SCOPE of Pain

Safer/Competent Opioid Prescribing Education

BU Chobanian & Avedisian School of Medicine

FACULTY

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Mark E. Pasanen, MD, MACP is an Associate Professor of Medicine at the Larner College of Medicine at the University of Vermont. His clinical practice includes primary care and hospitalist work at UVM Medical Center, where he also serves as Vice Chair of Education for the Department of Medicine. He has provided support for rural primary care practices in Vermont through the founding of the University of Vermont ECHO program, which he continues to lead. He has been recognized numerous times for his teaching and recently been name a Master in the American College of Physicians. He has a long-standing passion for the care of patients with chronic pain and his research, clinical and educational focus on assuring compassionate, safe and effective care.

ACCREDITATION

In support of improving patient care, Boston University Chobanian & Avedisian School of Medicine is jointly accredited by the Accreditation Council for Continuing Medical Education (ACCME), the Accreditation Council for Pharmacy Education (ACPE), and the American Nurses Credentialing Center (ANCC), to provide continuing education for the healthcare team.

Physicians
Boston University Chobanian & Avedisian School of Medicine designates this live internet activity for a maximum of ***2.5 AMA PRA Category 1 Credits™***. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

Nurses
Nursing Contact Hours: 2.5, of which 2.5 is eligible for pharmacology credit
Nurses will receive contact hours after completion of a post-test and evaluation.

Pharmacists
This activity is approved for 2.5 CPE credit(s) under ACPE universal activity number **JA0000185-0000-26-052-L08-P.**

The activity is available for credit claiming for up to 60 days after the date of the activity.

AAFP
The AAFP has reviewed SCOPE of Pain: Safer/Competent Opioid Prescribing Education, and deemed it acceptable for AAFP credit. Term of approval is from 9/24/2026 to 09/24/2007. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

ABIM MOC Part 2
Successful completion of this CME activity, which includes participation in the evaluation component, enables the participant to earn up to 2 MOC points and patient safety MOC credit in the American Board of Internal Medicine's (ABIM) Maintenance of Certification (MOC) program. It is the CME activity provider's responsibility to submit participant completion information to ACCME for the purpose of granting ABIM MOC credit.

PARTNERS

This activity was planned in collaboration with our national partner the Federation of State Medical Boards.

GRANT SUPPORT

This activity is supported by an independent educational grant from the Opioid Analgesic REMS Program Companies. See https://opioidanalgesicrems.com/Resources/Docs/List_of_RPC_Companies.pdf for listing of REMS Program Companies. This activity is intended to be fully compliant with the Opioid Analgesic REMS education requirements issued by the US FDA.

TARGET AUDIENCE

Physicians, nurse practitioners, registered nurses, physician assistants, nurses, dentists, pharmacists, and allied health professionals whose practices manage acute and chronic pain.

EDUCATIONAL OBJECTIVES

At the conclusion of this activity, participants will be able to:

- Develop realistic, patient-centered pain treatment goals
- Incorporate evidence-based multimodal pain treatment strategies
- Educate patients about opioid misuse risks
- Use a risk-benefit framework when initiating, maintaining, or modifying opioid analgesics
- Monitor patients prescribed opioids for benefits and harms
- Manage patients with worrisome opioid taking behaviors including opioid use disorder

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Content development and planning committee members have no relevant financial relationships to disclose.

OFF-LABEL/ INVESTIGATIONAL USES

This presentation does include discussion of the off-label use of sublingual buprenorphine to treat pain. Sublingual buprenorphine has been FDA approved for addiction treatment but not pain treatment. This presentation does include discussion of the off-label use of clonidine and tizanidine to treat opioid withdrawal symptoms. Clonidine and tizanidine are not FDA approved for this use.

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How the Program Works

- Webinar with Q&A
- Certificate available upon completion of a post-test and evaluation.

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Partnership & Opioid Analgesic REMS

National Partner

- Federation of State Medical Boards

Opioid REMS

- Content dictated by FDA *"Blueprint for Prescriber Education"*
- FDA requires opioid analgesic manufacturers to fund CME-certified education by approved providers

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About the Program

Through the case presented in this program, you will learn how to:

- Quantify pain and functional impairment using validated tools
- Formulate individualized, multimodal pain treatment plans using a risk-benefit framework
- Counsel patients on the therapeutic limitations of opioids and risk mitigation strategies
- Monitor opioid therapy continuously for efficacy, safety, and adverse outcomes
- Diagnose and manage opioid use disorder in patients with or without concurrent pain
- Use interprofessional, team-based care for comprehensive pain management

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Purpose of the Training

- Covers strategies for pain management including safer use of opioids by reviewing **best practices** and sharing **clinical pearls**
- Counts towards the **2023 DEA education requirement** of the **Medication Access and Training Expansion (MATE) Act**
- Aligns with the **2022 CDC Clinical Practice Guideline for Prescribing Opioids for Pain**
- Does NOT cover palliative care or end of life pain management

Alford DP, et al. *Pain Med*. 2016

Dowell D et al. *MMWR* 2022

https://deadiversion.usdoj.gov/pubs/docs/MATE_Training_Letter_Final.pdf

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Introduction:

Setting the Stage

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Pain: *"An Unpleasant **Sensory and Emotional** Experience"*

Acute Pain *Life sustaining symptom*	Chronic Pain Pain persisting beyond expected healing (~3 months) *No evolutionary benefit, can be a disease in and of itself*

Adaptive to minimize harm and allow healing	• **Maladaptive** disorder influenced by genetics and epigenetics
	• Classification influences work-up, treatment, and prognosis
	  • **Nociceptive**: actual or threatened tissue damage - **somatic** (e.g., bones, joints, muscle), **visceral** (e.g., mucosal injury, obstruction, ischemia)
	  • **Neuropathic**: disease or injury of the somatosensory nervous system - **central** (e.g., traumatic, vascular), **peripheral** (e.g., compression)
	  • **Nociplastic**: abnormal pain processing without evidence of discrete pathology - **diffuse sensitization** (fibromyalgia), **regional sensitization** (complex regional pain syndrome), **visceral pain** (irritable bowel syndrome)
	  • **Mixed Pain:** combination of different types of pain, occurring simultaneously in the same area

Raja SN, et al. *Pain*. 2020
Cohen SP, et al. *Lancet*. 2021
Fitzcharles MA et al. *Lancet*. 2021
Treede RD et al. *Pain*. 2019
Clauw DJ et al. *Postgrad Med*. 2019
Freynhagen R et al. *Curr Med Res Opin*. 2020

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State of Pain

21% of US adults (~50 million) reported pain on most days or everyday

Up to 60% of ED visits are for pain-related complaints

Pain costs billions of dollars per year in medical costs, lost wages and lost productivity

Pain contributes to disparities by disproportionally impacting women, elderly, racial and ethnic minorities, those with lower socioeconomic status, military veterans, and those in rural communities

Yong R et al. *Pain* 2022
Cordell WH, et al. *Am J Emerg Med*. 2002
Gaskin DJ, Richard P. *J Pain* 2012
Dahlammer J et al. *MMWR* 2018
Mills SEE et al. *Br J Anaesth*. 2019

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Barriers to Optimal Pain Care

- Over-burdened providers with many competing priorities
- Inadequate training in managing pain
- Lack of decision support for effective and safe pain management
- Financial misalignment favoring use of medications
- Lack of access to pain specialists and comprehensive multimodal pain care
- Negative attitudes and disparities in pain care
- Patient access to misinformation leading to unrealistic treatment expectations

AMA J Ethics. 2020
Laferton JAC et al. *JAMA*. 2025
Hadi MA, et al. *BMJ Open*. 2017

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State of Opioids

- **Opioid prescribing**
  - Opioid analgesic prescribing increased in the 1990s, peaked in 2012
  - National opioid prescriptions fell more than 44% over last decade

- **Opioid overdoses**
  - In 2025 opioid overdose deaths dropped to 44,564 (down from 55,296 in 2024), 3rd consecutive year of national decline
  - Illicit fentanyl drive most opioid deaths along with poly-substances including cocaine, methamphetamine, and/or adulterants like xylazine

www.cdc.gov/nchs/nvss/vsrr/drug-overdose-data.htm
www.cdc.gov/overdose-prevention/data-research/facts-stats/opioid-dispensing-rate-maps.html

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Part 1:

Assessing and Managing Pain

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Case Study – Michelle Jones – 36 yo female

Medical History

- 36-year-old female with no past medical history
- Displaced right femoral neck fracture after a motor vehicle crash
- Underwent internal fixation
- Perioperative pain managed with nerve blocks and parenteral hydromorphone

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Assessing Acute Pain

S	Site
O	Onset
C	Character
R	Radiation
A	Associations
T	Time course
E	Exacerbating/relieving factors
S	Severity

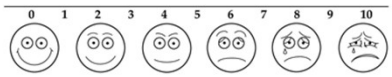
He S, et al. *JAMA*. 2022
Oken BS. *Brain*. 2008
Breivik H, et al. *Br J Anaesth*. 2008
Mason ST, et al. *Handbook of Pain Assessment*. 2011

*"Many factors influence self-reported pain including **gender, social support, clinician characteristics, trust**."*

~ Barry S. Oken, MD, PhD

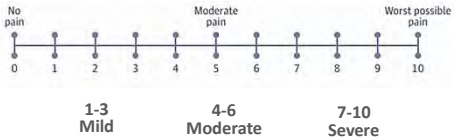
Pain intensity scales include:

- **Visual Analogue Scales (VAS)**



- **Emoji-based VAS**

- **Numerical Rating Scales (NRS) 10-point scale**



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Risk: Developing Chronic Postsurgical Pain

- Alterations in expression of neurotransmitters, receptors, and ion channels
- Changes to neuron structure, connectivity, and survival

Persistent Pain

Patient-related
- Younger
- Female
- History of
  - Anxiety
  - Depression
  - Catastrophizing
  - Pre-existing pain syndrome
  - Preoperative opioid use

Intraoperative variables
- Surgical procedure
- Nerve ligation/injury
- Ischemia

Postoperative pain
- Uncontrolled severe pain
- Longer duration of postop pain

Voscopoulos C, Lema M. *Br J Anaesth.* 2010
Pozek JP, et al. *Med Clin North Am*. 2016

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Risk: Acute to Chronic Musculoskeletal Pain

STarT MSK Screening Tool

- Helps identify modifiable risk factors for chronic musculoskeletal pain disability
- Score stratifies risk:
  - Low (0-3)
  - Medium (4-7)
  - High (8-9)

	Last 2 weeks…(disagree [0] or agree [1])
Characteristics	1. …**troublesome joint or muscle pain in more than one part** of your body?
	2. …**only been able to walk short distances** because of your pain?
	3. …**dress more slowly** than usual because of your pain?
	4. …**other important health problems**?
Catastrophizing	5. …**feel it is unsafe**…to be physically active?
	6. …**worrying thoughts** about your pain a lot of the time?
	7. …your pain condition **will last a long time**?
	8. … **stopped enjoying** all the things you usually enjoy?
	9. **How bothersome** has your pain been… *(not at all, slightly, moderately, very much, extremely)*

Campbell P, et al. *J Pain Res*. 2016
Beneciuk JM, et al. *J Pain*. 2024

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Case Study – Michelle Jones – 36 yo female

?

What is the correct amount of opioid to discharge this patient on?

Discharge Home

- Orthopedic follow-up in 1 week
- Physical therapy referral
- Prescriptions
  - Ibuprofen 600 mg every 8 hours prn pain
  - Oxycodone (5 mg) 1-2 tablets every 4-6 hours prn pain **(#40 tablets)**

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Opioid Overprescribing for Acute Pain

Overprescribing	Overprescribing Risk
• Postoperatively over 70% of patients took half or less of their opioids • After ED visit (renal colic, fracture/ dislocation) 93% of patients had leftover pills, 52% of pills were unused	• 31% of prescription opioids misused obtained from family & friends • 3-5% of opioid-naïve patients receiving an opioid became long-term (>3 months) opioid users *(risk factors: male, over 50, mental illness, substance use disorder)*

Since 2012, fewer *new* opioid prescriptions for more than 7 days

Bartels et al. *Plos One*. 2016
Dayer LE, et al. *J Surg Res*. 2025
SAMHSA. (2025). *2024 NSDUH*
Sun EC, et al. *JAMA Intern Med*. 2016
McCarthy DM, et al. *Pain Med*. 2021
Riva JJ, et al. *Ann Intern Med*. 2020
Deyo RA, et al. *J Gen Intern Med*. 2017
Zhu W et al. *N Engl J Med*. 2019

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Treating Acute Pain

Acute Dental Pain

Molar extractions:

NSAID + APAP more effective versus oxycodone alone or in combination with APAP

Acute Musculoskeletal Pain

No significant difference in pain reduction

NSAID + APAP versus opioid alone or in combination with APAP

Acute Pain Guidelines

Multimodal, individualized approach

Minor surgeries: NSAIDs +/- APAP or limited opioids then transition to NSAIDs +/- APAP

CDC Recommendations 1 & 6

- Acute pain: maximize non-pharm and non-opioids
- Only consider opioids if benefits > risks
- Discuss realistic benefits and known risks
- Prescribe no greater quantity than needed for expected duration of severe pain

Dowell D, et al. MMWR. 2022

Moore RA, et al. *Cochrane Library* 2015
Chang AK, et al. *JAMA* 2017
Jones CMP, et al. *Lancet* 2023
Joshi GP. *Curr Pain Headache Rep*. 2023
Qaseem A, et al. *Ann Intern Med* 2020
Fiore JF, et al. *Lancet* 2022
Mariano ER et al. *Reg Anesth Pain Med*. 2022
Rech MA, et al. *Am J Emerg Med*. 2022

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Ketamine
Suzetrigine

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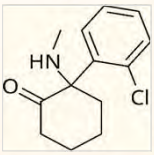
Ketamine for Acute Pain

Dissociative Anesthetic developed in 1960s



- NMDA receptor antagonist provides analgesia at subanesthetic doses
- Analgesic without respiratory depression
- Low oral bioavailability - parenteral use (IV, IM) as analgesic in ED and perioperative settings
  - Low dose (0.3-0.5 mg/kg) reduces pain more rapidly but less sustained than morphine
  - Decreases opioid requirements ("opioid-sparing")
- Oral, sublingual and intranasal formulations being studied for efficacy and safety for refractory severe chronic pain
- Dose-dependent adverse effects - hallucinations, agitation, anxiety, dysphoria, euphoria
- Misuse potential due to psychoactive effects

Faísco A, et al. *Cureus*. 2024
Pickering G, et al. *CNS Drugs*. 2026
Phan JH, et al. *Ann Pharmacother*. 2026
Duong HG, et al. *Pain Manage.* 2026
Guo J, et al. *Am J Emerg Med*. 2024

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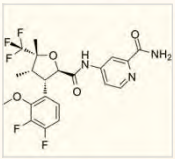
Suzetrigine for Acute Pain

1st Nonopioid Analgesic in over 25 Years



- Oral systemic selective Na channel blocker for short-term treatment of moderate to severe **acute pain** in adults
- For postoperative pain more efficacious than placebo but not hydrocodone/APAP
  - Only available as oral formulation: dosage 100 mg once followed by 50 mg BID
- In clinical trials, well-tolerated, over 80% of participants still required rescue NSAIDs
- Alternative when NSAIDs or opioids are ineffective or the risk of adverse effects with their use is too high
- Efficacy and safety for treatment of subacute or chronic pain is being investigated

Med Lett Drugs Ther. 2025
Yuan S, et al. *J Pain Palliat Care Pharm*. 2026
Divito AE et al. Cleve *Clin J Med*. 2026
Courtney D et al. *Am J Health-Syst Pharm*. 2026

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Case Study – Michelle Jones – 36 yo female

Postoperative Course

- Completed physical therapy
- Occasionally performed recommended home exercises
- Hip pain and range of motion improved over time
- She ended up with 15 unused oxycodone tablets, which she threw away

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Case Study – Michelle Jones – 54 yo female

?

What is the most efficient way to screen for psychiatric conditions?

18 Years Later…

- Presents for primary care, at age 54, after previous PCP retired
- Chief complaint: **"I need my pain med refilled today. My feet and hip are killing me! It is making me so depressed!"**
- Past medical history:
  - Type 2 diabetes mellitus (A1C 7%)
  - Painful diabetic neuropathy
  - Diabetic nephropathy (Stage 3a, GFR 50)
  - Hypertension
  - Hyperlipidemia
  - Obesity (BMI 32)
  - Post-traumatic osteoarthritis of right hip

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Psychiatric Co-Morbidities

- Almost every psychiatric diagnosis in the DSM-5 is also associated with increased rates of chronic pain
  - Major depressive disorder
  - Generalized anxiety disorder
  - Personality disorder
  - Sleep disorder
  - PTSD
  - Substance use disorder
- Bidirectional relationship
  - Psychiatric conditions make pain worse
  - Pain makes psychiatric conditions worse
- Should assess for psychiatric conditions and attempt to co-manage

Johnston KJA, Huckins LM. *Complex Psychiatry.* 2023

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Brief Screenings for Co-Morbidities

Depression	**PHQ-2** (Patient Health Questionnaire), *2-items. If positive PHQ9*
Anxiety	**GAD-2** (Generalized Anxiety Disorder), *2-items, if positive GAD-7*
PTSD	**PC-PTSD-5** (Primary Care PTSD Screen for DSM-5), *5-items*
Sleep Disorder	**ISI-3** Insomnia Severity Index, *3-items*
Suicidality	**ASQ** (Ask Suicide-Screening Questions), *4-items*
Substance Use	**TAPS** (Tobacco, Alcohol, Prescription Meds, & Other Substance Use) Tool **SISQ** (Single Item Screening Question – Alcohol, Drugs) *if positive *AUDIT +/- **DAST or ^DSM-5 for substance specific use disorder*

Kroenke K, et al. *Med Care.* 2003
Kroenke K, et al. Ann Intern Med. 2007
Prins A, et al. *J Gen Intern Med.* 2016
Thakral M, et al. *Sleep Med.* 2021
McNeely J, et al. Ann Intern Med. 2016
Horowitz LM, et al. *Psychosomtics.* 2020
Smith PC, Saitz R. *J Gen Intern Med* 2009
Smith PC, Saitz R. *JAMA Intern Med* 2010

*Alcohol Use Disorders Identification Test
**Drug Abuse Screening Test
^Diagnostic & Statistical Manual of Mental Disorders, 5th Ed

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Case Study – Michelle Jones – 54 yo female

Screening Results

- **Positive for depression: PHQ9 = 5** (mild depression)
- **Positive for anxiety: GAD7 = 8** (mild anxiety)
- Negative for insomnia
- Negative for substance use disorder

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Case Study – Michelle Jones – 54 yo female

Medications

Metformin, Empagliflozin, Lisinopril, Atorvastatin

Pain Medications

Oxycodone 10 mg 4x/day (60 MME*)
Gabapentin 300 mg 3x/day

Previous Pain Medications

NSAIDs (ibuprofen, naproxen)	Diabetic nephropathy and GI upset
Acetaminophen	Inadequate pain relief
Tricyclic antidepressants (TCA) (amitriptyline)	Inadequate pain relief and dry mouth
Tramadol	Inadequate pain relief
Acetaminophen with codeine	Inadequate pain relief and nausea

**Morphine Milligram Equivalents*

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Case Study – Michelle Jones – 54 yo female

Social History

Paralegal law office 20 hours/week
Married, no children

Substance Use History

No tobacco use
Alcohol use: 1 glass of wine on special occasions
No illicit drug or cannabis use

Family History

Father being treated for lung cancer
Mother died from complications of alcohol-associated cirrhosis

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Case Study – Michelle Jones – 54 yo female

Pain Medications

- Spacing out oxycodone to avoid running out
- Took last oxycodone this morning
- Best pain relief with oxycodone 10 mg every 6 hours
- Current pain is more severe due to less frequent oxycodone
  - **"My pain pills don't last. I'm suffering. It's almost impossible to go to work."**
- Presents with some medical records from previous PCP

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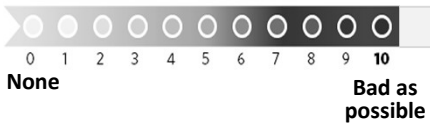
Case Study – Michelle Jones – 54 yo female

Pain Assessment

- **Moderate right hip pain**
  - Constant deep, aching pain radiating to the right groin
  - Exacerbated with activity and relieved with rest
- **Severe bilateral foot pain**
  - Burning, numbness and tingling
  - Pain worse at night, trouble sleeping because of pain

On a scale of 0-10



Michelle states her pain is **"20"!**

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Building Trust: Patient Issues

Patients may assume that you do not believe the severity of their pain complaints

Demonstrated by **exaggerating pain scores** and **functional limitations**

Upshur C et al, *Pain Med.* 2010

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Building Trust: Clinician Issues

After completing a thorough pain hx, focused exam, and appropriate diagnostic testing…

Show empathy…clinician empathy is associated with better chronic pain outcomes

"I hear how much this pain is affecting your life."
"I can see how hard you are trying to manage this pain."

