

MASSACHUSETTS SOCIETY OF HEALTH-CARE PHARMACEUTISTS

Don't Go Chasing Waterfalls: Pain, Opioids, and the Precipice of Addiction

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Learning Objectives

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- Describe the role of the pharmacist in pain management and addiction medicine.
- Analyze patient-specific information to determine the appropriateness of opioid therapy for the management of chronic pain.
- Implement best practices for monitoring opioid therapy in the setting of chronic pain.

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Learning Objectives (cont'd)

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- Analyze patient-specific information to determine the presence of an opioid use disorder.
- Design a pharmacotherapeutic plan for the management of pain in patients with substance use disorders.

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SUD Addictions Pharmacist Role

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- Educate patients on new medications (administration regimen, expected onset of action, potential adverse effects, when to call your prescriber etc.)
- Educate patients on how to administer naloxone
- Educate health care providers on medications and treatment guidelines
- Will lead outpatient psychoeducation and medication education groups in outpatient MGH Bridge Clinic (start of Q3 2016)
- Will establish collaborative practice to offer clinical pharmacy services in outpatient MGH Bridge Clinic (by end of Q4 2016)

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"Pain Pharmacist" Competencies

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<ul style="list-style-type: none"> □ Chronic pain syndromes □ Pain pharmacotherapy □ Interventional therapies □ Risk assessment and management □ Toxicology and urine drug screening evaluation 	<ul style="list-style-type: none"> □ Responsible opioid prescribing/universal precautions □ Behavioral interventions □ Addiction medicine □ Inter-professional communication and collaboration
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Herndon CM et al. J Pain Symptom Manage 2012; 43(5): 925-944

Case Study Part 1

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HPI

- FD is a 32 y/o man with a h/o chronic L arm pain s/p traumatic avulsion injury sustained from a motor vehicle crash roll over

PMH

- Mood disorder, PTSD

PSH

- Amputation of L thumb
- Centralization of left wrist with fusion with bone graft

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Case Study Part 1 (cont'd)

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Allergies/Intolerances

- NKDA

Medications

- Oxycodone 15 mg po q4h prn
- OxyContin 15 mg po Q8h
- Levofloxacin 500 mg po once daily
- Sulfamethoxazole/trimethoprim DS 1 tab po BID
- Docusate 100 mg po TID
- Senna 8.6 mg po BID
- Gabapentin 300 mg po TID



Case Study Part 1 (cont'd)

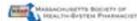
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FH

- Father – alcohol use disorder

SH

- Tobacco use: current smoker
- EtOH use: rarely
- Illicit drug use: current marijuana smoker; denies active use of other substances; admits to remote h/o heroin use
- Unemployed; lives with girlfriend
- Iraqi war veteran



Case Study (cont'd)

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Opioid Risk Assessment:

PMP search WNL

SOAPP-R score = 35 (high risk for misuse)

COMM score = 4 (low risk for misuse)

ABC score = 0

PHQ-9 score = 20

UDT results: positive for oxycodone, oxymorphone, THC



Case Study Discussion Questions

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- Are opioids appropriate for the management of chronic pain in this patient?
 - What information is needed to assist with decision-making?
- What modifications could be made to this patient’s analgesic regimen?
- If opioids are continued, how should therapy be monitored?



Evidence-Based Medicine: Opioids for Chronic Pain – Key Points

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- Fair evidence for short-term use
 - Pain
 - Quality of life
- Fair evidence for no significant difference in effectiveness or adverse effects between ER/LA and short-acting opioids
- Lack of long-term, high quality studies
- Limited published evidence for opioid rotation

Manchikanti L et al. Pain Physician 2012; 15:S1-S66



Implementing Opioid Therapy – Patient Considerations

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- Co-morbid diseases
- Organ dysfunction
- Concomitant medications
- Risk of accidental death/overdose
- History of drug or alcohol abuse
- Young age
- History of physical/sexual abuse
- Criminal history
- Unclear cause of pain
- History of multiple providers
- Unstable home environment
- Too ingratiating; too demanding
- “Gut feeling”

