injection. She made multiple attempts at acute detox and then went on Methadone for two years in her early 30s. She then tapered off and had done well but at 38-years old, two years prior to this presentation, she fell and injured her left shoulder, at which time she was started on opioid pain medication. More recently, she's escalated her dose of her pain medicine and has starting to use it for mood alteration.

She is happily married with 2 children and manages the local food pantry. She presents wanting help with both her opiate dependence and pain management.

# Pain and Addiction – Case Vignette

## Question 1. Following a full evaluation, you:

- A. Refer to methadone maintenance because she is opioid dependent,
- B. Refer to pain management,
- C. Consider inducing to Buprenorphine and maintain on a split dose
- D. Refer to her to and orthopedic physician.

*Complete the Post-Test for answer.*



# Pain and Addiction – Case Vignette

**Question 2. Patient ultimately ends up on buprenorphine and remains abstinent. The time comes where she and her orthopedic physician decide shoulder surgery is indicated.**

- A. Patient is instructed to discontinue buprenorphine the day before surgery,
- B. Patient is instructed she will need to be off buprenorphine for week prior to surgery,
- C. Patient told that following the surgery, she will not need much more medication than the buprenorphine 4-miligram strips she takes three times each day because of the high pain threshold she has established
- D. She should be referred to methadone maintenance because of her need for opioid pain therapy.

*Complete the Post-Test for answer.*

# Pain and Addiction – Case Vignette

**Question 3. Following surgery the patient has done well on maintenance buprenorphine treatment, however when attempting to participate in physical therapy she struggles due to increased pain. She is not well controlled with non-opioid pain medication.**

- A. Advise her to work through the pain
- B. Tell her you can't help her unless she come off buprenorphine and restart opioid treatment
- C. Maintain buprenorphine treatment and allow her to take a short-acting immediate release opioid prior to physical therapy.
- D. Refer her to pain management

*Complete the Post-Test for answer.*

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# PCSS-MAT Mentoring Program

- PCSS-MAT Mentor Program is designed to offer general information to clinicians about evidence-based clinical practices in prescribing medications for opioid addiction.
- PCSS-MAT Mentors comprise a national network of trained providers with expertise in **medication-assisted treatment, addictions and clinical education.**
- Our 3-tiered mentoring approach allows every mentor/mentee relationship to be unique and catered to the specific needs of both parties.
- The mentoring program is available, at no cost to providers.

**For more information on requesting or becoming a mentor visit:**

**[pcssmat.org/mentoring](https://pcssmat.org/mentoring)**

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For More Information: [www.pcssmat.org](http://www.pcssmat.org)



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