Validate that you believe the patient's pain and suffering is real…

"I hear how much pain you are in, and I believe you."
"Your pain is real; we will figure this out together."

Believing the severity of a patient's pain report
does not mean opioids are indicated

Licciardone JC et al. *JAMA Network Open*. 2024
Lozano PM et al. *J Pain*. 2025

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Chronic Pain Assessment

Unidimensional Scales

- ☐ (e.g., Numeric rating) are of limited value for assessing chronic pain

Multidimensional Instruments

- ☐ McGill Pain Questionnaire
- ☐ Graded Chronic Pain Scale
- ☐ Brief Pain Inventory

} Impractical for use in most primary care settings

Brief Multidimensional Tool

Pain, Enjoyment, General Activity (PEG) Scale

1. What number best describes your pain on average in the past week:

0 1 2 3 4 5 6 7 8 9 10
No pain — Pain as bad as you can imagine

2. What number best describes how, during the past week, pain has interfered with your enjoyment of life?

0 1 2 3 4 5 6 7 8 9 10
Does not interfere — Completely interferes

3. What number best describes how, during the past week, pain has interfered with your general activity?

0 1 2 3 4 5 6 7 8 9 10
Does not interfere — Completely interferes

Breivik H, et al. *Br J Anaesth*. 2008
Salaffi F, et al. *Best Pract Res Clin Rheumatol.* 2015
Krebs EE, et al. *J Gen Intern Med*. 2009
Reed II DE, et al. *J Pain.* 2024

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Case Study – Michelle Jones – 54 yo female

In the past week…

PEG Scale Assessment

Pain on average?

0 1 2 3 4 5 6 7 8 9 10

No pain — As bad as you can imagine

Pain interfered with **Enjoyment of life?**

0 1 2 3 4 5 6 7 8 9 10

Does not interfere — Completely interferes

Pain interfered with **General activity?**

0 1 2 3 4 5 6 7 8 9 10

Does not interfere — Completely interferes

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Case Study – Michelle Jones – 54 yo female

?

How will you manage this patient's chronic pain?

Physical Examination

- No acute distress
- Normal vitals, weight 193 lbs (BMI 32)
- Musculoskeletal exam normal except right hip with decreased internal rotation
- Neuro-motor exam normal except absent Achilles tendon reflex bilaterally
- Diabetic foot exam:
  - No lesions, normal pulses
  - Loss of protective sensation by monofilament test

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Goals of Care and Multimodal Approach

***Self-management** is a patient-centered, multimodal approach (physical, emotional, and cognitive strategies) that reduces the impact of pain and improves function by transitioning patients from passive treatment recipients to active partners of their care.

Hestmann R, et al. *BMC Health Serv Res*. 2023
Kang Y, et al. *BMJ*. 2024

Henry SG, et al. *Clin J Pain*. 2017
Elbers S, et al. *Eur J Pain*. 2022
Connell NB, et al. *J Gen Intern Med*. 2022
Wang Y, et al. *Cell Rep Med*. 2025

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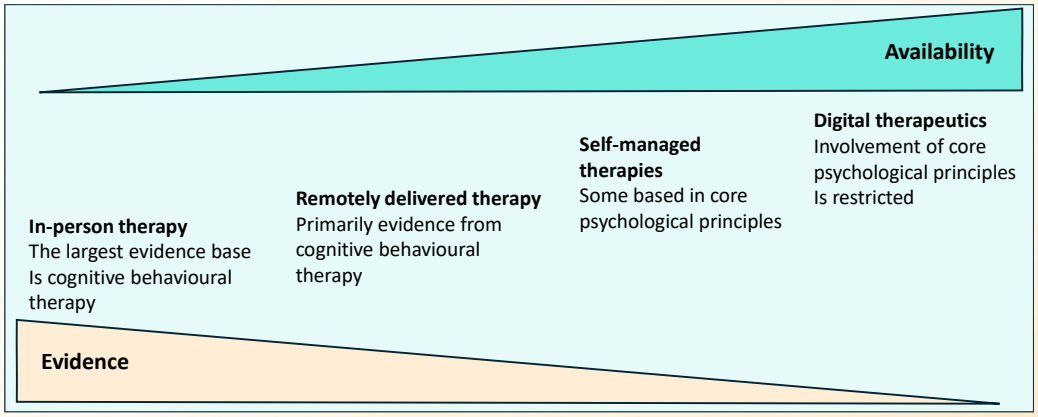
Behavioral Interventions

CBT, ACT, Mindfulness-Based Stress Reduction, Pain Reprocessing, Biofeedback & Relaxation

- Targets cognitive, emotional, and behavioral factors contributing to pain
- Mitigate psychological distress: reframe maladaptive pain beliefs, reduce catastrophizing/rumination, correct somatic misinterpretations, and downregulate central threat perception



Vase L, et al. *Lancet*. 2025

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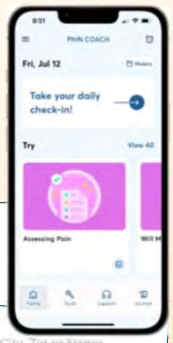
Behavioral Interventions

CBT, ACT, Mindfulness-Based Stress Reduction, Pain Reprocessing, Biofeedback & Relaxation

- High-quality evidence demonstrate reduced pain, catastrophizing, and emotional distress, improvements in functioning and coping that match or exceed the benefits of many medications
- Mobile health apps (e.g., mindfulness, relaxation, reframing, pacing, goal setting), many free *(e.g., VA Pain Coach app, Manage My Pain app)*, some require subscription or paid version with more features
- Finding health psychologists: hospital-affiliated clinics, insurance plan, Psychology Today (www.psychologytoday.com/us), Society of Behavioral Medicine



Kerns RD, et al. *Pain Med.* 2022
Vase L, et al. *Lancet.* 2025
Kang Y, et al. *BMJ.* 2024
Ziadni MS, et al. *J Pain*, 2026
APA. *Clinical Practice Guideline*. 2024
Skelly AC, et al. *AHRQ*. 2020
Eagle H, et al. *Clin J Pain* . 2026

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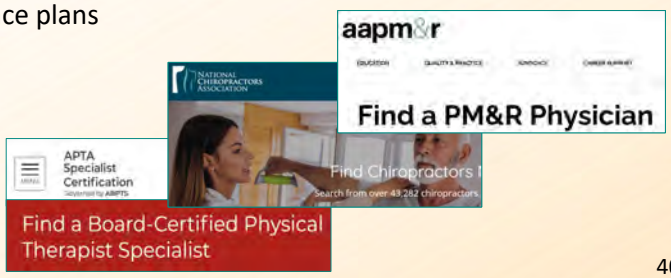
Physical and Restorative Approaches

Physiatrists (PM&R), Osteopathic Physicians, PT, OT, Chiropractors

- Mechanical interventions to optimize neuromusculoskeletal function targeting physical forces, tissue manipulation, and biomechanical training
- Evidence for improving pain and function: strongest with therapeutic structured exercise, moderate evidence for spinal manipulative therapy, and weaker evidence for standalone passive treatments (e.g., massage)
- Use professional medical directories and search tools dedicated to each specific practice type, insurance plans



Skelly AC, et al. *AHRQ*. 2020
Trager RJ, et al. *J Clin Med*. 2024
González-Gómez L, et al. *Eur J Pain*. 2025

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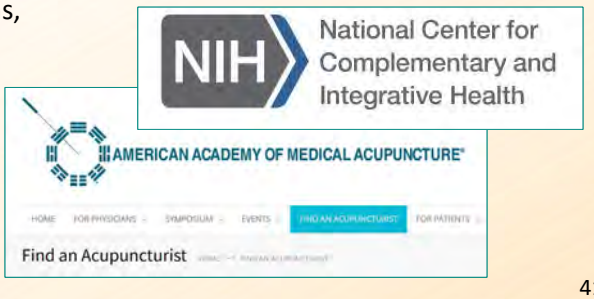
Integrative Medicine Approaches

Acupuncture, Mind-Body Practices, Movement Therapies (Tai Chi, Qigong, Yoga)

- Whole-person approaches to address the biological, psycho-social, and environmental factors contributing to a patient's pain experience
- Systematic reviews and meta-analyses of RCTs show moderate, clinically meaningful improvements in pain and function with strong safety profile
- Hospital departments of Integrative Medicine, local licensed acupuncturists, board-certified integrative physicians, insurance plans



Nahin RL, et al. *JAMA*. 2024
Seal KH, et al. *JAMA*. 2026

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Case Study – Michelle Jones – 54 yo female

How will you respond to her concerns about nonpharmacologic approaches?

Plan of Care

- You discuss the importance of self-management and the benefits of nonpharmacologic treatments.
- She responds by saying…
  - "You don't believe me, you think my pain is all in my head"
  - "I have tried these other things and they didn't work…some made my pain worse…they were a waste of time"

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Discussing Nonpharmacologic Options

- "Seeing a psychologist doesn't mean that your pain is not real, pain changes the nervous system, making the brain's 'amplifier' too sensitive, and this therapy will teach the brain how to quiet down pain signals. Psychologists are experts in the brain."
- "Carefully guided movement actively repairs your body, so the soreness you feel during rehab is actually a safe sign that your body is adapting and getting stronger—not causing damage. You can use quick relief options like ice or heat to ease any discomfort and to help you get moving."
- "Exploring integrative treatments does not mean your pain isn't serious, nor does it mean conventional medicine is giving up on you. Instead, these therapies work hand-in-hand with your medications and other treatments to help your body heal and become stronger."

Braverman MT, Volmar KM, Govier DJ. *Am J Health Promot.* 2023

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Case Study – Michelle Jones – 54 yo female

?

What are your medication options for treating her chronic pain?

- She reluctantly agrees to read about self-management strategies and see a psychologist for behavioral approaches
- You tell her that you will review the medications she is taking and those she has tried in the past to determine if there are any improvements that can be made

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Non-Opioid Pharmacotherapies

Non-steroidal Anti-inflammatory Drugs (NSAIDs)

- Nonselective and selective COX-2 inhibitor (celecoxib)
- Anti-inflammatory, analgesic, antipyretic
- Adverse effects (GI, renal, CV) especially at high doses

Acetaminophen (APAP)

- Analgesic, antipyretic
- Less effective than full dose NSAIDs in relieving chronic pain
- Fewer adverse effects than NSAIDs

General Considerations

- Ceiling analgesic effects
- No known analgesic tolerance
- Additive role (NSAID+APAP)
- Some patients may respond better to one NSAID than another

Med Lett Drugs Ther. 2022
Finnerup NB. *N Eng J Med.* 2019

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Non-Opioid Pharmacotherapies

- **Analgesics with primary indication other than pain**
  - **Antidepressants** (TCAs, SNRIs)
  - **Anticonvulsants** (gabapentinoids, carbamazepine)
  - **Antispasmodics/muscle relaxants**
  - **Local anesthetics** (lidocaine)

} Mainstay of pharmacologic treatments for neuropathic and nociplastic pain syndromes

Caution:

- Misuse and addiction potential with:
  - Gabapentinoids (gabapentin, pregabalin)
  - Muscle relaxants (carisoprodol metabolizes into meprobamate (barbiturate-like drug))
- Additive burden of anticholinergic side effects (e.g., TCAs, cyclobenzaprine)

Med Lett Drugs Ther. 2022
Finnerup NB. *N Eng J Med.* 2019
Evoy KE et al. *Drugs.* 2021
Hill J, Alford DP. *Semin Neurol.* 2018

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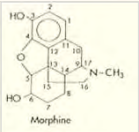
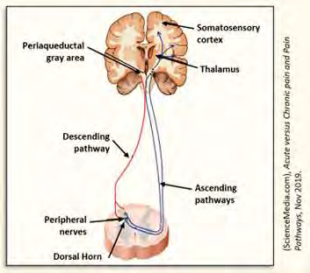
Opioid Analgesics

- Classification
  - Opiates (e.g., morphine, codeine)
  - Semisynthetic opioids (e.g., oxycodone, hydrocodone, buprenorphine)
  - Synthetic opioids (e.g., fentanyl, methadone)



- Analgesic mechanisms of action
  - Turn on descending inhibitory systems (periaqueductal gray) and prevent ascending transmission of pain signal
  - Inhibit activation of C-fibers and the peripheral nociceptors
- Activate the reward pathway ➡ euphoria
- Not all patients respond to the same opioid in the same way
  - Variability driven by μ-receptor polymorphisms and single nucleotide polymorphisms (SNPs) influencing metabolism, transport, and receptor kinetics
  - Pharmacogenomic (PGx) profiles not routinely used due to cost and lack of coverage



(ScienceMedia.com), *Acute versus Chronic pain and Pain Pathways*, Nov 2015.

Ren ZY et al. *Pain Physician*. 2015 Somogyi AA, et al. *Anaesth Intensive Care*. 2022 Crews KR, et al. *Clin Pharmacol Ther*. 2021

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Opioid Tolerance & Physical Dependence

Both tolerance and physical dependence are physiological adaptations to chronic opioid exposure

Tolerance:

- Increased dosage needed to produce specific effect
  - Develops readily for CNS and respiratory depression
  - Less so for constipation
  - **Unclear about analgesia**

Physical Dependence:

- Signs and symptoms of withdrawal by abrupt opioid cessation, rapid dose reduction or exposure to an opioid antagonist (e.g., naloxone, nalmefene)

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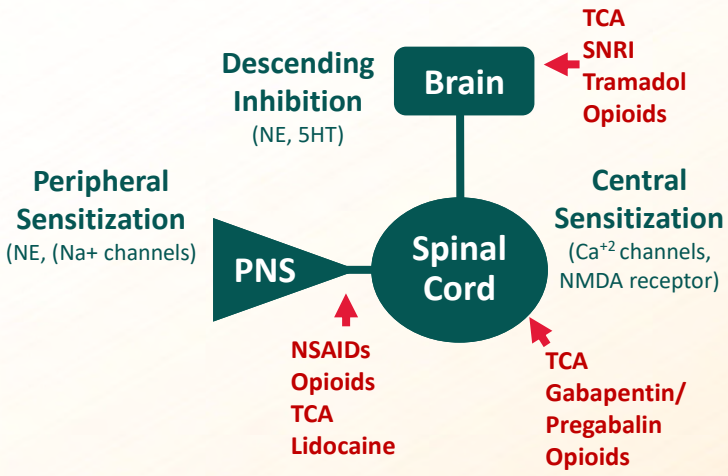
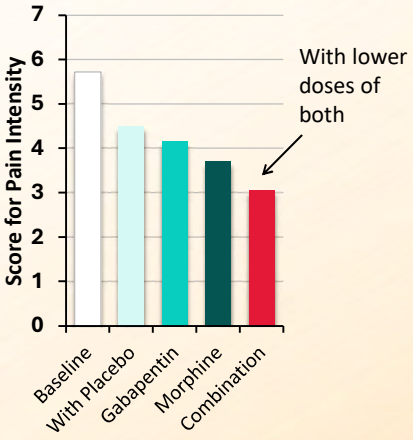
Rational Polypharmacy

Exploit Synergism





Finnerup NB. *N Eng J Med.* 2019
Woolf CJ. *Ann Intern Med.* 2004

Gilron I, et al. *N Engl J Med.* 2005

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Opioid Efficacy and Safety

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Opioid Efficacy for Chronic Pain

Meta-analyses (3-6 m f/u)

- **Opioids vs placebo** *(high-quality studies)* Opioids with statistically significant, but small, improvements in pain[1,2] and physical functioning[2]
- **Opioids vs nonopioids** *(low-mod quality studies)* Similar benefits[2]

RCT[3] found opioids **not superior** to nonopioids for improving musculoskeletal pain-related function over 12 months

Limitations to generalizability:[4]

- *Excluded patients already on long-term opioids*

Two longer term follow-up studies found **44.3%** on chronic opioids for chronic pain had **at least 50% pain relief** [5]

1. Meske DS, et al. *J Pain Res*. 2018
2. Busse JW, et al. *JAMA*. 2018
3. Krebs EE, et al. *JAMA*. 2018
4. Webster L. *Pain Med*. 2019
5. Noble M, et al. *Cochrane Syst Rev*. 2010

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Opioid Safety and Risks

Allergies: Rare

Immunosuppression

- Animal models, opioid induced immuno-suppression
- Humans increased risk invasive pneumococcal disease, and community acquired pneumonia

Organ Toxicities

- Suppression of the hypothalamic-pituitary-gonadal and adrenal axes
  - Menstrual irregularities, reduced fertility, erectile dysfunction
  - Osteoporosis, fatigue
  - Obesity, metabolic syndrome

Adverse Effects

- Nausea, sedation, urinary retention, sweating
- Constipation: (hypodynamic bowel, dry stool)
- Pruritus (histamine release)
- **Respiratory depression → Death**

Diasso PD, et al. *Eur J Pain*. 2019
Wiese AD, et al. *Ann Intern Med*. 2018
Edelman EJ, et al. *JAMA Intern Med*. 2019
Kotlińska-Lemieszek, A et al. *Drug Des Devel Ther*. 2024

Report AE to FDA 1-800-FDA-1088, www.fda.gov

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Managing Opioid Adverse Effects

Nausea and Vomiting	• Usually resolves in a few days • Antiemetics, switch opioids
Sedation Mostly during initiation or change in dose	• **Decrease dose**
Constipation Most common and should be anticipated	• Stool softeners, osmotic stimulants • Peripherally-acting opioid antagonists • Switch opioids, avoid bulking agents
Pruritus	• Switch opioids • Antihistamines
Urinary Retention	• Switch opioids

Paul AK, et al. *Pharmaceuticals.* 2021
Hanson B et al. *Gastroenterology.* 2019

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Opioids & Patient Considerations

Age

- Decline in therapeutic index and predisposition to adverse drug effects
- Fall risk, worsening cognitive function

Medical Co-morbidities

- **Liver disease**: decreased opioid clearance
  - Morphine, oxycodone, hydromorphone: reduce doses and prolong dosing intervals

- **Kidney disease**: decreased opioid excretion
  - Preferred are hydromorphone, fentanyl, buprenorphine, methadone
  - Caution with oxycodone, morphine due to active metabolites

Pregnancy

- Risk of neonatal opioid withdrawal syndrome (NOWS)
- All opioids transfer into human milk to some degree

Hamilton JP. *Gastroenterol Hepatol.* 2023
Rajput K, Ng J, et al. *Anesthesiol Clin* 2023
Esposito DB, et al. *JAMA Network Open*. 2022
Odoma VA, et al. *Cureus.* 2023

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Opioids: Drug-Drug Interactions (DDI)

- Significant DDI can occur between opioids and drugs that affect the opioid metabolism
- DDI often arise due to inhibition or induction of **cytochrome P450** (CYP450)
  - **Opioids metabolized by CYP450:** DDIs can reduce or increase opioid effects (e.g., codeine, oxycodone, hydrocodone, fentanyl, tramadol, methadone)
  - **Opioids not metabolized by CYP450:** fewer DDIs (e.g., morphine, hydromorphone)
- CNS depressants (benzodiazepines, alcohol, cannabis, other sedatives, hypnotics, TCAs) may potentiate opioid effect on sedation and respiratory depression
- Alcohol may rapidly release opioid (dose dump) or increase drug levels w/out dose dumping

CDC

Recommendation 11

Use caution when concurrently prescribing opioids and benzodiazepines (and other CNS depressants)

Dowell D, et al. MMWR. 2022

Kotlinska-Lemieszek A, et al. *Drug Des Devel Ther.* 2015
Coates S, Lazarus P. *J Pharmacol Exp Ther.* 2023

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Problematic Opioid Use

Systematic review and meta-analysis

- 148 studies, 4.3 millions participants - chronic pain treated with long-term opioids
- Settings: pain clinics, primary care, other specialty clinics

Aberrant Behavior: 29.6%
(95%CI: 22.1% - 38.3%)

Worrisome behaviors including early refills, repeated dose escalations, lost prescriptions, seeking meds from multiple prescribers, unexpected urine drug test results