Chou et al. J Pain 2009; 10(2):113-130



Risk Factors for Opioid Overdose

- 13
 - High daily dose of opioid
 - Provider error due to knowledge deficits
 - Patient non-adherence
 - Unanticipated comorbidities
 - Presence of additional centrally-acting drugs
 - Psychological variables
 - Catastrophizing
 - Impulsivity
 - Chemical coping
 - Lack of acceptance
 - Personality disorders
 - Demoralization and existential distress
 - Sensation seeking
 - Escapism
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Pasik SD, Lowery A. Pain Medicine 2011; 12: 536-542

Monitoring Opioid Therapy – Best Practices

- 14
 - 6 “A’s”
 - Analgesia, adverse effects, activities of daily living, aberrant behaviors, affect, adjuvants
 - Urine drug tests
 - Pill counts
 - Tools to screen for misuse/abuse
 - Current Opioid Misuse Measure (COMM)
 - Addiction Behaviors Checklist (ABC)
 - Prescription monitoring programs (PMPs)
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Case Study Part 2

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 - Clinical Course**
 - Patient returns 6 months later for a f/u visit
 - Has seen his PCP only once since that time but has been prescribed opioids monthly
 - States that he ran out of oxycodone and OxyContin 5 days early
 - Admits to purchasing oxycodone 30 mg tabs from a friend; requests this formulation today
 - Reports worsening pain in the setting of a recent fall (landed on his L arm); pain now rated as “20/10”
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Case Study Part 2 (cont'd)

- 16
 - Clinical Course (cont'd)**
 - Reports that his girlfriend “kicked him out”
 - PMP search reveals two oxycodone scripts from two different providers since his last visit
 - UDT obtained in clinic today was positive for 6-MAM and morphine
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Case Study Discussion Questions

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 - What is your assessment of the patient?
 - How could the approach to caring for this patient have been improved?
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Treatment of Opioid Use Disorder (OUD)

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Scope of the Problem

- As of 2012, Rx OUD was 4x more common than heroin-related disorders
- As of 2013, 10% of hospital admissions for SUD were attributed to Rx opioid use
- Less than half of Americans with OUD received medication-assisted treatment in 2012

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Risk Factors for Heroin Use

- Any history of prior nonmedical opioid use (associated with 19 times higher incidence)
- Living in metropolitan area
- History of SUD diagnosis in past year
- Male gender
- Age < 25 YO
- Annual income < \$20,000

MASACHUSETTS SOCIETY OF HEALTH-CARE PHARMACEUTISTS Muhuri, SAMHSA, 2013

Assessment SUD DSM-5 Diagnostic Criteria

Taken in larger amounts or over longer period than intended Persistent desire or unsuccessful efforts to stop/reduce use Excessive time spent trying to obtain/use substance, or recover Craving Failure to fulfill major obligations due to recurrent use Continued use despite negative social/interpersonal problems Giving up of important social/occupational/recreational activities Recurrent use where it is physically hazardous Use despite negative physical or psychological effects Tolerance (need more for same effect or get less effect with same amount) Withdrawal (syndrome specific to substance or using to avoid withdrawal)	Mild 2-3 criteria Moderate 4-5 criteria Severe 6+ criteria
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Opioid Withdrawal & Intoxication Signs

Intoxication Signs	Withdrawal Signs
Drooping eyelids	Restlessness, irritability, anxiety
Constricted pupils	Insomnia
↓ Respiratory rate	Yawning
Scratching (d/t ↑ histamine)	Abdominal cramps, diarrhea, vomiting
Head nodding	Dilated pupils
	Sweating
	Piloerection

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Objective Physical Signs in SUD

System	Findings
Dermatologic	Abscesses, rashes, cellulitis, jaundice, scars, track marks, pock marks
Ear, nose, throat, eyes	Pinpoint or dilated pupils, yellow sclera, conjunctivitis, rhinorrhea, epistaxis, hoarseness/laryngitis
Mouth	Poor dentition, gum disease, abscesses
Respiratory	Dyspnea, chronic cough, hematemesis
Musculoskeletal & extremities	Pitting edema, broken bones, traumatic amputations, burns on fingers

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FD overdoses...

- Found down in a park
- Is revived with intranasal naloxone
- BIBEMS to ED
- Addictions specialist in ED evaluates FD and discusses treatment options

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Which of the following is a reasonable treatment plan for the addictions specialist to consider?