Opioid Use Disorder: 9.3%
(95% CI: 5.7% - 14.8%)

Based on DSM or ICD diagnostic criteria/codes

Thomas KH, et al. *Addiction.* 2024

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Collateral Opioid Risk

Risks

- Young children's ingestion and overdose*
- Adolescent experimentation leading to overdose and addiction
- Other household contacts (family, visitors)

Mitigating risk

- Safe storage (e.g., lock box)
- Child resistant packaging
- Mail-back envelopes: REMS Program Companies to provide pre-paid drug mail-back envelopes to pharmacies and other dispensers
- Safe disposal www.deadiversion.usdoj.gov/drug_disposal/
- Overdose education and naloxone distribution www.prescribetoprevent.org

Gaither JR, et al. *JAMA Pediatr*. 2016
Beletsky L, Rich JD, Walley AY. *JAMA* 2012
SAMHSA *Opioid Overdose Prevention Toolkit* 2018
Bonomo Y, Hogg M. *Pain Manag Today*. 2023

CDC **Recommendation 8**

Use strategies to mitigate risk including naloxone co-prescribing

Dowell D, et al. MMWR. 2022

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Higher Dose Opioids

Lack of high-quality evidence about the efficacy of high-dose opioids for chronic pain

Higher doses associated w/:

- Immunosuppression
- Hyperalgesia
- Reduced function
- **Overdose risk increased**
  - 2X at 20-49 MME (Morphine Mg Equivalent)
  - Up to 9X at ≥ 100 MME

Patient on high doses…

- Manage as higher risk
- Increase monitoring and support

CDC **Recommendation 4**

- When starting, prescribe lowest effective dosage
- Use caution at any dosage
- Carefully evaluate benefits and risks when considering increasing dosage
- Avoid increasing dosage above levels w/ diminishing benefit relative to risk

Dowell D, et al. MMWR. 2022

Els C, et al. *Cochrane Reviews* 2023
Kobus AM, et al. *J Pain*. 2012
Huxtable CA, et al. *Anaesth Inten Care*. 2011
Brush DE. *J Med Toxicol*. 2012
Lee M, et al. *Pain Physician*. 2011
Braden JB. *Arch Intern Med*. 2010
Paulozzi LJ. *Pain Med*. 2012
Edelman EJ, et al. *JAMA Int Med*. 2019
Dunn KM, et al. *Ann Intern Med*. 2010
Bohnert AS, et al. *JAMA*. 2011
Zedler B et al. *Pain Med*. 2014
Gomes T, et al. *Open Med*. 2011

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Opioid-Related Harms

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Risk Factors for Opioid-Related Harm
(misuse, overdose, addiction)

Medication Factors	Patient Factors
Higher opioid dose	**Mental health disorder** (e.g., depression, anxiety)
Long-term opioid use (>3 months)	**Substance use disorder (SUD)** (e.g., alcohol, tobacco, illicit and prescription drug)
Extended release/long-acting (ER/LA) opioid	**Family history of SUD**
Initial 2 weeks after starting ER/LA opioid	**History of opioid overdose**
Combination opioids and sedatives (e.g., benzodiazepines)	**Sleep-disordered breathing**

Liebschutz JM, et al. *J Pain*. 2010
Weiner SG, et al. *JAMA Network Open*. 2022
Han B, et al. *J Clin Psychiatry*. 2024
Volkow ND, et al. *N Engl J Med*. 2016
Kendler KS, et al. *Psych Med*. 2023
Thomas AT, et al. *Pain Physician*. 2022

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Screening for Sleep-Disordered Breathing

STOP-BANG Questionnaire

STOP
Do you **SNORE** loudly?
Do you often feel **TIRED**, fatigued, or sleepy during daytime?
Has anyone **OBSERVED** you stop breathing during your sleep?
Do you have or are you being treated for high blood **PRESSURE**?
BANG
BMI more than 35?
AGE over 50?
NECK circumference (males: 17+ inches; females: 16+ inches)?
GENDER male?

Sleep Apnea Risk	Total Score
High Risk	5-8
Intermediate Risk	3-4
Low Risk	0-2

Chung F et al. *Anesthesiology* 2008
Feltner C et al. *JAMA.* 2022

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Assess for Opioid Misuse Risk Prior to Prescribing

Check for Prior History of Opioid Misuse

Check medical records and speak to prior PCP and co-care providers for any history of loss of control, compulsive use, continued use despite harm

Verify Substance Use and Medication History

Check urine drug test and prescription drug monitoring program

Screening Tools

(no gold standard, lack of high-quality evidence supporting use)

ORT: Opioid Risk Tool
DIRE: Diagnosis, Intractability, Risk, Efficacy
SOAPP: Screener and Opioid Assessment for Patients with Pain
STAR: Screening Tool for Addiction Risk
STORM: VA Stratification Tool for Opioid Risk Mitigation
BRQ: Brief Risk Questionnaire
PMQ: Pain Medication Questionnaire
Others…

Moore TM, et al. *Pain Med*. 2009
Klimas J et al. *JAMA Network Open.* 2019

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Case Study – Michelle Jones – 54 yo female

?

What are your medication options for treating her chronic pain?

- Michelle screened negative for sleep disorder breathing
- She has several opioid misuse risk factors including:
  - Long-term opioid therapy
  - Personal history of depression and anxiety
  - Family history of substance use disorder

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Opioid Therapy from Previous Clinician

"Legacy Patients" "Opioid Orphans"

- Review the patient history from medical records and with the former clinician, if possible
- Review prescription history (e.g., Prescription Drug Monitoring Program)
- Assess the patient for opioid use disorder and treat or refer to specialty care, if indicated
- Consider a therapeutic bridge for the patient until a plan of care is determined given the risks associated with stopping opioid therapy abruptly
- Document rationale for treatment plan and next steps

Coffin PO, et al. *N Engl J Med*. 2022

CDC **Recommendation 5**

For patients already on opioids, carefully weigh benefits and risks

- If benefits > risks, continue opioids and optimize other therapies
- If risks > benefits, optimize other therapies, gradually taper opioids to lower dosages
- Unless life-threatening issue (i.e., impending overdose), do not abruptly reduce opioids from higher dosages

Dowell D, et al. MMWR. 2022

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Case Study – Michelle Jones – 54 yo female

PDMP showed oxycodone 10 mg #120 tablets per month with one prescriber and one pharmacy, last filled 7 weeks ago

At 1st visit

- Sent urine drug test (UDT)
- Obtained release to contact previous PCP
- Prescribed oxycodone 10 mg 4x/day x 2 weeks (#56)
- Continued gabapentin 300 mg 3x/day
- Added APAP 500 mg 4x/day to be taken with the oxycodone
- Referred to a local psychologist, given self-management handout

Before 2nd visit

- Reviewed previous medical records
  - Problem and medication lists reconciled
  - Inadequate documentation about benefits (e.g., pain, function) or monitoring (e.g., UDT) BUT no evidence of worrisome behaviors (e.g., early refills)

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Questions for Next Visit

Clinician Concerns:

- Should I continue the opioid
- Should I change the opioid dose?
- Should I change to an ER/LA opioid?
- What about any other adjuvant medications or therapies?
- What sort of treatment plan should I develop for her chronic severe pain including co-managing her depression and anxiety?

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Summary Part 1

- Focus on reducing pain, improving coping, restoring function, cultivating wellbeing, and maximizing quality of life
- Build strong therapeutic alliance to improve treatment adherence and clinical outcomes
- Utilize validated, multidimensional instruments to evaluate the full impact of chronic pain
- Use self-management strategies with nonpharmacologic therapies and targeted combined pharmacologic options
- Routinely assess and comanage co-occurring mental health conditions
- Prescribe opioids judiciously while assessing all patients for opioid misuse risk

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Part 2:

Safer Opioid Prescribing

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Case Study – Michelle Jones – 54 yo female

?

Should opioids be continued?

If so, should the opioid be changed?

In the interim…

- Unable to contact previous PCP who retired
- UDT positive for oxycodone only (as expected)

Office Visit 2

- PEG scores:
  - "6 out of 10" after oxycodone dose
  - "9 out of 10" right before next oxycodone dose
- Denied sedation
- Completed 2-week oxycodone prescription on schedule
- Did not make appointment with psychologist

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When Might Opioids be Indicated?

Opioids should not be first choice

- Pain is severe and has significant impact on function and quality of life
- Expected benefits for pain and function outweigh the potential severe risks
- Pain type is potentially opioid-responsive (e.g., nociceptive > nociplastic)
- Patient agreeable to safety monitoring and risk mitigation practices
- Non-pharmacological and non-opioid therapies have proven insufficient
- **If already taking opioids, is there documented benefit and absence of harm**

CDC

Recommendation 2

- Maximize non-pharmacologic and non-opioid therapies
- Only consider opioids if expected benefits (pain/function) > risks
- Before starting opioids discuss realistic benefits and known risks
- Establish treatment goals and how opioids will be discontinued if benefits < risks

Dowell D, et al. MMWR. 2022

Chou R, et al. *Ann Intern Med.* 2015
Dowell D, et al. *N Engl J Med.* 2022
Reuben DB, et al. *Ann Intern Med.* 2015
Volkow ND, McLellan T. *N Engl J Med.* 2016

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Opioid Choices

Immediate Release/ Short-acting (IR/SA)	Extended Release/ Long-acting (ER/LA)
• Morphine	• Morphine
• Hydrocodone	• Hydrocodone
• Hydromorphone	• Hydromorphone
• Oxycodone	• Oxycodone
• Oxymorphone	• Oxymorphone
• Tramadol	• Tramadol
• Tapentadol	• Tapentadol
• Buprenorphine (buccal)	• Buprenorphine (transdermal)
• Fentanyl (transmucosal)	• Fentanyl (transdermal)
• Codeine	• Methadone

Product-specific information: http://dailymed.nlm.nih.gov/dailymed; pharmacy medication guide; www.fda.gov/downloads/Drugs/DrugSafety/InformationbyDrugClass

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Choosing IR/SA vs ER/LA Opioids

IR/SA Opioids
- No opioid tolerance/opioid naïve
- Intermittent or occasional pain (PRN dosing)

CDC **Recommendation 3**

When starting opioids, use IR/SA instead of ER/LA opioids

Dowell D, et al. MMWR. 2022

ER/LA Opioids
- Opioid tolerance exists
- Constant, severe, around-the-clock pain (scheduled dosing)
- To stabilize pain relief when patient using multiple doses of IR/SA opioids
- **MUST NOT be broken, chewed or crushed**

Uncertainties about comparative effectiveness and safety (IR/SA vs ER/LA)
- Choose option that best meet patient's needs

Always **start low** and **go slow**

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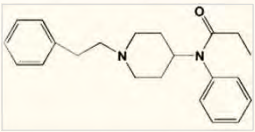
Transdermal Fentanyl



- 100 times more potent than morphine, dosed in mcg
- Slow peak onset (12-24h) and delayed offset (12-24h)
- Sustained release requires predictable blood flow and adequate subcutaneous fat
  - Applied to intact, clean and healthy skin (chest, back, arms)
  - Absorption increased with fever or broken skin
  - Absorption decreased with edema
- Replace patch q72h to a different location
- Fully used patches contain 20-60% of original dose requiring safe disposal (FDA: fold with sticky sides together, flush them down a toilet)
- May need to remove before MRI, some with metal foil backing causing burns

Fentanyl

- Every 72 hours
- Dosages (mcg/hr): 12, 25, 37.5, 50, 62.5, 75, 87.5, 100

Fu Q, et al. *Drug Des Devel Ther.* 2024
Taylor KP, et al. *StatPearls*. 2023

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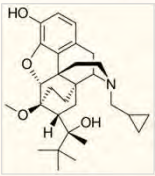
Buprenorphine for Pain



- Formulations approved for pain (mcg) or opioid use disorder (mg)
- 25-40 times more potent than morphine
- Poor oral bioavailability due to hepatic first pass metabolism
- Mu opioid receptor agonist
  - High affinity and slow dissociation can precipitate opioid withdrawal if full opioid agonist highly bound
  - Partial agonist w/ ceiling effect on respiratory and CNS depression
  - Acts as full agonist for analgesia
- Kappa and delta opioid receptor antagonism:
  - Antihyperalgesia and anxiolytic effects
- Can prolong QTc interval
- Less effects on cognitive/psychomotor function and hypogonadism compared to other opioids

Taper prior opioid to <30 MME before starting buprenorphine

Buccal film 75-900 mcg q12-24

- Do not cut, chew or swallow

Transdermal patch 5-20 mcg/hr q 7 days, 72 hrs to achieve steady state

- (mcg/hr): 5, 7.5, 10, 15, 20 (max)
- Rotate sites wait min 3 wks before using same site

Vu PD et al. *Curr Pain Headache Rep.* 2023
Spinella S, McCarthy R. *Am J Med.* 2024

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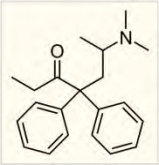
Methadone for Pain



- Complex pharmacology causing unique risks
- Long, variable, unpredictable t½ - extensive plasma protein binding
  - Analgesia 6-8 hours while serum t½ 20-120 hours
- QTc prolongation, risk of torsades de pointes

Some possible advantages:

- NMDA receptor antagonist resulting in reduced hyperalgesia and analgesic tolerance
- Inhibits serotonin and norepinephrine reuptake making it efficacious for neuropathic pain
- No active metabolites
- Inexpensive, small dosage units (scored 5mg tablets)

Hanna V, Senderovich H. *J Pain*. 2021
Brown P, et al. *Health Psychol Res.* 2025

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Dual Mechanism Opioids

Norepinephrine and Serotonin reuptake inhibition

Tramadol	Tapentadol
Weak μ-opioid receptor agonist	**Stronger μ-opioid receptor agonist**
Minimal norepinephrine effect	Prominent norepinephrine effect
Prominent serotonin effect	Minimal serotonin effect

Seizure risk

Physical dependence

Serotonin syndrome

Controlled substances with addiction potential

Zavaleta-Monestel E, et al. *Cureus*. 2024
Seidmohammadi K, et al. *J Pain Palliat Care Pharmacother.* 2025

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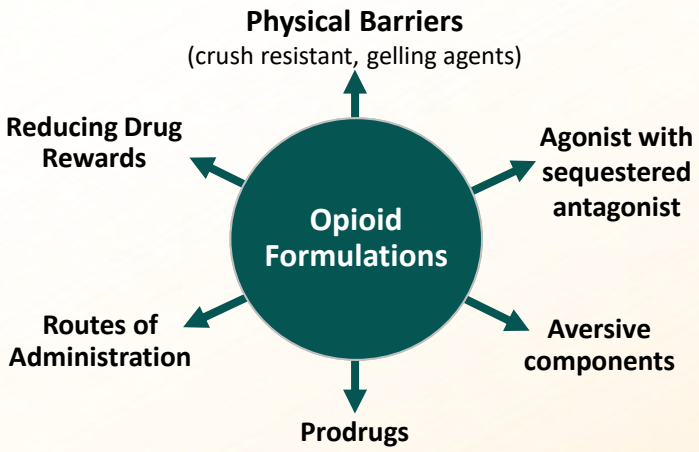
Formulations with Abuse Deterrent Properties



- Decrease medication diversion and street price
- Does not prevent taking many intact tablets
- Are expensive and some insurers do not cover them

Currently, there are **no 100% proven misuse resistant opioids**

Updated list of abuse-deterrent opioids: *www.fda.gov/drugs/drugsafety*

Webster L, Gudin J. et al. *J Pain Res*. 2024

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Individualizing Opioid Choice

- Duration and onset of action
  - Consider pattern of pain: intermittent vs. constant
- Patient's prior experience (effects & side effects)
  - Mu-opioid receptor polymorphisms and differences in opioid metabolism
- Patient's level of opioid tolerance (always assess before starting ER/LA opioid formulations)
- Age, other medications and health conditions
- Route of administration
- Cost and insurance issues

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Case Study – Michelle Jones – 54 yo female

Over the ensuing months patient reported better pain control

Change Opioid Regimen

- Tolerates IR oxycodone 10 mg 4x/day (60 MME) but…
  - Periodicity of effects (on-off) may be causing inadequate pain control due to "withdrawal-mediated pain"
  - Analgesia may improve with more stable blood levels using ER/LA oxycodone requiring a lower daily dose (15 mg 2x/day) (45 MME)
  - Don't assume need for breakthrough medication
- Reviewed, signed Patient Provider Agreement (PPA)
- Re-reviewed importance of self-management and behavioral therapy for her pain
- Referred to PT for chronic right hip pain
- Counseled on weight loss

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Universal Precautions

Predicting opioid risk and misuse is imprecise

Consistent application of precautions reduces stigma and standardizes care

Precautions include:

- Assess and document pain diagnosis(es) and opioid misuse risk
- **Prescribe opioids as a test or trial**; continued, modified or discontinued based on risks/benefits (e.g., every 1-3 months)
- State maximum number of tablets to be taken per day
- Use Patient Prescriber Agreements written at 5th grade level, without coercive language
- Monitor for adherence, misuse, and diversion

CDC **Recommendations 7 & 10**

Evaluate benefits and risks 1-4 weeks of starting opioids or after dose escalation and then regularly

Use strategies to mitigate risk including toxicology testing

Dowell D, et al. MMWR. 2022

Gourlay DL, Heit H. *Pain Med.* 2005 Chou R, et al. J *Pain.* 2009 Franklin GM. *Neurology.* 2014 FSMB 2024 www.fsmb.org/opioids/

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Patient Provider Agreement (PPA)

Informed Consent		Plan of Care
Realistic Goals • Reduce *(not eliminate)* pain • Improve function **(SMART goals):** **Specific** **Measurable** **Action-oriented** **Realistic** **Time-sensitive**	**Potential Risks** • Adverse effects and DDI • Over-sedation, impairment (esp. during dose adjustments) • Misuse • Overdose & Death • Risk of neonatal opioid withdrawal syndrome • Hyperalgesia • Victimization by others	• Engage in other treatments as directed • Safer opioid use: take as directed, don't double dose if dose missed, safe storage/disposal, no sharing • No illicit drugs, avoid/minimize sedatives • Report other meds, adverse effects • Discuss pregnancy plans, risks and monitor

Tobin DG, et al. *Cleve Clin J Med.* 2016
Nicolaidis C. *Pain Med.* 2011
Paterick TJ, et al. *Mayo Clin Proc.* 2008
Mailis-Gagnon A, et al. *Clin J Pain.* 2012
Cheatle MD, Savage SR. *J Pain Symp Manage.* 2012
Tolia VN, et al. *N Engl J Med.* 2015
Schumacher MB, et al. *Pschopharm.* 2017
Hale TW, Krutsch K. *Clin Pharmacol Ther.* 2021

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Monitoring: Urine Drug Testing

Objective data

- **Information on therapeutic adherence**
- **Information on use of illicit drugs**

- Document time of last medication use
- Discuss urine drug testing openly with patient → "If I send your urine now, what will I find in it?"
- Discuss unexpected findings with open-ended questions → "Your urine had "x" please tell me about it?"
- One medical data point to integrate with others
- **Urine drug screen** usually immunoassays (quick, inexpensive, risk of false negatives and false positives)
- **Definitive testing** w/ *GC-MS or LC-MS (know opioid metabolites e.g., hydrocodone→hydromorphone)

*Gas Chromatography (GC) or Liquid Chromatography (LC), and Mass Spectroscopy (MS)

Contact lab toxicologist for questions regarding unexpected results

Argoff CE, Alford DP, Fudin J et al. *Pain Med.* 2018
Nagpal G et al. *JAMA.* 2017

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Monitoring: Medication Count & Prescription Drug Monitoring Program (PDMP)

Medication Count

Information on

- Medication adherence
- Possible diversion

28-day (vs 30-day) decreases risk of running out on weekends and medication hoarding

CDC **Recommendation 9**

Use strategies to mitigate risk including reviewing PDMP data

Dowell D, et al. MMWR. 2022

PDMP

Information on

- Harmful polypharmacy
- Multiple prescribers

Some states:

- *require utilization of PDMP*
- *allow delegating access to others*
- *have interstate data sharing*

Methadone administered or dispensed at opioid treatment programs not routinely included

Insufficient evidence that PDMPs increase or decrease opioid overdoses

Fink DS, et al. *Ann Intern Med.* 2018

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Monitoring Based on Risk

Universal precautions applied individually to match risk

- Review personal and public health (community) risks of opioids
- Discuss monitoring is to protect patient from harm

One example: (www.opioidresources.org)

Opioid Misuse Risk Level	Visits/year	UDT & PDMP checks/year
Low-Moderate Risk	**4**	**2-4**
High Risk	**6**	**6**

- State laws may mandate certain levels of monitoring
- Monitoring more intensive during first 6 months of therapy and after change in treatment plan

Liebschutz JM, et al. *JAMA Intern Med.* 2017

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Documentation

Study using National Ambulatory Medical Care Survey data found that in visits when an opioid was prescribed, **30% had no pain diagnosis**

Six A's

- **A**nalgesia
- **A**ctivities
- **A**dverse effects
- **A**berrant behaviors
- **A**ffect
- **A**dherence

Include:

- **Subjective reports** from patient, co-care providers, caregivers, "reliable" family members (beware of those with secondary gain for giving inaccurate information)
- **Objective information** (observations, PEG scores, drug tests, pill counts, PDMP)
- **24-hour inventory** "Tell me how you are taking your medications." "Do you miss doses on some days?" "On average how many doses do you take per day?"

Sherry TB, et al. *Ann Intern Med.* 2018

Passik SD, et al. *Clin Ther.* 2004

Know federal and state guidelines and regulations: www.deadiversion.usdoj.gov/pubs/manuals/index.html
Templates in Resources at: www.scopeofpain.org and www.opioidresources.org

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Safer opioid prescribing is a lot of work!

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What is the Clinician's Role?

Use a risk-benefit framework

Judge the opioid treatment, not the patient

NOT

Nicolaidis C. *Pain Medicine*. 2011

87

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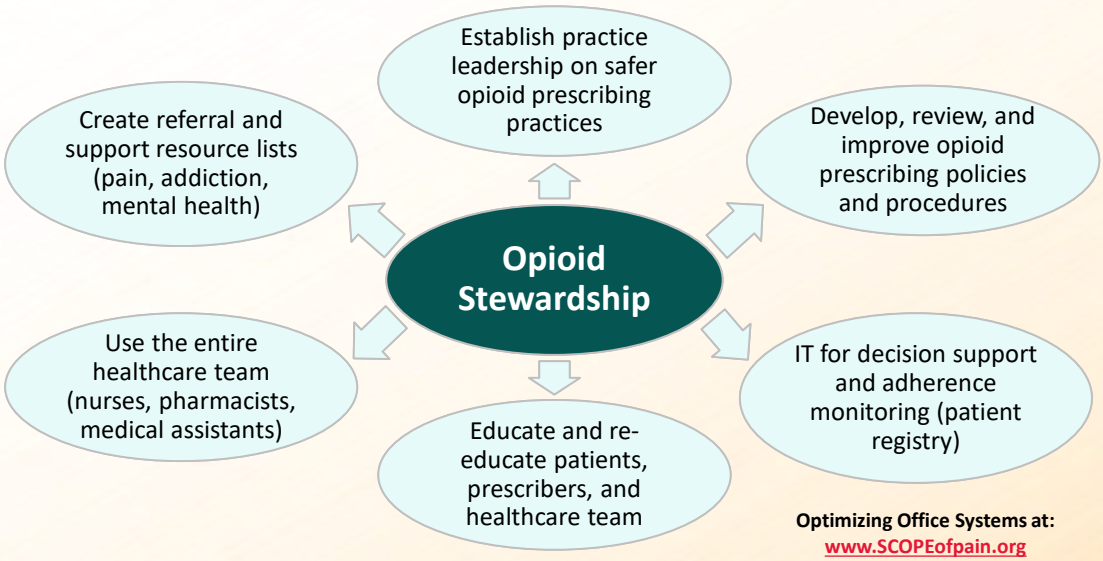
Implementing Opioid Stewardship

Prescribing opioids safely, correctly, and under the right circumstances



Optimizing Office Systems at:
www.SCOPEofpain.org
click on: Supplemental Training

MacIntyre PE, et al. *JAMA Surg*. 2022

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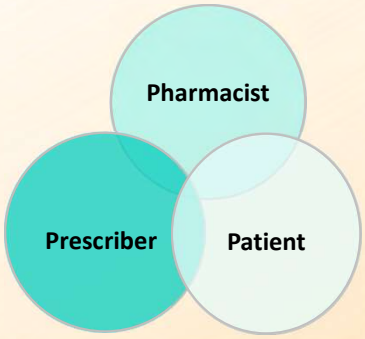
Community Pharmacist

- Pharmacist must ensure that prescriptions are for "legitimate medical purpose"
- Help with medication choices, doses and substitutions
- Interact with patients
  - Educate on risks, proper use, storage and disposal, drug take-back programs, use of naloxone
  - Check PDMP, monitor for worrisome behaviors
  - Identify potential drug-drug interactions
  - Assist with formularies and prior authorizations
- Prescribers can help by including:
  - Diagnosis or indication on prescription
  - Parameters for when script should be filled
  - Maintain open lines of communication (direct phone lines)



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Case Study – Michelle Jones – 54 yo female

Did well on regimen of ER/LA oxycodone 15 mg bid with gabapentin 300 mg 3x/day for 11 months…

Scenario 1a
- Worrisome opioid taking
- Potential loss of benefit
- Switching opioids

Scenario 1b
- Continued lack of benefit after opioid switch
- Clinician initiated opioid discontinuation

Scenario 2
- Patient requested opioid discontinuation

Scenario 3
- Worrisome opioid taking
- Diagnosing and managing OUD

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Case Study – Michelle Jones – 54 yo female

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Case Study – Michelle Jones – 54 yo female

Scenario 1a

- She then went to the ED of her local hospital, **requesting early refill** of her oxycodone
- ED physician noted that she was in moderate opioid withdrawal and gave her enough ER/LA oxycodone to last until her next PCP appointment in one week
- ED physician left a message with the PCP office regarding patient visit and follow-up plan

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Case Study – Michelle Jones – 54 yo female

Post ED Follow-up

History since last visit

- Foot pain worse in past month "10 out of 10 most days"
- Extra oxycodone in the afternoon and ran out early
- Concerned "body has become used to current dose"; doesn't seem to work all day anymore
- Requests increase in her dose
- Husband says she has become "addicted"
- Difficult to go to work due to severe pain
- Missed first appointment with pain psychologist, attended one session with physical therapist
- She is re-educated about risks including death of self-escalating her opioid dose and the benefits of physical and behavioral therapies

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Worrisome Medication-Taking Behaviors: Differential Diagnosis

Substance Seeking	Pain Relief and Substance Seeking	Pain Relief Seeking
• Opioid use disorder (OUD) • Self-treating other symptoms (e.g., anxiety, insomnia) • Diversion (sharing, selling)	Worsening pain, with OUD, while diverting some for income	• Disease progression • New painful condition • Poorly opioid responsive pain • Opioid analgesic tolerance • Withdrawal mediated pain • Opioid-induced hyperalgesia and/or allodynia

Maumus M, et al. *Ochsner J.* 2020

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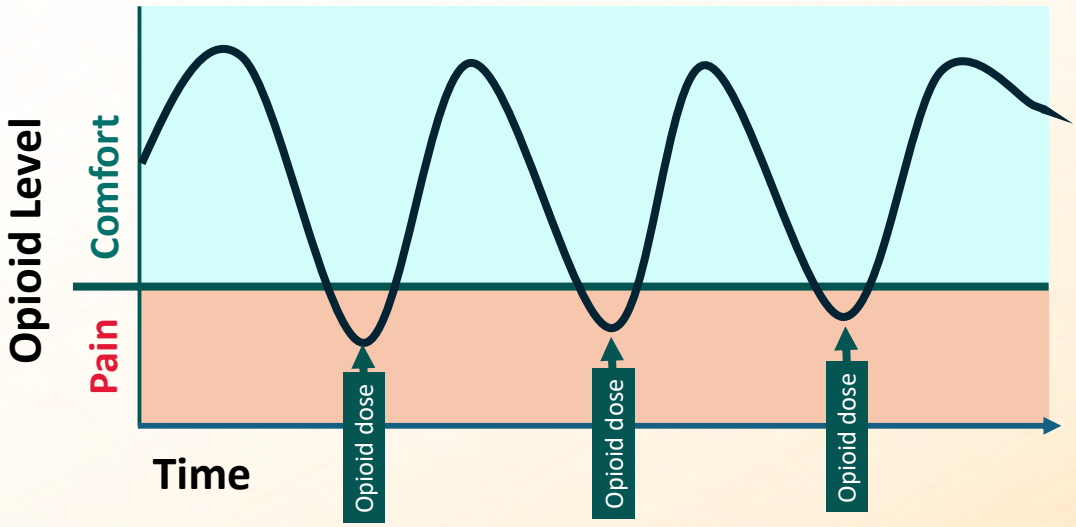
Opioid Withdrawal Mediated Pain

In patients with physical dependence, a drop in blood-opioid levels causing opioid withdrawal can increase pain sensitivity



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Opioid-Induced Hyperalgesia and Allodynia

- Paradoxical worsening pain despite an increase in the opioid dose with neural hyperexcitability causing increased sensitivity to painful (i.e., hyperalgesia) and nonpainful (i.e., allodynia) stimuli
- Underlying pathophysiology unclear, but experiments demonstrate NMDA-mediated increased pain sensitivity after prolonged opioid exposure
- True incidence is unknown, most studies report in patients on high dose opioids
- No validated diagnostic criteria but clinically pain is generalized, diffuse, ill-defined, beyond the site of original pain and is refractory to opioid dose increase
- When suspected it can be managed with a reduction or discontinuing opioid, or switch to an alternative opioid

Guichard L et al. *Clin J Pain*. 2021

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Lack or Loss of Benefit

What are the next steps?

- Reassess factors affecting pain
- Re-attempt to treat underlying disease and co-morbidities
- Consider…
  - Add or increase non-opioid and non-pharmacologic treatment
  - Add breakthrough medications
  - Switch to a different opioid ("rotation")
  - **Avoid dose escalation to "high" dose opioids due to increase risks**

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Consider Breakthrough Medication

1st Choice: Non-Opioid
- NSAIDs
- Acetaminophen

IR/SA Opioid
- Same molecule
- Different molecule

Dual Mechanism Opioid
- Tapentadol
- Tramadol

Davies AN, et al. *Eur J Pain*. 2009

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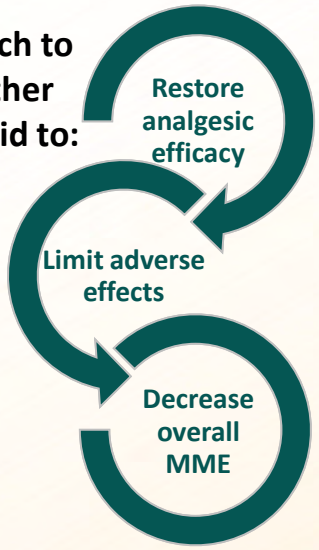
Consider Switching Opioids

Switch to another opioid to:



- Based on large intra-individual variation in response to different opioids
- Different variants of mu-opioid receptors
- Limited evidence as most trials were retrospective and studied small numbers of patients

Fine PG , Portenoy RK. *J Pain Symptom Manage*. 2009
Smith HS, Peppin JF. *J Pain Res*. 2014
Treillet E, et al. *J Pain Res.* 2018

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Opioid Conversion Tables

- Derived from relative potency ratios using single-dose analgesic studies in opioid-naïve patients
- Based on limited doses or range of doses
- Does not reflect clinical realities of chronic opioid administration
- Are not reliable due to individual pharmacogenetic differences
- Most tables do NOT adjust for incomplete cross-tolerance

Opioid	NIH 2024 Conversions
Morphine (mg)	1
Hydrocodone (mg)	1
Oxycodone (mg)	1.5
Buprenorphine tablet/film (mg) sublingual	38.8
Buprenorphine film (mcg) buccal	0.039
Buprenorphine patch (mcg/hr) transdermal	2.2
Codeine (mg)	0.15
Fentanyl patch (mcg/hr)	2.4
Hydromorphone (mg)	5
Methadone (mg)	4.7
Oxymorphone (mg)	3
Tapentadol (mg)	0.3
Tramadol (mg)	0.2

Fudin J, et al. *J Pain Res* 2018
Webster LR, Fine PG. *Pain Med.* 2012
Adams, MCB, *Pain*, 2025

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Case Study – Michelle Jones – 54 yo female

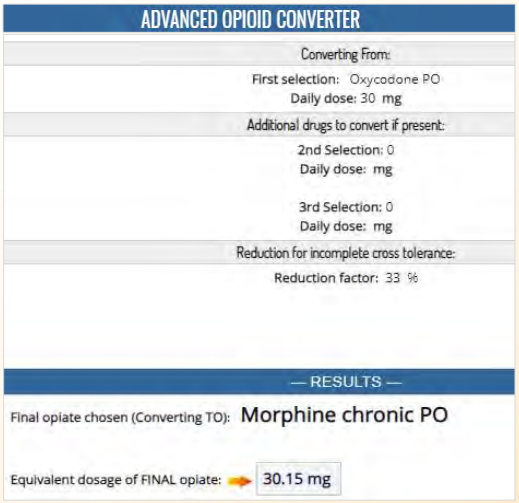
https://globalrph.com/medcalcs/opioid-pain-management-converter-advanced/

Scenario 1a

Switching Opioids

Rotated off
ER/LA oxycodone 15 mg bid
(45 MME)

Converted to
ER/LA morphine 15 mg bid
(30 MME)



ADVANCED OPIOID CONVERTER

Converting From:

First selection: Oxycodone PO
Daily dose: 30 mg

Additional drugs to convert if present:

2nd Selection: 0
Daily dose: mg

3rd Selection: 0
Daily dose: mg

Reduction for incomplete cross tolerance:

Reduction factor: 33 %

— RESULTS —

Final opiate chosen (Converting TO): Morphine chronic PO

Equivalent dosage of FINAL opiate: 30.15 mg

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Case Study – Michelle Jones – 54 yo female

Over the next 18 months after switching to morphine

Scenario 1a

- Medication management
  - Continued ER/LA morphine 15mg 2x/day (30 MME)
  - Continued acetaminophen and gabapentin
- Stopped seeing psychologist after 3 sessions but learned valuable relaxation skills
- Joined a monthly chronic pain support group at her church
- Completed a full course of physical therapy
- Individual PEG scores remained between 5-6/10
- Remained employed
- Remained adherent with treatment plan and monitoring
- Continued regularly scheduled follow-up visits

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Did well on regimen of ER/LA oxycodone 15 mg bid with gabapentin 300 mg 3x/day for 11 months…

Scenario 1a
- Worrisome opioid taking
- Potential loss of benefit
- Switching opioids

Scenario 2
- Patient requested opioid discontinuation

Scenario 3
- Worrisome opioid taking
- Diagnosing and managing OUD

Scenario 1b
- Continued lack of benefit after opioid switch
- Clinician initiated opioid discontinuation

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Case Study – Michelle Jones – 54 yo female

After switching from oxycodone to morphine…

Scenario 1b

- Pain remained out-of-control (PEG scores 9-10/10)
- On medical leave from work and spending most of the day in bed (according to her husband)
- Nonadherent with psychologist and physical therapy due to severe pain
- Duloxetine was added to pain regimen
- After one morphine dose increase, **she requested to be converted back to oxycodone**
- On multiple occasions she was confrontational to the office staff when she was unable to be seen by her PCP without an appointment
- She started smoking marijuana to treat her pain

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Cannabis and Pain

Cannabis

- >60 pharmacologically active cannabinoids including cannabidiol (CBD) and the psychoactive tetra-hydrocannabinol (THC)
- Endocannabinoid receptors are found in high concentration in the brain and spinal cord

Efficacy

- Moderate-quality evidence can be effective for short-term (1-6 m) treatment of neuropathic and nociplastic pain but inconclusive for nociceptive pain
- **For 30% pain reduction** number needed to treat (NNT):
  - 24 for cannabinoids
  - 4-10 for TCAs, opioids, gabapentinoids, SNRIs

Risks/Harms

- Side effects are mild, can cause dizziness, sedation, and impaired coordination
- Long-term use in adolescents and young adults can result in cannabis use disorder and long-term cognitive impairment

Some states have community pharmacists dispense and report medicinal cannabis to the PDMP

Stockings E et al. *Pain* 2018
Noori A et al. *BMJ Open* 2021
Busse JW et al. *BMJ* 2021
McDonagh MS, et al. *Ann Intern Med*. 2022
Ang SP, et al. *Pain Ther.* 2023

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Pain Specialists & Continued Lack of Benefit

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Role of the Pain Specialists

Interventional Approaches

- When unsure of pain diagnosis and other treatments including interventional e.g., injections, ablation, nerve stimulation, vertebroplasty or kyphoplasty
- Evidence varies by procedure: strong short-term relief w/ epidural injections for radiculopathy, moderate evidence for radiofrequency ablation for facet-mediated spinal pain while others have mixed long-term data

- Set appropriate expectations e.g., don't send patient with expectations of a specific treatment as this sets up patients for disappointment and frustration
- Locate providers via the American Society of Interventional Pain Physicians or American Society of Regional Anesthesia and Pain Medicine

Lo Bianco G. et al. *J Pain Res*. 2023
Sayed D, et al. *J Pain Res*. 2022

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Continued Lack of Benefit

Remember:

- ☐ Not all chronic pain is opioid responsive
- ☐ More opioid is not always better
- ☐ More opioid may increase risk of adverse effects
- ☐ Some chronic pain improves after opioid taper

Baron MJ, McDonald PW. *J Opioid Manage*. 2006

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Discontinuing Opioids (Deprescribing)

- You **do not** have to prove addiction or diversion, only assess and reassess the risk-benefit ratio
- If patient is unable to take opioids safely or is non-adherent with monitoring, then discontinuing opioids is appropriate, even in the setting of benefits
- Need to determine how urgent the discontinuation should be based on the severity of the risks and harms
- Determine if the opioid needs to be tapered due to physical dependence
- Document rationale for discontinuing opioids

You are NOT abandoning the patient, you are abandoning the opioid

Lin CW, Langford AV. *N Engl J Med.* 2025
Tobin DG et al. *J Gen Intern Med.* 2021

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Tapering Opioids

Clinician-Initiated

Potential Benefits (*Systematic Review: interpreted with caution due to poor quality of studies and high risk of bias)

- Statistically significant improvement after tapering for pain intensity, anxiety, depression, pain catastrophizing, and pain interference
- No statistically significant effect for physical functioning, mental health-related quality of life, and physical health-related quality of life

Potential Risks

- Observational studies identified harms (suicide & overdose) associated with opioid taper
- Comparative effectiveness study of individuals on long-term opioids with no evidence of OUD or opioid misuse, found tapering associated with small absolute increase in opioid overdose or suicide compared with maintaining stable opioid dosages

*Wuyts E et al. *Br J Anaesth.* 2024

James JR, et al. *J Gen Intern Med.* 2019
Mark TL, et al. *J Subst Abuse Treat.* 2019
Oliva EM, et al. *BMJ.* 2020

Jung M et al. *Pain.* 2024
Langford AV et al. *MjA.* 2023
Hopkins RE et al. *Pain.* 2026

Kennedy MC, et al. *Plos Med.* 2022
Larochelle MR et al. *JAMA open.* 2022
Hallvik SE, et al. *Pain.* 2022

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Continued Lack of Benefit

Discussing Opioid Taper

- Stress how much you believe the patient's pain severity
- Show empathy for the patients suffering and frustration
- Focus on the patient's strengths and encourage therapies for coping with pain
- Show commitment to continue working to control pain and improve function
- If patient continues to request an increase in opioids, state "I cannot continue to prescribe a medication that is not helping (or is hurting you or both)"
- Schedule close follow-ups during and after the change in therapies

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Case Study – Michelle Jones – 54 yo female

Scenario 1b

- Despite the PCP's best efforts to explain the rationale for opioid taper due to lack of benefit and possible harm (e.g., opioid induced hyperalgesia), she continued to demand higher doses of oxycodone
- She was offered alternative pain treatments including increasing duloxetine and re-referral for cognitive behavioral therapy
- She became increasingly angry and stood up and stated that she was going to find a new doctor
- She left the office…

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Did well on regimen of ER/LA oxycodone 15 mg bid with gabapentin 300 mg 3x/day for 11 months…

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- Potential loss of benefit
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Scenario 2
- Patient requested opioid discontinuation

Scenario 3
- Worrisome opioid taking
- Diagnosing and managing OUD

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Case Study – Michelle Jones – 54 yo female

?

How will you help her taper off oxycodone?