- A** Referral to residential addiction treatment program; abstinence-based recovery
- B** Screening, brief intervention, and referral to treatment (SBIRT)
- C** Induce FD with buprenorphine according to appropriate dosing protocol
- D** Administer IM naltrexone



Treatment Approach

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Detoxification: Can be 1st step, but not a primary treatment

Harm reduction: ↓ negative consequences associated with substance use

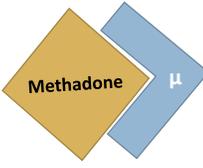
- Maintenance Treatment
 - Buprenorphine products
 - Methadone
 - Naltrexone
- Overdose Treatment
 - Naloxone rescue kits



Methadone

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- Long-acting mu-opioid agonist
 - Maintains opioid tolerance
 - Reduces cravings
 - Requires enrollment in registered clinic
 - Good for severe, long-standing OUD
 - Maybe good for patients with acute/chronic pain
 - Many drug-drug interactions
 - Must monitor QT interval
 - Very high doses not uncommon




Methadone (cont'd)

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- Typical maintenance dose: 60 – 120 mg daily
- Many US regions report clinics are operating at capacity, limiting new patient access
- Negative social stigma
 - ↓s help-seeking behaviors
 - ↑s social isolation
 - Undermines long-term recovery

Jones. Am J Public Health. 2015. DuCharme. Subst Abuse Treat Prev Policy. 2008.



Buprenorphine

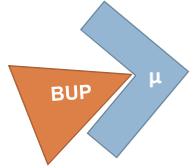
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Buprenorphine = partial mu-opioid receptor agonist

- Must educate on sublingual administration
- Can precipitate withdrawal if given too soon
- Induction should be monitored by clinical staff
- Reduces cravings
- Limits euphoria
- Can block other opioids
- Limited to authorized prescribers

Naloxone = opioid antagonist

- Inactive if taken orally
- Limits misuse potential




Buprenorphine (cont'd)

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- Higher treatment engagement rate, lower self-reported illicit opioid use, lower use of inpatient addiction treatment services vs. referral or SBIRT
- Barriers
 - Limited prescriber availability/willingness to prescribe
 - Low provider confidence in addressing addiction
 - Lack of institutional/office support
 - Reimbursement concerns
 - Many more...

Sohler. J Opioid Manag. 2013. Roman. Addict Behav. 2011. Walley. J Gen Intern Med. 2008. Cunningham. Fam Med. 2006. Hutchinson. Ann Fam Med. 2014. Netherland. J Subst Abuse Treat. 2009. Volkow. N Engl J Med. 2014. D'Onofrio. JAMA. 2015.



Naltrexone

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Opioid antagonist

- Available **IM (once-monthly)** or PO (daily)
- Should not lower cravings
- Can protect against overdose
- Can also ↑ OD risk
- MUST ensure f/u scheduled
- REMS program with IM
- No Rx restrictions/qualifications



Naltrexone IM
(Vivitrol)

Naltrexone PO
(Revia)

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Naltrexone (cont'd)

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- IM dose: 380 mg IM (gluteal) once-monthly
- Requires opioid-free period of 6-10 days to avoid precipitated withdrawal
- Efficacy of PO formulation limited by poor medication adherence
- Found to have efficacy in patients with polysubstance use disorder
- Not ideal for patients with pain flares

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Minozzi, Cochrane Reviews, 2006. Tiihonen, Am J Psychiatry, 2012.

OUD Pharmacotherapy Effectiveness

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Treatment retention rate at 12 months

Methadone	Buprenorphine	Naltrexone	Behavioral Tx
60%	< 60%	20 – 50%	< 20%

- Methadone (MMT) → Longest treatment retention
- MMT vs. buprenorphine
 - No differences in + tox screens
 - No differences in self-reported use
- IM naltrexone more effective than oral

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Johnson, N Engl J Med 2000. Strain, JAMA 1999. Simpson, Psychology of Add Behav 1997. Mattick, Cochrane Reviews 2014. Ling, Arch Gen Psychiatry 1996.