Scenario 2

- Calls the PCP office after she was unable to get her oxycodone refilled due to her insurance's new prior authorization requirement
  - "My insurance keeps refusing to pay for my pain pills which leaves me without them for days."
- Very upset when describing how badly she is treated by her family, the primary care staff, and at the pharmacy:
  - "I am tired of being treated like a drug addict or criminal."
  - "I tried to stop but got sick."
  - "I want to get off these pills!"

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Stigma, Chronic Pain, and Opioids

- Stigma is being discredited, or undesirable, because of an attribute
- Stigma is common among people with chronic pain
- Individuals with pain with less clear pathophysiology report greater stigma
- Stigma can be internalized contributing to poorer pain-related outcomes
  - Positive correlation between stigma and pain intensity, disability, and depression
  - Patients might believe they deserve their pain, are being punished and do not deserve to be included in social activities
- Opioid-related stigma includes fears about anticipated negative attitudes and judgments from others

Hickling LM, et al. *Pain.* 2024
Bulls HW, et al. *Pain.* 2022

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Tapering Opioids

Patient-Initiated

- No validated protocols in patients on opioids for chronic pain
- Very low-quality evidence suggests several types of opioid tapers may be effective and that pain, function, and quality of life may improve for some patients with decrease opioid dose
- Study found 62% of patients in a pain clinic completed a **voluntary, patient-centered** opioid taper over 4 months with >50% dose reduction
  - Neither pain intensity nor pain interference increased with opioid reduction
  - Success was not predicted by starting dose, baseline pain intensity, years prescribed opioids or any psychosocial variable

Frank JW, et al. *Ann Intern Med.* 2017
Darnall BD, et al. *JAMA Intern Med.* 2018
Fenton JJ et al. *JAMA Network Open.* 2019
Lin CW, Langford AV. *N Engl J Med.* 2025
Darnall BD, et al. *Ann Intern Med*. 2026

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Opioid Tapering (Deprescribing)

General Approach

A Patient Centered Approach to Opioid Tapering at:
www.SCOPEofpain.org
click on: Supplemental Training

Speed and Goal
(decrease dose or discontinuation)
depends on reason for taper

- Lack of benefit taper over weeks to months
- Apparent harm/risk taper over days to weeks
- Build up alternative pain treatments as short-term withdrawal can lead to transitory increased pain flares

1st STEP
Reduce medication dose
to the smallest dosage unit

CDC Recommendation

- Decrease 10%/month if on opioids for years
- Decrease 10%/week if on opioids for weeks to months

Dowell D, et al. MMWR. 2022

2nd STEP
Increase amount of time between doses

- IR opioid can be started when at lowest ER/LA opioid dose
- Can use α2-adrenergic agonist (e.g., lofexidine, clonidine*, tizanidine*) to treat withdrawal symptoms

**Off-label*

Med Lett Drugs Ther. 2018

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Case Study – Michelle Jones – 54 yo female

Scenario 2

- Over 6 months she successfully tapered off oxycodone
- Her neuropathic pain was moderately well controlled on combination of APAP, gabapentin and duloxetine *(added during opioid taper)*
- She continue self-management skills taught by the psychologist including breathing, relaxation and mindfulness exercises and joined a monthly chronic pain support group
- PEG scores remained between 4-5/10 *(patient stated she was surprised her pain improved off oxycodone)*
- Remained employed
- Remained adherent with the treatment plan and monitoring
- Continued with regularly scheduled follow up visits

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Did well on regimen of ER/LA oxycodone 15 mg bid with gabapentin 300 mg 3x/day for 11 months…

Scenario 1a
- Worrisome opioid taking
- Potential loss of benefit
- Switching opioids

Scenario 1b
- Continued lack of benefit after opioid switch
- Clinician initiated opioid discontinuation

Scenario 2
- Patient requested opioid discontinuation

Scenario 3
- Worrisome opioid taking
- Diagnosing and managing OUD

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Case Study – Michelle Jones – 54 yo female

Scenario 3

- UDTs were consistently positive for oxycodone as expected except once her UDT was opiate positive (i.e., morphine and/or codeine) and oxycodone negative raising the concern for opioid misuse including diversion
  - She denied sharing or giving her oxycodone to others
  - Urine "quantity not sufficient" for confirmation testing
- Unexpected UDT resulted in increased monitoring frequency with no additional unexpected UDTs over the ensuing two months

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Discussing Possible Diversion

- Diversion is one form of opioid misuse and is defined as giving, selling, or trading prescription medications
  - Family and friends are common source of diverted opioids
- Discuss why you are concerned about diversion e.g., UDT negative for prescribed opioid, nonadherence with medication counts
- Discuss your inability to continue to prescribe opioids if the opioids are being diverted to others

SAMHSA. (2025). *2024 NSDUH*

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Case Study – Michelle Jones – 54 yo female

?

2 months later… brought to ED by ambulance after suffering an opioid overdose

How will you manage this patient?

Scenario 3

- Husband found her unresponsive, administered intranasal naloxone with brisk response and called 911
- In the ED, husband reported that his wife has been running out of her oxycodone, and taking her father's morphine
- Husband had been in denial of how bad his wife's problem had gotten. He reported that she's been fired from her job for missing too many deadlines, and that she once fell asleep with a stove burner on, and melted a teapot
- He heard a staff person in the ED refer to his wife as a "drug abuser"

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Words Matter

Stigmatizing Language	Non-Stigmatizing Language
Addict, substance abuser, alcoholic	Person with a substance use disorder (SUD)
Substance abuse	Substance use
Clean urine	Expected test result
Patient is clean	Person with SUD in remission
Dirty urine	Unexpected test result
Patient is dirty	Active substance use

Botticelli MP, Koh HK. *JAMA*. 2016. Kelly JF, Wakeman SE, Saitz R. *Am J Med*. 2015

"Stigma surrounding SUD is perpetuated by the stigmatizing terminology used in healthcare settings, by the news and other media, and by society as a whole."

Zwick J, Appleseth H, Arndt S. *Subst Abus Treat Prev Policy.* 2020

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Opioid Overdose Reversal & Future Risk

- **Overdose Reversal**
  - **Naloxone:** short-acting (1-2h) opioid antagonist administered by IM, IV, IN, and SC
  - **Nalmefene:** long-acting (9-11h), 5X higher binding affinity than naloxone administered IM, IV, IN and SC
  - Potential benefits of nalmefene (greater affinity, longer duration action) carry risk of causing harm due to prolonged precipitated opioid withdrawal
- **Future Risk**
  - Retrospective cohort study of adults who had nonfatal opioid overdose during long-term opioid therapy for chronic pain
    - Opioids were dispensed to 91% of patients after the overdose
    - **7%** had repeat opioid overdose and **17%** for patients on **high opioid dosages**

Stolbach AI, et al. *J Med Toxicol.* 2024 Med Lett Drugs Ther. 2026 Larochelle MR, et al. *Ann Intern Med*. 2016

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Opioid Use Disorder

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Opioid Use Disorder (OUD)

OUD is a chronic, relapsing brain disorder characterized by compulsive use despite negative consequences, involving:

- Changes to brain involved in reward, stress, and self-control
- Changes that persist after stopping drug use
- Like other chronic diseases, OUD often involves cycles of relapse and remission
- Without intervention, OUD is progressive and can result in disability or premature death

Harris MTH, et al. *JAMA*. 2026
Taylor JL, Samet JH. *Ann Intern Med*. 2022

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Does Patient Have an OUD?

APA. 5th Edition, Text Revision (DSM-5-TR) . 2022

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

1. Tolerance
2. Withdrawal
3. Larger amounts and/or longer periods
4. Inability to cut down or control use
5. Increased time spent obtaining, using or recovering

Loss of Control/Compulsive Use

6. Craving/ Compulsion
7. Role failure: work, home, school
8. Social, interpersonal problems
9. Reducing social, work, recreational activity
10. Physical hazards
11. Physical or psychological harm

Continued Use Despite Negative Consequences

Pain-Adjusted DSM-5 OUD

- Tolerance and withdrawal not counted if patient prescribed opioids
- Exclude symptoms driven solely by pain relief and/or therapeutic intent

FDA Anesthetic and Analgesic Drug Products Advisory Committee. May 5, 2025
Hasin DS et al. *Am J Psych.* 2022

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Discussing Possible OUD

Give specific, timely feedback about behaviors that raise your concerns for possible OUD (e.g., loss of control, compulsive use, continued use despite harm)

Remember patients may suffer from both chronic pain and OUD

May need to “agree to disagree” with the patient

Benefits no longer outweigh risks

“I cannot responsibly continue prescribing opioids as I feel it would cause you more harm than good.”

Always support connection to and/or initiate OUD treatment

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Medications for OUD (MOUD)

Normalize brain changes	Alleviate physical withdrawal	Provide opioid blockade	Alleviate drug craving
Methadone (Dispensed in licensed program only)	**Naltrexone** Oral, monthly IM injection	**Buprenorphine** Submucosal*, weekly & monthly SQ injection	

*dosed: QD for OUD and TID for OUD + pain

- Increased treatment retention and employment
- Decreased relapse, HIV and hepatitis C incidence
- Decreased mortality (methadone, buprenorphine)

MOUD is easy to use but not universally available even after overdose

Harris MTH, et al. *JAMA*. 2026
Crystal S et al. *Drug Alc Depend*. 2022,
Larochelle MR , et al. *Ann Intern Med*. 2018

CDC **Recommendation 12**
- Offer or arrange evidence-based medications for treating OUD

Dowell D, et al. MMWR. 2022

Treating OUD with Medications
www.SCOPEofpain.org

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Case Study – Michelle Jones – 54 yo female

Over the next 6 months…

How will you manage this patient perioperatively?

Scenario 3

- PCP continues buprenorphine 24 mg for the treatment of OUD and dosed it 8 mg TID to also treat her chronic pain
- Right hip pain from end-stage arthritis is affecting her quality of life despite trying nonoperative management
- She is schedule for a right hip arthroplasty

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Acute Pain in Patients on MOUD

Systematic Review

There is now consensus on perioperative management of patients on MOUD

- Patients with OUD history are often more sensitive to painful stimuli
- Continue methadone or buprenorphine throughout the perioperative period
- Treat pain with analgesics on top of the patient's daily MOUD
- Patients taking MOUD may need higher doses of opioid analgesics
- Ineffective pain management can result in disengage-ment in care

Buonora MJ, et al. *Ann Intern Med*. 2025
Veazie S et al. *J Gen Intern Med.* 2020
Kohan L, et al. *Reg Anesth Pain Med.* 2021

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Case Study – Michelle Jones – 54 yo female

Scenario 3

- Did well postop with improved pain control
- Painful diabetic neuropathy well controlled on combination of buprenorphine 8 mg sublingual 3x/day, duloxetine and APAP (Note: gabapentin discontinued due to misuse risk)
- PEG scores remained between 5-6/10
- OUD in sustained remission with MOUD and counseling
- Remained employed
- Continued with regularly scheduled follow up visits

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Summary Part 2

- Match treatment plan to patient needs and functional goals
- Individualize universal precautions based on patient risk
- Document rationale and benefits, risks and harms
- Utilize interprofessional team for monitoring and support
- Identify and manage worrisome opioid-taking behaviors
- When indicated, taper opioids gradually and institute alternative pain therapies
- Diagnose and manage opioid use disorder (OUD) using highly effective medications
- Continue methadone or buprenorphine for OUD during perioperative period

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Post-test & Evaluation

- Complete the post-test with a score of >70%
- Complete the evaluation
- Download your certificate, worth:
  - 2.5 *AMA PRA Category 1 Credits*™
  - 2.5 nursing contact hours, or
  - 2.5 ACPE credits

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Reference Materials and Resources

Reference Materials and Resources
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Article about Efficacy of SCOPE of Pain Education 55

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Excerpts from the CDC Clinical Practice Guideline for Prescribing Opioids for Pain – United States, 2022

Dowell D, Ragan KR, Jones CM, Baldwin GT, Chou R. CDC Clinical Practice Guideline for Prescribing Opioids for Pain — United States, 2022. MMWR Recomm Rep 2022;71(No. RR-3):1–95. DOI: http://dx.doi.org/10.15585/mmwr.rr7103a1

BOX 1. Executive summary of the CDC Clinical Practice Guideline for Prescribing Opioids for Pain — United States, 2022

This clinical practice guideline updates and expands the *CDC Guideline for Prescribing Opioids for Chronic Pain — United States, 2016* (MMWR Recomm Rep 2016;65[No. RR-1]:1–49]) and provides evidence-based recommendations for primary care and other clinicians (including physicians, nurse practitioners and other advanced practice registered nurses, physician assistants, and oral health practitioners) providing pain care, including those prescribing opioids, for outpatients aged ≥18 years with acute (duration of <1 month) pain, subacute (duration of 1–3 months) pain, or chronic (duration of >3 months) pain. Recommendations on use of opioids for acute pain and on tapering opioids for patients already receiving opioid therapy have been substantially expanded in this update. These recommendations do not apply to patients experiencing pain associated with the following conditions or settings: pain management related to sickle cell disease, cancer-related pain treatment, palliative care, and end-of-life care. Applicable outpatient settings include clinician offices, clinics, and urgent care centers. The recommendations do not apply to providing care to patients who are hospitalized or in an emergency department or other observational setting from which they might be admitted to inpatient care. These recommendations do apply to prescribing for pain management when patients are discharged from hospitals, emergency departments, or other facilities.

This clinical practice guideline addresses the following areas:

1. Determining whether or not to initiate opioids for pain
2. Selecting opioids and determining opioid dosages
3. Deciding duration of initial opioid prescription and conducting follow-up
4. Assessing risk and addressing potential harms of opioid use

CDC developed this clinical practice guideline using the Grading of Recommendations Assessment, Development, and Evaluation (GRADE) framework, and recommendations are made based on a systematic review of the available scientific evidence while considering benefits and harms; values and preferences of patients, caregivers, and clinicians; and resource allocation (e.g., costs to patients or health systems, including clinician time). CDC obtained

input on this clinical practice guideline through individual conversations with patients, caregivers, and clinicians and public comment opportunities available via *Federal Register* notices. CDC also sought input from the Board of Scientific Counselors of the National Center for Injury Prevention and Control (BSC/NCIPC) (a federally chartered advisory committee), federal partners, and peer reviewers with scientific and clinical expertise.

The clinical evidence reviews found that a number of nonpharmacologic treatments and a number of nonopioid medications are associated with improvements in pain, function, or both, that appear comparable to improvements associated with opioid use. Multiple noninvasive nonpharmacologic interventions (e.g., exercise and psychological therapies) are associated with improvements in pain, function, or both, that are sustained after treatment and are not associated with serious harms. Nonopioid drugs, including serotonin and norepinephrine reuptake inhibitor (SNRI) antidepressants, pregabalin and gabapentin, and nonsteroidal anti-inflammatory drugs (NSAIDs), are associated with small to moderate improvements in chronic pain and function for certain chronic pain conditions. Nonopioid drug class–specific adverse events include serious cardiovascular, gastrointestinal, or renal effects with NSAIDs and sedation with anticonvulsants. Opioid therapy is associated with similar or decreased effectiveness for pain and function versus NSAIDs across several acute pain conditions and with small improvements in short-term (1 to <6 months) pain and function compared with placebo; evidence was found of attenuated pain reduction over time with opioids (between 3 and 6 months versus between 1 and 3 months). Opioid therapy is associated with increased risk for serious harms (including opioid use disorder and overdose) that appears to increase with increase in opioid dosage, without a clear threshold below which there is no risk. No validated, reliable way exists to predict which patients will suffer serious harm from opioid therapy. Evidence was sparse for long-term improvement of pain or function for any treatment for chronic pain. Some evidence indicated that beneficial effects of some nonpharmacologic therapies persist for up to 12 months after the end of a course of a treatment. Among 154 trials of nonopioid medications rated as good or fair quality, eight were long term (≥1 year). A single trial evaluated outcomes at 1 year for opioid medications (compared with nonopioid medications).

CDC invited input on the draft clinical practice guideline and received approximately 5,500 public comments. Many of these comments were related to experiences with pain or with the aftermath of a family member's, friend's, or significant person's overdose; barriers to and access to pain care and evidence-based treatment; concerns about the level of specificity of recommendations; and overall communication and implementation of the clinical practice guideline. Some respondents expressed concerns that insufficient specificity of recommendations might leave clinicians without sufficient practical advice or context, whereas others were concerned that inclusion of more-specific recommendations or information in the guideline could facilitate misapplication through adaption of the clinical practice guideline or components of the guideline into rigid policies and laws. CDC incorporated insights from public comments into the clinical practice guideline, including special considerations for each recommendation. To help prevent misapplication of recommendations as inflexible rules and enable clinicians to account for individualized, person-centered clinical considerations, specific

prescription dosages and durations are generally not included in the summary recommendation statements, which highlight general principles. Greater specificity is provided in implementation considerations and supporting rationales, which can offer more flexibility to help clinicians weigh benefits and risks of different therapeutic courses for specific patients.

Recommendation statements emphasize that opioids should be used only when benefits for pain and function are expected to outweigh risks. Before initiating opioid therapy for patients with pain, clinicians should discuss with patients the realistic benefits and known risks of opioid therapy. Before starting ongoing opioid therapy for patients with subacute or chronic pain, clinicians should work with patients to establish treatment goals for pain and function and consider how opioid therapy will be discontinued if benefits do not outweigh risks. When opioids are initiated, clinicians should prescribe the lowest effective dosage of immediate-release opioids for no longer than needed for the expected duration of pain severe enough to require opioids. During ongoing opioid therapy, clinicians should collaborate with patients to evaluate and carefully weigh benefits and risks of continuing opioid therapy and exercise care when increasing, continuing, or reducing opioid dosage. Before starting and periodically during continuation of opioid therapy, clinicians should evaluate risk for opioid-related harms and should work with patients to incorporate relevant strategies to mitigate risk, including offering naloxone and reviewing potential interactions with any other prescribed medications or substances used. Clinicians should offer or arrange treatment with evidence-based medications to treat patients with opioid use disorder.

CDC recommends that persons with pain receive appropriate pain treatment with careful consideration of the benefits and risks of all treatment options in the context of the patient's circumstances. Clinicians should collaborate with patients when making treatment decisions and designing a treatment plan, including when initiating or changing pain management strategies and particularly when considering initiating, increasing, tapering, or discontinuing opioids. Clinicians should avoid abrupt discontinuation of opioids, especially for patients receiving high dosages of opioids, should avoid dismissing patients from care, and should ensure (provide or arrange) appropriate care for patients with pain and patients with complications from opioid use (e.g., opioid use disorder). Quality and equitable care across sociodemographic groups requires attention to mitigation of potential barriers to care, such as through linguistically tailored care and cost-assistance programs to ensure access to appropriate pharmacotherapy, psychological support, and physical therapy as needed.

This voluntary clinical practice guideline provides recommendations only and is intended to support, not supplant, clinical judgment and individualized, person-centered decision-making. This clinical practice guideline should not be applied as inflexible standards of care across patient populations by health care professionals; health systems; pharmacies; third-party payers; or state, local, or federal organizations or entities. This clinical practice guideline is intended to improve communication between clinicians and patients about the benefits and risks of pain treatment, including opioid therapy for pain; improve the safety and effectiveness of pain treatment; mitigate pain; improve function and quality of life for patients with pain; and

reduce risks associated with opioid pain therapy, including opioid use disorder, overdose, and death.

BOX 2. Intended use of CDC's Clinical Practice Guideline for Prescribing Opioids for Pain — United States, 2022

This clinical practice guideline is

- a clinical tool to improve communication between clinicians and patients and empower them to make informed, person-centered decisions related to pain care together;
- intended for primary care clinicians and other clinicians providing pain care for outpatients aged ≥18 years with
    - acute pain (duration of <1 month),
    - subacute pain (duration of 1–3 months), or
    - chronic pain (duration of >3 months); and
- intended to be flexible to enable person-centered decision-making, taking into account a patient's expected health outcomes and well-being.

This clinical practice guideline is not

- a replacement for clinical judgment or individualized, person-centered care;
- intended to be applied as inflexible standards of care across patients or patient populations by health care professionals, health systems, pharmacies, third-party payers, or governmental jurisdictions or to lead to the rapid tapering or abrupt discontinuation of opioids for patients;
- a law, regulation, or policy that dictates clinical practice or as a substitute for Food and Drug Administration–approved labeling;
- applicable to
    - management of pain related to sickle cell disease,
    - management of cancer-related pain, or
    - palliative care or end-of-life care; or
- focused on opioids prescribed for opioid use disorder.

BOX 3. Recommendations for prescribing opioids for outpatients with pain, excluding pain management related to sickle cell disease, cancer-related pain treatment, palliative care, and end-of-life care; recommendation categories; and evidence types — CDC Clinical Practice Guideline for Prescribing Opioids for Pain — United States, 2022

Determining Whether or Not to Initiate Opioids for Pain (Recommendations 1 and 2)

1. Nonopioid therapies are at least as effective as opioids for many common types of acute pain. Clinicians should maximize use of nonpharmacologic and nonopioid pharmacologic therapies as appropriate for the specific condition and patient and only consider opioid therapy for acute pain if benefits are anticipated to outweigh risks to the patient. Before prescribing opioid therapy for acute pain, clinicians should discuss with patients the realistic benefits and known risks of opioid therapy (recommendation category: B; evidence type: 3).
2. Nonopioid therapies are preferred for subacute and chronic pain. Clinicians should maximize use of nonpharmacologic and nonopioid pharmacologic therapies as appropriate for the specific condition and patient and only consider initiating opioid therapy if expected benefits for pain and function are anticipated to outweigh risks to the patient. Before starting opioid therapy for subacute or chronic pain, clinicians should discuss with patients the realistic benefits and known risks of opioid therapy, should work with patients to establish treatment goals for pain and function, and should consider how opioid therapy will be discontinued if benefits do not outweigh risks (recommendation category: A; evidence type: 2).

Selecting Opioids and Determining Opioid Dosages (Recommendations 3, 4, and 5)

3. When starting opioid therapy for acute, subacute, or chronic pain, clinicians should prescribe immediate-release opioids instead of extended-release and long-acting (ER/LA) opioids (recommendation category: A; evidence type: 4).
4. When opioids are initiated for opioid-naïve patients with acute, subacute, or chronic pain, clinicians should prescribe the lowest effective dosage. If opioids are continued for subacute or chronic pain, clinicians should use caution when prescribing opioids at any dosage, should carefully evaluate individual benefits and risks when considering increasing dosage, and should avoid increasing dosage above levels likely to yield diminishing returns in benefits relative to risks to patients (recommendation category: A; evidence type: 3).
5. For patients already receiving opioid therapy, clinicians should carefully weigh benefits and risks and exercise care when changing opioid dosage. If benefits outweigh risks of continued opioid therapy, clinicians should work closely with patients to optimize nonopioid therapies while continuing opioid therapy. If benefits do not outweigh risks of continued opioid therapy, clinicians should optimize other therapies and work closely with patients to gradually taper to lower dosages or, if warranted based on the

individual circumstances of the patient, appropriately taper and discontinue opioids. Unless there are indications of a life-threatening issue such as warning signs of impending overdose (e.g., confusion, sedation, or slurred speech), opioid therapy should not be discontinued abruptly, and clinicians should not rapidly reduce opioid dosages from higher dosages (recommendation category: B; evidence type: 4).

Deciding Duration of Initial Opioid Prescription and Conducting Follow-Up (Recommendations 6 and 7)

6. When opioids are needed for acute pain, clinicians should prescribe no greater quantity than needed for the expected duration of pain severe enough to require opioids (recommendation category: A; evidence type: 4).
7. Clinicians should evaluate benefits and risks with patients within 1–4 weeks of starting opioid therapy for subacute or chronic pain or of dosage escalation. Clinicians should regularly reevaluate benefits and risks of continued opioid therapy with patients (recommendation category: A; evidence type: 4).

Assessing Risk and Addressing Potential Harms of Opioid Use (Recommendations 8, 9, 10, 11, and 12)

8. Before starting and periodically during continuation of opioid therapy, clinicians should evaluate risk for opioid-related harms and discuss risk with patients. Clinicians should work with patients to incorporate into the management plan strategies to mitigate risk, including offering naloxone (recommendation category: A; evidence type: 4).
9. When prescribing initial opioid therapy for acute, subacute, or chronic pain, and periodically during opioid therapy for chronic pain, clinicians should review the patient's history of controlled substance prescriptions using state prescription drug monitoring program (PDMP) data to determine whether the patient is receiving opioid dosages or combinations that put the patient at high risk for overdose (recommendation category: B; evidence type: 4).
10. When prescribing opioids for subacute or chronic pain, clinicians should consider the benefits and risks of toxicology testing to assess for prescribed medications as well as other prescribed and nonprescribed controlled substances (recommendation category: B; evidence type: 4).
11. Clinicians should use particular caution when prescribing opioid pain medication and benzodiazepines concurrently and consider whether benefits outweigh risks of concurrent prescribing of opioids and other central nervous system depressants (recommendation category: B; evidence type: 3).
12. Clinicians should offer or arrange treatment with evidence-based medications to treat patients with opioid use disorder. Detoxification on its own, without medications for opioid use disorder, is not recommended for opioid use disorder because of increased risks for resuming drug use, overdose, and overdose death (recommendation category: A; evidence type: 1).

Recommendation categories (on basis of evidence type, balance between desirable and undesirable effects, values and preferences, and resource allocation [cost]).

- **Category A recommendation**: Applies to all persons; most patients should receive the recommended course of action.
- **Category B recommendation**: Individual decision-making needed; different choices will be appropriate for different patients. Clinicians help patients arrive at a decision consistent with patient values and preferences and specific clinical situations.

Evidence types (on basis of study design and as a function of limitations in study design or implementation, imprecision of estimates, variability in findings, indirectness of evidence, publication bias, magnitude of treatment effects, dose-response gradient, and constellation of plausible biases that could change effects).

- **Type 1 evidence**: Randomized clinical trials or overwhelming evidence from observational studies.
- **Type 2 evidence**: Randomized clinical trials with important limitations, or exceptionally strong evidence from observational studies.
- **Type 3 evidence**: Observational studies or randomized clinical trials with notable limitations.
- **Type 4 evidence**: Clinical experience and observations, observational studies with important limitations, or randomized clinical trials with several major limitations.

BOX 4. Guiding principles for implementation of the CDC Clinical Practice Guideline for Prescribing Opioids for Pain — United States, 2022 recommendations

1. Acute, subacute, and chronic pain needs to be appropriately assessed and treated independent of whether opioids are part of a treatment regimen.
2. Recommendations are voluntary and are intended to support, not supplant, individualized, person-centered care. Flexibility to meet the care needs and the clinical circumstances of a specific patient is paramount.
3. A multimodal and multidisciplinary approach to pain management attending to the physical health, behavioral health, long-term services and supports, and expected health outcomes and well-being of each person is critical.
4. Special attention should be given to avoid misapplying this clinical practice guideline beyond its intended use or implementing policies purportedly derived from it that might lead to unintended and potentially harmful consequences for patients.
5. Clinicians, practices, health systems, and payers should vigilantly attend to health inequities; provide culturally and linguistically appropriate communication, including communication that is accessible to persons with disabilities; and ensure access to an appropriate, affordable, diversified, coordinated, and effective nonpharmacologic and pharmacologic pain management regimen for all persons.

Extended Release/Long-Acting Opioids

General Drug Safety Information

This document is provided as a SUMMARY only of side effects and potential drug-drug interactions, for your reference as you prescribe ER/LA Opioids. Please consult the following for more information:

- https://dailymed.nlm.nih.gov/dailymed/ for DETAILED product-specific information, including side effects and contraindications

ER/LA opioid analgesic products are scheduled under the Controlled Substances Act and can be misused and abused.

SIDE EFFECTS:

- MOST COMMON: Constipation. This should be anticipated, and discussed with your patients.
- MOST SERIOUS: Respiratory depression (RD). Patients should be monitored for respiratory depression. You should explain the relative risks and describe appropriate measure to take (including calling 911), as RD can be immediately life-threatening.

DRUG INTERACTIONS AND COMPLICATIONS:

- CNS depressants. ER/LA Opioids are also CNS depressants; combining them with any of the substances below can increase the sedation and respiratory depression effected by the opioids.
  - Alcohol
  - Sedatives
  - Hypnotics
  - Tranquilizers
  - Tricyclic antidepressants
- "Dose Dumping". Exposure to alcohol may cause rapid release of some ER opioid formulations. Alcohol exposure may cause some opioid drug levels to increase, even without dose dumping.
- MAOIs. Use of opioids with MAOIs may result in possible increase in respiratory depression. Use of certain opioids with MAOIs may cause serotonin syndrome (interference with serotonin metabolism, resulting in neuromuscular, autonomic, and behavioral changes due to increased CNS serotonin activity)
- Diuretics. Opioids can reduce the efficacy of diuretics by inducing the release of antidiuretic hormone.
- QTc interval. Methadone and buprenorphine can prolong the QTc interval, increasing the risk of sudden cardiac death.
- MRIs. Patients should NOT wear transdermal fentanyl during MRIs (because of the metal foil backing on the patch).

TOLERANCE TO SEDATING AND RESPIRATORY-DEPRESSANT EFFECTS:

- Patients MUST be opioid tolerant before using any strength of
  - Transdermal fentanyl
  - ER hydromorphone
- Other ER/LA opioids require patients to be opioid tolerant before using
  - Certain strengths
  - Certain daily doses
- See https://dailymed.nlm.nih.gov/dailymed/ for details

Selected Important Safety Information

ABUSE POTENTIAL AND RISK OF LIFE-THREATENING RESPIRATORY DEPRESSION

The branded and generic drug products subject to this REMS include *all*:

- extended-release, oral dosage forms containing
  - hydromorphone,
  - morphine,
  - oxycodone,
  - oxymorphone, or
  - tapentadol;
- fentanyl and buprenorphine-containing transdermal delivery systems; *and*
- methadone tablets and solutions that are indicated for use as analgesics.

These drug products will be collectively referred to as Extended-Release and Long-Acting (ER/LA) prescription opioid analgesics.

ER/LA prescription opioid analgesics are opioid agonists and Schedule II or, Schedule III, as is the case with transdermal buprenorphine, controlled substances with abuse liabilities similar to other opioid agonists. Schedule II and Schedule III opioid substances have high potential for abuse and risk of fatal overdose due to respiratory depression.

ER/LA opioid analgesics can be abused in a manner similar to other opioid agonists, legal or illicit. This should be considered when prescribing or dispensing ER/LA opioid analgesics in situations where the physician or pharmacist is concerned about an increased risk of misuse, abuse, or diversion.

Persons at increased risk for opioid abuse include those with a personal or family history of substance abuse (including drug or alcohol abuse or addiction) or mental illness (e.g., major depression). Patients should be assessed for their clinical risks for opioid abuse or addiction prior to being prescribed opioids. All patients receiving opioids should be routinely monitored for signs of misuse, abuse and addiction.

ER/LA opioid analgesics containing buprenorphine, fentanyl, hydromorphone, methadone, morphine, oxycodone, oxymorphone, and tapentadol are indicated for the management of moderate to severe pain when a continuous, around-the-clock opioid analgesic is needed for an extended period of time. **ER/LA opioid analgesics are not indicated for acute pain. Additionally, ER hydromorphone and transdermal fentanyl products are indicated for use in opioid-tolerant patients only.** For some of the other ER/LA opioid analgesics, certain dosage strengths or certain doses are for use in opioid-tolerant patients only. Consult the individual Full Prescribing Information for dosing instructions for patients who are not opioid tolerant. ER/LA opioid analgesics are not intended for acute pain, pain that is mild or not expected to persist for an extended period of time, or for use on an as-needed basis.

Patients considered opioid tolerant are those who are taking at least 60 mg oral morphine/day, 25 mcg transdermal fentanyl/hour, 30 mg oral oxycodone/day, 8 mg oral hydromorphone/day, 25 mg oral oxymorphone/day, or an equianalgesic dose of another opioid for one week or longer.

ER/LA opioid analgesic formulations have product specific dosage and administration instructions. Refer to the individual Full Prescribing Information for specific doses and dosing recommendations.

ER/LA oral dosage forms must be swallowed whole and must not be cut, broken, chewed, crushed, or dissolved. Taking cut, broken, chewed, crushed or dissolved oral dosage forms leads to rapid release and absorption of a potentially fatal dose of the opioid agonist. For patients who have difficulty swallowing their medication whole, certain oral products may be opened and sprinkled on applesauce—refer to the product-specific Full Prescribing Information.

Transdermal dosage forms must not be cut, damaged, chewed, swallowed or used in ways other than indicated since this may cause choking or overdose resulting in death. Avoid direct external heat sources to transdermal application site and surrounding area.

ER/LA opioid analgesics are contraindicated in patients with a known hypersensitivity to any of the components of ER/LA opioid analgesics, including the respective active ingredients, or in any situation where opioids are contraindicated; in patients who have significant respiratory depression; in patients who have acute or severe bronchial asthma; or in patients who have or are suspected of having paralytic ileus. Additionally, ER hydromorphone and transdermal fentanyl products are contraindicated for use in opioid non-tolerant patients. **These contraindications are not all-inclusive of those for each individual ER/LA opioid analgesic;** therefore, the Full Prescribing Information for the individual ER/LA opioid analgesics must be consulted.

The concomitant use of ER/LA opioid analgesics containing buprenorphine, fentanyl, methadone, or oxycodone with cytochrome P450 3A4 inhibitors may result in increased opioid plasma concentrations and may cause potentially fatal respiratory depression.

Adverse Reactions

Serious adverse reactions of ER/LA opioid analgesics include life threatening respiratory depression, apnea, respiratory arrest, circulatory depression, hypotension, and death.

Accidental exposure of ER/LA opioids, especially in children, can result in death.

With methadone, cases of QT interval prolongation and serious arrhythmia (torsades de pointes) have been observed during treatment. Most cases involve patients being treated for pain with large, multiple daily doses of methadone, although cases have been reported in patients receiving doses commonly used for maintenance treatment of opioid addiction. A positive-controlled study of the effects of transdermal buprenorphine on the QTc interval in healthy subjects demonstrated no clinically meaningful effect at a transdermal buprenorphine dose of 10 mcg/hour; however, a transdermal buprenorphine dose of 40 mcg/hour (given as two 20 mcg/hour transdermal buprenorphine systems) was observed to prolong the QTc interval.

The most common adverse reactions of ER/LA opioid analgesics include constipation, nausea, somnolence, dizziness, vomiting, pruritus, headache, dry mouth, asthenia, and sweating. Additionally, the following have been reported with

transdermal buprenorphine and fentanyl products: application site pruritus, application site erythema, and application site rash. Refer to the individual Full Prescribing Information for all product-specific adverse reactions.

Adverse Event Reporting

Please report all suspected adverse reactions associated with the use of the specific ER/LA opioid analgesic to the appropriate company. You may also report adverse events directly to the FDA's MedWatch Reporting System:

- by calling 1-800-FDA-1088 (1-800-332-1088),
- online at https://www.accessdata.fda.gov/scripts/medwatch/medwatch-online.htm *or*
- by mail using the fillable portable document format (PDF) Form FDA 3500, available at http://www.fda.gov/downloads/Safety/MedWatch/DownloadForms/UCM082725.pdf.

Patient Counseling Document and Medication Guide

The Patient Counseling Document (PCD) on Extended-Release/Long-Acting Opioids is a tool unique to this REMS designed to facilitate important discussions with your patients for whom you select an ER/LA opioid analgesic. The PCD should be provided to the patient and/or their caregiver at the time of prescribing. It contains important safety information about the drug products subject to this REMS and includes space for you to write additional information to help your patients use their ER/LA opioid analgesic safely.

Patients and their caregivers should be counseled on: the importance of taking these medicines exactly as you prescribe them, the need to store ER/LA opioid analgesics safely and securely—out of the reach of children, pets, and household acquaintances to avoid risks from unintended exposure, the importance of not sharing these medications, even if someone has the same symptoms as the patient, and the proper methods of disposal of unneeded ER/LA opioid analgesics.

It is important that you encourage your patients to read the relevant Medication Guide when they pick up their prescription from the pharmacy. The Medication Guide provides important information on the safe and effective use of the specific ER/LA opioid analgesic prescribed.

Opioid Analgesics

Basic Patient Counseling Talking Points

Your patients need some basic information about the safer use of opioid analgesics. This information provided here is an outline of those points which should be communicated clearly to patients, whether they are just starting opioid therapy or managing their pain long-term with chronic opioid therapy. This document can be printed and kept handy in your office for easy reference. Please also refer to the FDA **Patient Counseling Guide**.

1. **PRINT** and distribute product-specific information; confirm that patients and/or caregivers will read it (available here: https://dailymed.nlm.nih.gov/dailymed/)

2. **EXPLAIN** details of how to take the medication
    a. Specific dosage
    b. When to take it
    c. How many per day (or within a certain number of hours)
    d. How to take if patient cannot swallow pills/capsules (refer to product-specific information)
    e. Special handling requirements for patch (patient should be aware that external heat, fever, and exertion can increase absorption, leading to overdose)

3. **EXPLAIN** importance of adherence to regimen
    a. How to handle missed doses
    b. Not to increase dosage or decrease interval OR abruptly stop taking opioids
    c. When to call PCP (if pain is not controlled)

4. **WARN** patients of what NOT TO DO
    a. Do NOT break, chew or crush oral medications
    b. Do NOT cut or tear patches prior to use
    c. Do NOT share opioids with others
    d. Do NOT sell or give away opioids (against the law)

5. **WARN** patients of adverse effects/consequences of opioids
    a. Describe common side effects (refer to specific medication information)
    b. Remind patients to call PCP regarding side effects
    c. Describe possibilities of severe side effects (including death)
    d. Describe overdose risks (and risk of death from overdose)

6. **INSTRUCT** patients on safe storage and disposal
    a. Lock boxes – safe from children, family members, visitors, pets
    b. Disposal (refer to product-specific information)
        i. Mix with coffee grounds and put in trash
        ii. Flush down the toilet
        iii. Find national, state, or local “take-back days” (refer to https://takebackday.dea.gov)

JAMA PATIENT PAGE

The Journal of the American Medical Association

MEDICINES

Misuse of Opioid Medication

About 100 million Americans have chronic pain and some may be treated with opioid medications. Opioid medications include codeine, morphine, oxycodone, and fentanyl, among others. These medications can help some people and harm others. In the United States, opioid medications are the second most common drug abused after marijuana. **Opioid medication misuse** is defined as use of an opioid medication different than the way in which it was prescribed (for example, in higher doses) or for reasons other than why it was prescribed (for example, to get high). An article published in the March 6, 2013, issue of *JAMA* discussed opioid misuse.

RISK FACTORS FOR OPIOID MEDICATION MISUSE

- Younger age (<45 years)
- Personal history of substance abuse, mental illness, or legal problems
- Family history of substance abuse

WHAT YOU SHOULD KNOW ABOUT USING OPIOIDS

Not all chronic pain gets better with use of opioids. Opioids can cause side effects, addiction, overdose, and death. Before prescribing opioids, your doctor will need to teach you about how opioid medications can help you and how they can harm you. This may include having you sign an agreement form.

Using opioids safely includes

- Not chewing or crushing the medication
- Not increasing the dose on your own
- Not sharing the medication with others
- Keeping the medication safe from others
- Throwing out extra opioid medications by mixing them with used coffee grounds or cat litter

The risk of harm from opioids is highest

- When the opioid medication is started
- When the dose is increased
- With a high dose (for example, more than 100 mg of morphine)
- When also taking sleep or anxiety medications or using alcohol

MONITORING FOR BENEFIT AND HARM

When you first begin taking an opioid medication, your doctor should see you often. To know if the opioids are helping you, your doctor will ask you if your pain and function are getting better. Your doctor will also look for evidence that the opioids are not helping, are being misused, or are harming you by causing side effects that are unsafe or that stop you from performing your normal daily activities. To check for opioid medication misuse, your doctor may use urine drug tests, pill counts, and official websites that show your prescription history. Urine drug tests are helpful to make sure the opioid is being taken and to see if there is any other drug abuse. Pill counts are helpful to see if you are taking the medication as prescribed. Official websites are helpful to show whether other doctors are prescribing medications to you. If your doctor is worried about opioid medication misuse (for example, if no opioid is found in the urine or an incorrect number of pills remain in your pill bottle), your doctor may decide that the opioid medication is too dangerous for you and will need to be stopped. If your body is physically dependent on the opioid, your doctor may decrease the opioid dose slowly so that you do not get sick from withdrawal.

FOR MORE INFORMATION

- US Food and Drug Administration
  www.fda.gov
- Substance Abuse and Mental Health Services Administration
  www.samhsa.gov
- US Drug Enforcement Administration
  www.deadiversion.usdoj.gov

INFORM YOURSELF

To find this and previous JAMA Patient Pages, go to the Patient Page index on *JAMA*'s website at www.jama.com. Many are available in English and Spanish. A Patient Page on acute pain treatment was published in the January 2, 2008, issue and one on opioid abuse was published in the September 15, 2004, issue.