MAT is [Usually] Our Best Option

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- From 1995-2009 in Baltimore, the increased availability of buprenorphine & methadone correlated w/ a ~50% ↓ in fatal overdoses
- Methadone associated with ↓ risk for acquiring or spreading HIV infection
- ↓ mortality in patients on long-term MAT
- MAT ↓s opioid consumption & psychiatric/medical comorbidities; ↑s treatment retention rates & social functioning

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Schwartz, Am J Public Health, 2013. Vanichevski, Int J Addict, 1991. Mattick, Cochrane Reviews, 2009.

Overdose Reversal: Naloxone

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Rapid-acting opioid antagonist

- Available IV, IM, IN, Sub-Q
- Treats opioid overdose
- Many MA pharmacies can dispense without Rx




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Overdose Reversal: Naloxone (cont'd)

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- Encourage training for all patients with OUD **and their family members/close friends**
- Co-prescribing to patients and their family members is endorsed by ASAM & SAMHSA
- Consider recommended for any patients with chronic opioid rx for > 50 mg ME daily

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ASAM, 2010. SAMHSA, 2014.

More Overdose Risk Factors

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- Addiction behaviors present
- Lacking insurance or enrolled in Medicaid
- Lack of adequate treatment
- Period of abstinence (↓ tolerance)
- Non-Hispanic Caucasian
- Males
- Living in large metropolitan area
- Aged 18 – 25 years



PCSS: <http://pcssmat.org/wp-content/uploads/2014/03/PCSS-MATGuidanceTreatmentOfAcutePainInPatientsReceivingBup.Fiellin.pdf>

What is the BEST option for managing OUD in patient FD?

- A Buprenorphine
- B Methadone
- C IM naltrexone
- D Support groups



What is the BEST approach for managing chronic pain in FD?

- A Restart oxycodone-based therapy
- B Initiate an SNRI (e.g. duloxetine)
- C Physical therapy
- D Amputation of the L arm



Acute Pain Management in Patients with OUD

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- Provide reassurance that a history of OUD will not be an obstacle to acute pain management
- Include the patient in the decision-making process to allay anxiety about relapse
- Offer addiction counseling as needed
- Patients who are opioid dependent should not be denied pain treatment with opioids when medically indicated

PCSS: <http://pcssmat.org/wp-content/uploads/2014/03/PCSS-MATGuidanceTreatmentOfAcutePainInPatientsReceivingBup.Fiellin.pdf>

Acute Pain Management in Patients with OUD (cont'd)

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- Maintenance opioids should not be expected to adequately treat new onset acute pain, and discontinuation of buprenorphine/naloxone in patients experiencing acute pain will increase the patient's requirement for acute analgesic relief
- PCA can be used in opioid-dependent patients with acute pain
- To avoid precipitated withdrawal, resuming buprenorphine maintenance should be deferred until the opioid being administered for acute pain is withdrawn

PCSS: <http://pcssmat.org/wp-content/uploads/2014/03/PCSS-MATGuidanceTreatmentOfAcutePainInPatientsReceivingBup.Fiellin.pdf>

Clinical Interface between Pain and Addiction

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- Pain and drug reward share common neuroanatomic and neurochemical substrates
- The physiologic sequelae of addiction have clear effects on pain management
- Opioids, prescribed or illicit, have analgesic and hyperalgesic properties
- The disease of addiction brings with it physical symptoms, mood states, behaviors, and social losses that serve to worsen the pain experience

Key Takeaways

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- Key Takeaway #1
 - ▣ Pain and addiction share common threads
- Key Takeaway #2
 - ▣ Appropriate patient selection and monitoring when implementing therapy for the management of pain and/or addiction is crucial
- Key Takeaway #3
 - ▣ The changing landscape for chronic pain management and the rise of opioid abuse warrants an interprofessional approach and highlights the important role of the pharmacist



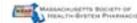
True or False

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Evidenced-based medicine suggests that an opioid medication, like oxycodone, is considered first-line treatment for a person with chronic neuropathic pain.

A True

B False

True or False

45

It is unsafe, and therefore never recommended, to prescribe opioids for pain in a patient with a history of a substance use disorder.

A True

B False




Which one of the following recommendations is MOST appropriate for the management of severe acute postoperative pain in a patient on buprenorphine therapy for an opioid use disorder?

A Increase the dose of buprenorphine

B Temporarily stop buprenorphine; utilize patient-controlled analgesia

C Continue buprenorphine; start methadone as needed

D Continue buprenorphine; start codeine as needed





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