Sources: US Food and Drug Administration, Substance Abuse and Mental Health Services Administration, US Drug Enforcement Administration

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JAMA INTERNAL MEDICINE PATIENT PAGE

What Should I Know About Opioids?

What Are Opioids?

Opioids are a group of substances derived from the plant-based chemical opium. Today many opioids are artificially created to have stronger or longer-lasting effects. Opioids include both prescription medications and illicit drugs. Examples include morphine, hydrocodone, oxycodone, codeine, hydromorphone, tramadol, fentanyl, and heroin. Opioids are addictive. Over time people's bodies require more and more opioid to achieve the same effects. Withdrawal symptoms can appear if opioids are not taken regularly. Opioids can cause death by slowing breathing and causing extreme sedation.

Is My Opioid Use a Problem?

- When a person's pattern of opioid use leads to life problems, poor function, or physical harm, they may have *opioid use disorder*—the medical term for addiction to opioids.
- Recognizing the signs of opioid use disorder in yourself or a loved one can save a life. They include: Craving opioids; using more opioids than intended; problems at work or in relationships owing to opioid use; use in potentially dangerous situations, such as driving; increasing time spent using or searching for opioids; continued use after a bad reaction, overdose, or other harm; the presence of withdrawal symptoms when opioids are not taken.
- These symptoms should prompt a visit to your physician for evaluation immediately.

What Treatments Are Available for Opioid Use Disorder?

- Medications like methadone and buprenorphine are the most effective treatment. These medications have been proven to prevent cravings and reduce opioid related deaths by up to 50%.
- Medications for opioid use disorder are intended for long-term use, similar to blood pressure pills. Stopping them can increase the risk for returning to opioid use (relapse) and death.
  - **Methadone** has been successfully used for over 50 years to treat opioid use disorder. It is taken daily while observed at a specialized treatment program.
  - **Buprenorphine** is typically a daily pill that can be taken at home with a prescription from a licensed provider.
  - **Depot Naltrexone** is a monthly injection that blocks the action of opioids. Evidence for its effectiveness is weaker than for methadone and buprenorphine.
  - **Naloxone** reverses bad reactions and overdose from opioids and can save someone's life. It is available as an easy-to-use nasal spray. If you or someone you know uses opioids, you should have this medication stored where it is easy to find in case of an emergency.
- **Counseling**
  - Counseling and support groups can increase the effectiveness of medication-based treatment. Counseling should be offered in addition to medications whenever possible. It should not be used as a substitute for medication-based treatment.
- **"Detox" Models**
  - There can be a lot of pressure to "just quit" using opioids, and several centers offer detox services. Detox alone is not as effective as medication-based treatment and is potentially dangerous. Evidence shows that people often return to opioid use soon after detox treatment, putting them at especially high risk of overdose death.
  - Sometimes detox may be used to transition to monthly naltrexone injections. This is more effective than detox alone. However, methadone and buprenorphine are the most proven treatments.

Common Misconceptions About Opioid Use

Myths	Facts
✗ Opioid addiction is a choice or moral failure.	✓ Opioid addiction is a medical condition with a biochemical basis and effective treatments.
✗ Detox is a sufficient treatment for opioid addiction.	✓ Detox alone is not recommended. FDA-approved medications save lives and should be a part of all treatment regimens.
✗ Methadone and buprenorphine treatments are just replacing one drug with another.	✓ Medication assisted treatment reduces craving and prevents withdrawal. Medications reduce opioid related death by up to 50%.
✗ One has to be in an addiction treatment program in order to access medications for opioid use disorder.	✓ Medications such as buprenorphine and naltrexone can be prescribed by addiction specialists and licensed primary care doctors. Ask your doctor if they are licensed to prescribe buprenorphine.

FOR MORE INFORMATION

- SAMHSA Patient Information
  https://www.samhsa.gov/medication-assisted-treatment/treatment
- National Institutes of Health
  https://www.drugabuse.gov/publications/research-reports/medications-to-treat-opioid-addiction/overview

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What You Need to Know About Opioid Pain Medicines

This guide is for you! Keep this guide and the Medication Guide that comes with your medicine so you can better understand what you need to know about your opioid pain medicine. Go over this information with your healthcare provider. Then, ask your healthcare provider about anything that you do not understand.

What are opioids?

Opioids are strong prescription medicines that are used to manage severe pain.

What are the serious risks of using opioids?

- Opioids have serious risks of addiction and overdose.
- **Too much opioid medicine in your body can cause your breathing to stop – which could lead to death.** This risk is greater for people taking other medicines that make you feel sleepy or people with sleep apnea.
- **Addiction** is when you crave drugs (like opioid pain medicines) because they make you feel good in some way. You keep taking the drug even though you know it is not a good idea and bad things are happening to you. Addiction is a brain disease that may require ongoing treatment.

Risk Factors for Opioid Abuse:

- You have:
  - » a history of addiction
  - » a family history of addiction
- You take medicines to treat mental health problems
- You are under the age of 65 (although anyone can abuse opioid medicines)

- **You can get addicted to opioids even though you take them exactly as prescribed, especially if taken for a long time.**
- If you think you might be addicted, talk to your healthcare provider right away.
- If you take an opioid medicine for more than a few days, your body becomes physically "dependent." This is normal and it means your body has gotten used to the medicine. You must taper off the opioid medicine (slowly take less medicine) when you no longer need it to avoid withdrawal symptoms.

How can I take opioid pain medicine safely?

- Tell your healthcare provider about **all** the medicines you are taking, including vitamins, herbal supplements, and other over-the-counter medicines.
- Read the Medication Guide that comes with your prescription.
- Take your opioid medicine exactly as prescribed.
- Do not cut, break, chew, crush, or dissolve your medicine. If you cannot swallow your medicine whole, talk to your healthcare provider.
- When your healthcare provider gives you the prescription, ask:
  - » How long should I take it?
  - » What should I do if I need to taper off the opioid medicine (slowly take less medicine)?
- Call your healthcare provider if the opioid medicine is not controlling your pain. Do not increase the dose on your own.
- Do not share or give your opioid medicine to anyone else. Your healthcare provider selected this opioid and the dose just for you. A dose that is okay for you could cause an overdose and death for someone else. Also, it is against the law.
- Store your opioid medicine in a safe place where it cannot be reached by children or stolen by family or visitors to your home. Many teenagers like to experiment with pain medicines. Use a lock- box to keep your opioid medicine safe. Keep track of the amount of medicine you have.

- Do not operate heavy machinery until you know how your opioid medicine affects you. Your opioid medicine can make you sleepy, dizzy, or lightheaded.

What should I avoid taking while I am taking opioids?

Unless prescribed by your healthcare provider, you should avoid taking alcohol or any of the following medicines with an opioid because it may cause you to stop breathing, which can lead to death:

- Alcohol: Do not drink any kind of alcohol while you are taking opioid medicines.
- Benzodiazepines (like Valium or Xanax)
- Muscle relaxants (like Soma or Flexeril)
- Sleep medicines (like Ambien or Lunesta)
- Other prescription opioid medicines

What other options are there to help with my pain?

Opioids are not the only thing that can help you control your pain. Ask your healthcare provider if your pain might be helped with a non-opioid medication, physical therapy, exercise, rest, acupuncture, types of behavioral therapy, or patient self-help techniques.

What is naloxone?

- Naloxone is a medicine that treats opioid overdose. It is sprayed inside your nose or injected into your body.
- Use naloxone if you have it and call 911 or go to the emergency room right away if:
  - You or someone else has taken an opioid medicine and is having trouble breathing, is short of breath, or is unusually sleepy
  - A child has accidentally taken the opioid medicine or you think they might have
- Giving naloxone to a person, even a child, who has not taken an opioid medicine will not hurt them.

Naloxone is never a substitute for emergency medical care. Always call 911 or go to the emergency room if you've used or given naloxone.

Where can I get naloxone?

- There are some naloxone products that are designed for people to use in their home.
- Naloxone is available in pharmacies. Ask your healthcare provider about how you can get naloxone. In some states, you may not need a prescription.
- When you get your naloxone from the pharmacy, read the **Patient Information** on how to use naloxone and ask the pharmacist if anything is unclear.
- Tell your family about your naloxone and keep it in a place where you or your family can get to it in an emergency.

When you no longer need your opioid medicine, dispose of it as quickly as possible. The Food and Drug Administration recommends that most opioid medicines be promptly flushed down the toilet when no longer needed, unless a drug take-back option is immediately available. A list of the opioid medicines that can be flushed down the toilet is found here: https://www.fda.gov/drugdisposal

What things should I know about the specific opioid medicine that I am taking?

- Your healthcare provider has prescribed _____ for you. Read the Medication Guide for this medicine, which is information provided by your pharmacy.
- Remember this other important information about your opioid medicine:

Dosing instructions: _____

Any specific interactions with your medicines: _____

_____

What if I have more questions?

- Read the Medication Guide that comes with your opioid medicine prescription for more specific information about your medicine.
- Talk to your healthcare provider or pharmacist and ask them any questions you may have.
- Visit: www.fda.gov/opioids for more information about opioid medicines.

HHS Guide for Clinicians on the Appropriate Dosage Reduction or Discontinuation of Long-Term Opioid Analgesics

This *HHS Guide for Clinicians on the Appropriate Dosage Reduction or Discontinuation of Long-Term Opioid Analgesics* provides advice to clinicians who are contemplating or initiating a reduction in opioid dosage or discontinuation of long-term opioid therapy for chronic pain. In each case the clinician should review the risks and benefits of the current therapy with the patient, and decide if tapering is appropriate based on individual circumstances.

After increasing every year for more than a decade, annual opioid prescriptions in the United States peaked at 255 million in 2012 and then decreased to 191 million in 2017.[i] More judicious opioid analgesic prescribing can benefit individual patients as well as public health when opioid analgesic use is limited to situations where benefits of opioids are likely to outweigh risks. At the same time opioid analgesic prescribing changes, such as dose escalation, dose reduction or discontinuation of long-term opioid analgesics, have potential to harm or put patients at risk if not made in a thoughtful, deliberative, collaborative, and measured manner.

Risks of rapid opioid taper

- Opioids should not be tapered rapidly or discontinued suddenly due to the risks of significant opioid withdrawal.
- Risks of rapid tapering or sudden discontinuation of opioids in physically dependent[ii] patients include acute withdrawal symptoms, exacerbation of pain, serious psychological distress, and thoughts of suicide.[1] Patients may seek other sources of opioids, potentially including illicit opioids, as a way to treat their pain or withdrawal symptoms.[1]
- Unless there are indications of a life-threatening issue, such as warning signs of impending overdose, HHS does not recommend abrupt opioid dose reduction or discontinuation.

Whether or not opioids are tapered, safe and effective nonopioid treatments should be integrated into patients' pain management plans based on an individualized assessment of benefits and risks considering the patient's diagnosis, circumstances, and unique needs.[2,3,4] Coordination across the health care team is critical. Clinicians have a responsibility to provide or arrange for coordinated management of patients' pain and opioid-related problems, and they should never abandon patients.[2] More specific guidance follows, compiled from published guidelines (the *CDC Guideline for Prescribing Opioids for Chronic Pain*[2] and the *VA/DoD Clinical Practice Guideline for Opioid Therapy for Chronic Pain*[3]) and from practices endorsed in the peer-reviewed literature.

Consider[iii] tapering to a reduced opioid dosage, or tapering and discontinuing opioid therapy, when

- Pain improves[3]
- The patient requests dosage reduction or discontinuation[2,3,5]
- Pain and function are not meaningfully improved[2,3,5]
- The patient is receiving higher opioid doses without evidence of benefit from the higher dose[2,3]
- The patient has current evidence of opioid misuse[3,5]
- The patient experiences side effects[iv] that diminish quality of life or impair function[3]
- The patient experiences an overdose or other serious event (e.g., hospitalization, injury),[2,5] or has warning signs for an impending event such as confusion, sedation, or slurred speech[2,6]
- The patient is receiving medications (e.g., benzodiazepines) or has medical conditions (e.g., lung disease, sleep apnea, liver disease, kidney disease, fall risk, advanced age) that increase risk for adverse outcomes[3,5]
- The patient has been treated with opioids for a prolonged period (e.g., years), and current benefit-harm balance is unclear

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[i] https://www.cdc.gov/drugoverdose/maps/rxrate-maps.html

[ii] Physical dependence occurs with daily, around-the-clock use of opioids for more than a few days and means that the body has adapted to the drug, requiring more of it to achieve a certain effect (tolerance). Patients with physical dependence will experience physical and/or psychological symptoms if drug use is abruptly ceased (withdrawal).

[iii] Additional tools to help weigh decisions about continuing opioid therapy are available: Assessing Benefits and Harms of Opioid Therapy, Pain Management Opioid Taper Decision Tool, and Tapering Opioids for Chronic Pain.

[iv] e.g., drowsiness, constipation, depressed cognition

Important considerations prior to deciding to taper

Overall, following voluntary reduction of long-term opioid dosages, many patients report improvements in function, sleep, anxiety, and mood without worsening pain or even with decreased pain levels.[4,7,8,9,10,11] Other patients report increased pain, insomnia, anxiety, and depression.[4,7,9,12] The duration of increased pain related to hyperalgesia or opioid withdrawal is unpredictable and may be prolonged in some patients.[12] Decisions to continue or reduce opioids for pain should be based on individual patient needs.[2,13] Consider whether opioids continue to meet treatment goals, whether opioids are exposing the patient to an increased risk for serious adverse events or opioid use disorder, and whether benefits continue to outweigh risks of opioids.[2,13]

- Avoid insisting on opioid tapering or discontinuation when opioid use may be warranted (e.g., treatment of cancer pain, pain at the end of life, or other circumstances in which benefits outweigh risks of opioid therapy). ***The CDC Guideline for Prescribing Opioids for Chronic Pain does not recommend opioid discontinuation when benefits of opioids outweigh risks.***[2,4,13]
- Avoid misinterpreting cautionary dosage thresholds as mandates for dose reduction.[4] While, for example, the CDC Guideline recommends avoiding or carefully justifying *increasing* dosages above 90 MME/day, it does not recommend abruptly reducing opioids from higher dosages.[2,4] Consider individual patient situations.
- Some patients using both benzodiazepines and opioids may require tapering one or both medications to reduce risk for respiratory depression. Tapering decisions and plans need to be coordinated with prescribers of both medications.[2] If benzodiazepines are tapered, they should be tapered gradually[v] due to risks of benzodiazepine withdrawal (anxiety, hallucinations, seizures, delirium tremens, and, in rare cases, death).[2]
- Avoid dismissing patients from care. This practice puts patients at high risk and misses opportunities to provide life-saving interventions, such as medication-assisted treatment for opioid use disorder.[2,4,13] Ensure that patients continue to receive coordinated care.
- There are serious risks to noncollaborative tapering in physically dependent patients, including acute withdrawal, pain exacerbation, anxiety, depression, suicidal ideation, self-harm, ruptured trust, and patients seeking opioids from high-risk sources.[1,14]

Important steps prior to initiating a taper

- Commit to working with your patient to improve function and decrease pain.[2,7] Use accessible, affordable nonpharmacologic and nonopioid pharmacologic treatments.[2,3,7] Integrating behavioral and nonopioid pain therapies before and during a taper can help manage pain[10] and strengthen the therapeutic relationship.
- Depression, anxiety, and post-traumatic stress disorder (PTSD) can be common in patients with painful conditions, especially in patients receiving long-term opioid therapy.[15] Depressive symptoms predict taper dropout.[7,8] Treating comorbid mental disorders can improve the likelihood of opioid tapering success.
- If your patient has serious mental illness, is at high suicide risk, or has suicidal ideation, offer or arrange for consultation with a behavioral health provider before initiating a taper.[3,5]
- If a patient exhibits opioid misuse behavior or other signs of opioid use disorder, assess for opioid use disorder using DSM-5 criteria.[2,5] If criteria for opioid use disorder are met (especially if moderate or severe), offer or arrange for medication-assisted[vi] treatment.[2,3]
- Access appropriate expertise if considering opioid tapering or managing opioid use disorder during pregnancy. Opioid withdrawal risks include spontaneous abortion and premature labor. For pregnant women with opioid use disorder, medication-assisted treatment is preferred over detoxification.[2]
- ***Advise patients that there is an increased risk for overdose on abrupt return to a previously prescribed higher dose.***[2] Strongly caution that it takes as little as a week to lose tolerance and that there is a risk of overdose if they return to their original dose.[2,3,5,6] Provide opioid overdose education and consider offering naloxone.[2]

Share decision-making with patients

- Discuss with patients their perceptions of risks, benefits, and adverse effects of continued opioid therapy, and include patient concerns in taper planning. For patients at higher risk of overdose based on opioid dosages, review benefits and risks of continued high-dose opioid therapy.[2,5]
- If the current opioid regimen does not put the patient at imminent risk, tapering does not need to occur immediately.[4] Take time to obtain patient buy-in.[14]
- For patients who agree to reduce opioid dosages, collaborate with the patient on a tapering plan.[2] Tapering is more likely to be successful when patients collaborate in the taper.[vii] Include patients in decisions, such as which medication will be decreased first and how quickly tapering will occur.

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[v] Example benzodiazepine tapers and clinician guidance are available at https://www.pbm.va.gov/PBM/AcademicDetailingService/Documents/Benzodiazepine_Provider_AD_%20Risk_Discussion_Guide.pdf

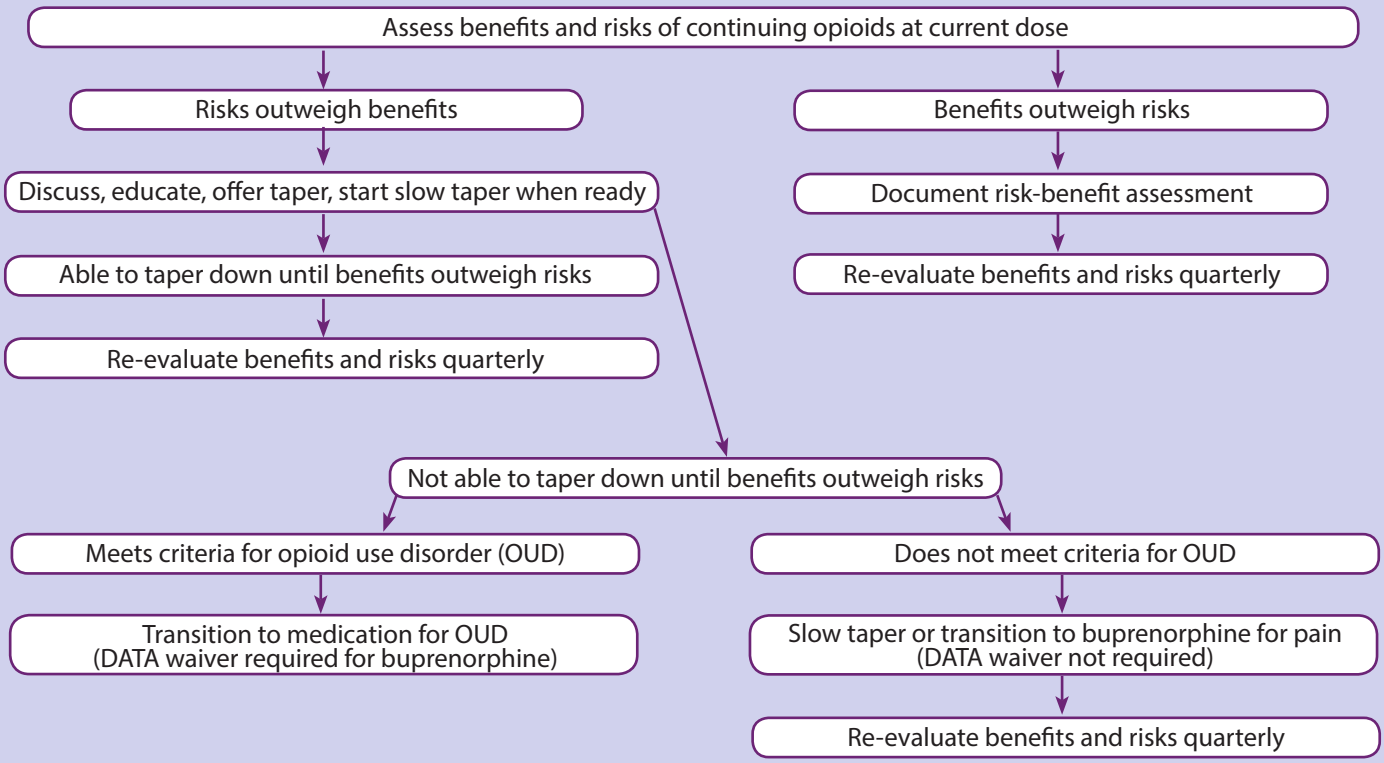
[vi] See SAMHSA's TIP 63: Medications for Opioid Use Disorder, SAMHSA's Buprenorphine Practitioner Locator, and SAMHSA's Opioid Treatment Program Directory

[vii] A recent systematic review found that when opioids were tapered with buy-in from patients who agreed to decrease dosage or discontinue therapy, pain, function, and quality of life improved after opioid dose reduction.[10]

Individualize the taper rate

- When opioid dosage is reduced, a taper slow enough to minimize opioid withdrawal symptoms and signs[viii] should be used.[2] Tapering plans should be individualized based on patient goals and concerns.[2,3,5,6]
- The longer the duration of previous opioid therapy, the longer the taper may take. Common tapers involve dose reduction of 5% to 20% every 4 weeks.[3,5]
  - **Slower tapers** (e.g., 10% per month or slower) are often better tolerated than more rapid tapers, especially following opioid use for more than a year.[2] Longer intervals between dose reductions allow patients to adjust to a new dose before the next reduction.[5] Tapers can be completed over several months to years depending on the opioid dose. See "slower taper" example here.
  - **Faster tapers** can be appropriate for some patients. A decrease of 10% of the original dose per week or slower (until 30% of the original dose is reached, followed by a weekly decrease of 10% of the remaining dose) is less likely to trigger withdrawal[7] and can be successful for some patients, particularly after opioid use for weeks to months rather than years. See "faster taper" example here.
- At times, tapers might have to be paused and restarted again when the patient is ready.[2] Pauses may allow the patient time to acquire new skills for management of pain and emotional distress, introduction of new medications, or initiation of other treatments, while allowing for physical adjustment to a new dosage.[3,5]
- Tapers may be considered successful as long as the patient is making progress, however slowly, towards a goal of reaching a safer dose,[2] or if the dose is reduced to the minimal dose needed.
- Once the smallest available dose is reached, the interval between doses can be extended [2,5,7] Opioids may be stopped, if appropriate, when taken less often than once a day.[2,7] See "example tapers for opioids" here.
- More rapid tapers (e.g., over 2-3 weeks[16]) might be needed for patient safety when the risks of continuing the opioid outweigh the risks of a rapid taper (e.g., in the case of a severe adverse event such as overdose).
- Ultrarapid detoxification under anesthesia is associated with substantial risks and ***should not be used***.[2]

Opioid Tapering Flowchart



Adapted from Oregon Pain Guidance. Tapering – Guidance & Tools. Available at https://www.oregonpainguidance.org/guideline/tapering/.

DSM-5 Opioid Use Disorder

A problematic pattern of opioid use leading to clinically significant impairment or distress, as manifested by at least 2 of the following, occurring within a 12-month period:

1. Opioids are often taken in larger amounts or over a longer period than was intended.
2. There is a persistent desire or unsuccessful efforts to cut down or control opioid use.
3. A great deal of time is spent in activities necessary to obtain, use, or recover from the effects of opioids.
4. Craving, or a strong desire or urge to use opioids.
5. Recurrent opioid use resulting in a failure to fulfill major role obligations at work, school, or home.
6. Continued opioid use despite having persistent or recurrent social or interpersonal problems caused or exacerbated by the effects of opioids.
7. Important social, occupational, or recreational activities are given up or reduced because of opioid use.
8. Recurrent opioid use in situations in which it is physically hazardous.
9. Continued opioid use is continued despite knowledge of having a persistent or recurrent physical or psychological problem that is likely to have been caused or exacerbated by the substance.
10. Tolerance, as defined by either of the following:
    a. A need for markedly increased amounts of opioids to achieve intoxication or desired effect, or
    b. Markedly diminished effect with continued use of the same amount of an opioid.

    Note: This criterion is not considered to be met for those taking opioids solely under appropriate medical supervision.
11. Withdrawal, as manifested by either of the following:
    a. The characteristic opioid withdrawal syndrome, or
    b. Opioids (or a closely related) substance is taken to relieve or avoid withdrawal symptoms.

    Note: This criterion is not considered to be met for those taking opioids solely under appropriate medical supervision.

Mild: Presence of 2-3 symptoms
Moderate: Presence of 4-5 symptoms
Severe: Presence of 6 or more symptoms

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Treat symptoms of opioid withdrawal

- If tapering is done gradually, withdrawal symptoms should be minimized and manageable.
- Expectation management is an important aspect of counseling patients through withdrawal.
- Significant opioid withdrawal symptoms may indicate a need to pause or slow the taper rate.
- Onset of withdrawal symptoms depends on the duration of action of the opioid medication used by the patient. Symptoms can begin as early as a few hours after the last medication dose or as long as a few days, depending on the duration of action.[7] Early withdrawal symptoms (e.g., anxiety, restlessness, sweating, yawning, muscle aches, diarrhea and cramping[viii]) usually resolve after 5-10 days but can take longer.[5]
- Some symptoms (e.g., dysphoria, insomnia, irritability) can take weeks to months to resolve.[5]
- Short-term oral medications can help manage withdrawal symptoms, especially when prescribing faster tapers.[5] These include alpha-2 agonists[ix] for the management of autonomic signs and symptoms (sweating, tachycardia), and symptomatic medications[x] for muscle aches, insomnia, nausea, abdominal cramping, or diarrhea.[5]

Provide behavioral health support

- Make sure patients receive appropriate psychosocial support.[2,3,6,11] Ask how you can support the patient.[5]
- Acknowledge patient fears about tapering.[5] While motives for tapering vary widely, fear is a common theme. Many patients fear stigma, withdrawal symptoms, pain, and/or abandonment.[13,18]
- Tell patients "I know you can do this" or "I'll stick by you through this." Make yourself or a team member available to the patient to provide support, if needed.[3,6] Let patients know that while pain might get worse at first, many people have improved function without worse pain after tapering opioids.[7,8,9,10,11]
- Follow up frequently. Successful tapering studies have used at least weekly follow up.[10]
- Watch closely for signs of anxiety, depression, suicidal ideation, and opioid use disorder and offer support or referral as needed.[2,3,6] Collaborate with mental health providers and with other specialists as needed to optimize psychosocial support for anxiety related to the taper.[2]

[viii] Acute opioid withdrawal symptoms and signs include drug craving, anxiety, restlessness, insomnia, abdominal pain or cramps, nausea, vomiting, diarrhea, anorexia, sweating, dilated pupils, tremor, tachycardia, piloerection, hypertension, dizziness, hot flashes, shivering, muscle or joint aches, runny nose, sneezing, tearing, yawning, and dysphoria.[7] Worsening of pain is a frequent symptom of withdrawal that may be prolonged but tends to diminish over time for many patients.[7]

[ix] Alpha-2 agonists clonidine and lofexidine are more effective than placebo in ameliorating opioid withdrawal.[17] There is not similar research in patients tapering from long-term opioid treatment for pain.[7] Lofexidine has an FDA-approved indication for use up to 14 days for "mitigation of opioid withdrawal symptoms to facilitate abrupt opioid discontinuation in adults."

[x] NSAIDs, acetaminophen, or topical menthol/methylsalicilate for muscle aches; trazodone for sleep disturbance; prochlorperazine, promethazine, or ondansetron for nausea; dicyclomine for abdominal cramping; and loperamide or bismuth subsalicylate for diarrhea.[5]

Special populations

- If patients experience unanticipated challenges to tapering, such as inability to make progress despite intention to taper or opioid-related harm, assess for opioid use disorder using DSM-5 criteria.[2] If patients meet criteria for opioid use disorder (especially if moderate or severe), offer or arrange medication-assisted treatment.[2,3]
- If patients on high opioid dosages are unable to taper despite worsening pain and/or function with opioids, whether or not opioid use disorder criteria are met, consider transitioning to buprenorphine.[4,12] Buprenorphine is a partial opioid agonist that can treat pain as well as opioid use disorder,[19] and has other properties that may be helpful,[3] including less opioid-induced hyperalgesia[12] and easier withdrawal than full mu-agonist opioids,[3] and less respiratory depression than other long-acting opioids.[20] Buprenorphine can then be continued or tapered gradually.[12] Transitioning from full-agonist opioids requires attention to timing of the initial buprenorphine dose to avoid precipitating withdrawal.[xi]

Consultation with a clinician experienced in use of buprenorphine is warranted if unfamiliar with its initiation. SAMHSA's Providers Clinical Support System offers training and technical assistance as well as mentors to assist those who need to taper opioids and may have additional questions.

- Closely monitor patients who are unable or unwilling to taper and who continue on high-dose or otherwise high-risk opioid regimens. Mitigate overdose risk (e.g., provide overdose education and naloxone). Use periodic and strategic motivational questions and statements to encourage movement toward appropriate therapeutic changes.[14]

[xi] To avoid precipitating protracted withdrawal from full agonist opioids when starting buprenorphine, patients need to be in mild to moderate withdrawal (including Clinical Opioid Withdrawal Score (COWS) objective signs) before the first buprenorphine dose.[12] To do this, wait at least 8 to 12 hours after the last dose of short-acting full agonist opioids before the first dose of buprenorphine.[12] Buprenorphine buccal film (Belbuca) and buprenorphine transdermal system (Butrans) have FDA-approved indications for "the management of pain severe enough to require daily, around-the-clock, long-term opioid treatment and for which alternative treatment options are inadequate." The full Belbuca prescribing information and the full Butrans prescribing information include instructions for conversion from full agonist opioids. More time should be allowed before starting buprenorphine following the last dose of long-acting full agonist opioids (e.g., at least 36 hours after last methadone dose); in addition, transition from methadone to buprenorphine is likely to be better tolerated after methadone is gradually tapered to 40mg per day or less.[12] Because the duration of action for analgesia is much shorter than the duration of action for suppression of opioid withdrawal,[21] "split dosing" (e.g., 8mg sublingual tablet twice a day) rather than once a day dosing is used when buprenorphine is provided for pain management.[3,12]

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VIEWPOINT

Patient-Centered Reduction or Discontinuation of Long-term Opioid Analgesics
The HHS Guide for Clinicians

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Prescription opioid use continues to contribute to significant morbidity and mortality in the United States.[1-4] In 2017, 17 029 of the 47 600 opioid-related overdose deaths involved prescription opioids.[5] Nearly 2 million individuals in the United States have a prescription opioid use disorder.[1] At the same time, approximately 11% of US adults report daily pain,[1] and an estimated 3% to 4% use opioids long-term to help manage chronic pain.[1] Although limiting opioid analgesic prescribing to situations for which benefits outweigh risks can improve individual and population health, rapidly decreasing or abruptly discontinuing long-term opioid analgesics can significantly increase the risk of adverse consequences, including opioid-related hospitalizations and emergency department visits.[3]

Nonopioid strategies may provide equally or more effective pain relief and lower risks than opioids for most patients with chronic pain and for many with acute conditions.[1] In addition, because the benefits of long-term opioid therapy often diminish over time while the risks do not, the 2016 Centers for Disease Control and Prevention Guideline for Prescribing Opioids for Chronic Pain recommends that clinicians and patients regularly reevaluate benefits and risks of continuing opioid therapy, particularly at higher dosages.[1] Yet, patients may find the idea of reducing or discontinuing opioid therapy anxiety-provoking.[1] Determining when and how to taper opioids can be challenging for clinicians.[6] There is a need for clear guidance to support clinicians in negotiating challenges with changes in opioid prescribing for patients receiving opioid therapy.

There are concerning reports of patients having opioid therapy discontinued abruptly[3] and of clinicians being unwilling to accept new patients who are receiving opioids for chronic pain,[4] which may leave patients at risk for abrupt discontinuation and withdrawal symptoms. Payer and health system policies that misinterpret cautionary dosage thresholds as mandates for dose reduction may result in rapid tapers or abrupt discontinuation of opioids.[7] While evidence on the effectiveness and safety of different strategies to reduce opioid dosage is limited,[6] emerging data suggest that when there is a decision to reduce opioid dosage, certain practices, including integration of nonpharmacologic pain management, behavioral support, and slower tapers, may improve outcomes.[6]

To help clinicians reduce risks and improve outcomes related to opioid dose reduction and discontinuation among patients prescribed opioids to manage pain (particularly chronic pain), the US Department of Health and Human Services (HHS) developed the HHS Guide for Clinicians on the Appropriate Dosage Reduction or Discontinuation of Long-Term Opioid Analgesics.[8] A working group composed of experts from HHS agencies considered systematic reviews on opioid tapering and national guidelines on opioid prescribing published after 2014 to identify and summarize evidence-based clinical practices and guidance relevant to opioid dosage reduction or discontinuation. Six experts external to HHS reviewed the working group's summary and provided input. Guidance is provided to assist clinicians in 8 areas: (1) criteria for considering reducing or discontinuing opioid therapy, (2) considerations prior to deciding to taper opioids, (3) steps to ensure patient safety prior to initiating a taper, (4) shared decision-making with patients, (5) the rate of opioid taper, (6) opioid withdrawal management, (7) behavioral health support, and (8) challenges to tapering.[8] The HHS guide emphasizes the importance of shared decision-making with patients, individualized and slow tapers, and integration of pain management and behavioral support.[8]

Involving patients in decisions regarding continuation or discontinuation of opioid analgesics may improve outcomes. Among studies rated by a systematic review as "good" or "fair" quality, when opioids were tapered following discussion with patients who agreed to taper, pain, function, and quality of life improved after opioid dose reduction.[6] The HHS guide encourages collaborating with patients whenever possible in making decisions about whether to taper opioids and outlines additional opportunities to share decision-making with patients.[8] For example, clinicians can include patients in decisions such as which medication will be decreased first and how quickly tapering will occur.[8]

If there is a decision to taper opioids, integrating behavioral and nonopioid pain therapies before and during a taper can help manage pain and strengthen the therapeutic relationship.[8] Worsening of pain is a frequent symptom of opioid withdrawal that may be prolonged but tends to diminish over time.[8] It can be helpful to counsel patients regarding the transient nature of this effect.[8]

Mental health comorbidities and opioid use disorder are common in patients receiving long-term opioid therapy for chronic pain.[1,8] Symptoms of depression predict taper dropout, and managing comorbid mental health disorders can improve the likelihood of opioid tapering success.[8] The HHS guide and current guidelines recommend that patients who exhibit signs and symptoms of opioid misuse be assessed for opioid use disorder using *Diagnostic and Statistical Manual of Mental Disorders* (*Fifth Edition*) criteria and offered medication treatment if criteria are met, especially if the patient has moderate or severe opioid use disorder.[1,8,9]

The HHS guide and current guidelines emphasize that tapering should be individualized and should ideally proceed slowly enough to minimize opioid withdrawal symptoms and signs.[1,8,9] Physical dependence occurs as early as a few days after consistent opioid use,[1] and when opioids

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have been prescribed continuously for longer than a few days, sudden discontinuation may precipitate significant opioid withdrawal.[3] Rapid tapering or sudden discontinuation of opioids in physically dependent patients can also increase risks of psychological distress and opioid-related emergency department visits and hospitalizations, supporting the importance of slow tapering.[3] One study involving 494 patients found that each additional week of tapering time before opioid discontinuation was associated with a 7% relative reduction in the risk of opioid-related emergency department visits or hospitalizations.[3] Although relatively faster tapers (eg, 10% per week) may be successful for some patients who have taken opioids for shorter time periods (eg, weeks to months), slower tapers (eg, ≤10% per month) are often better tolerated when patients have been taking opioids continuously for chronic pain, especially following opioid use for more than a year.[1,8] Slower tapers may require several months to years depending on the opioid dosage.[8] Significant opioid withdrawal symptoms may indicate a need to further slow the taper rate.[8]

Some patients with unanticipated challenges to tapering, such as inability to make progress in tapering despite opioid-related harm, may have undiagnosed opioid use disorder. Thus, it is recommended to assess patients experiencing these challenges for opioid use disorder using *Diagnostic and Statistical Manual of Mental Disorders* (*Fifth Edition*) criteria and offer or arrange for medication treatment if criteria for opioid use disorder are met, especially if it is moderate or severe.[1] Furthermore, patients who do not meet criteria for opioid use disorder but who have an unfavorable risk/benefit profile for continued high-dose opioid use might benefit from transition to buprenorphine (Supplement).[2,8] Buprenorphine is an opioid partial agonist that can be used to manage pain as well as opioid use disorder,[2] and has other properties that may be helpful in the context of long-term opioid therapy,[9] including less respiratory depression and overdose risk than other opioids.[2] The HHS guide provides additional details on transitioning from full agonist opioids to buprenorphine, including attention to timing of the initial buprenorphine dose to avoid precipitating withdrawal from full agonist opioids, dosing for analgesia, and resources available from the Substance Abuse and Mental Health Services Administration, including training, technical assistance, and mentors for clinicians who need to taper opioids and have additional questions.[8]

While safe and effective opioid use and discontinuation can be challenging, the Centers for Disease Control and Prevention guideline and the HHS guide emphasize that clinicians have a responsibility to provide care for or arrange for management of patients' pain and should not abandon patients.[1,8] For patients who are unable or unwilling to taper and who continue receiving high-dose or otherwise high-risk opioid regimens (eg, opioids prescribed concurrently with benzodiazepines), close monitoring and mitigation of overdose risk are recommended.[1,8]

More research is critically needed to define optimal strategies for opioid tapering. Many of the available studies on opioid tapering used uncontrolled designs and are rated low in quality by systematic reviews.[6] One systematic review of patient outcomes after opioid tapering found that of 67 studies identified (11 randomized trials and 56 observational studies), only 3 studies were "good" quality and 13 were "fair" quality.[6] Of note, among the limited set of studies with at least fair-quality evidence, opioid tapering was associated with improved pain, function, and quality of life.[6]

While evidence on the benefits and risks of opioid dose reduction or discontinuation is evolving and evidence on effectiveness of various approaches to tapering is limited,[6] fair- or good-quality studies in which positive outcomes were found following opioid tapering used specific opioid tapering practices[6]; harm has been reported with other practices.[3] Unless there is a life-threatening issue, such as imminent overdose, the benefits of rapidly tapering or abruptly discontinuing opioids are unlikely to outweigh the significant risks of these practices.[3,8] However, following slow, voluntary reduction of long-term opioid dosages, most patients report improvements in function, quality of life, anxiety, and mood without worsening pain or with decreased pain levels.[6]

ARTICLE INFORMATION

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Opioid Taper Decision Tool

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Possible reasons to re-evaluate the risks and benefits of continuing opioid therapy:

Opioids are associated with many risks and it may be determined that they are not indicated for pain management for a particular patient.[1]

- No pain reduction, no improvement in function or patient requests to discontinue therapy
- Severe unmanageable adverse effects (e.g., drowsiness, constipation, cognitive impairment)
- Dosage indicates high risk of adverse events (e.g., doses of 90 MEDD* and higher)

- Non-adherence to the treatment plan or unsafe behaviors** (e.g., early refills, lost/stolen prescription, buying or borrowing opioids, failure to obtain or aberrant UDT***)
- Concerns related to an increased risk of SUD**** (e.g., behaviors, age <30, family history, personal history of SUD†)
- Overdose event involving opioids

- Medical comorbidities that can increase risk (e.g., lung disease, sleep apnea, liver disease, renal disease, fall risk, advanced age)
- Concomitant use of medications that increase risk (e.g., benzodiazepines)
- Mental health comorbidities that can worsen with opioid therapy (e.g., PTSD, depression, anxiety)

Consider Tapering Opioid

STOP **Prior to any changes in therapy, discuss the risks of continued use, along with possible benefits, with the patient. Establish a plan to consider dose reduction, consultation with specialists, or consider alternative pain management strategies.**

*Morphine equivalent daily dose
**Consider assessment for opioid use disorder (OUD)
*** Urine drug test
****Substance use disorder
†Personal history of SUD includes alcohol use disorder (AUD), opioid use disorder (OUD), and/or a use disorder involving other substances

Example Tapers for Opioids[5-9]

Slowest Taper (over years)	Slower Taper (over months or years)	Faster Taper (over weeks)****	Rapid Taper (over days)****
Reduce by 2 to 10% every 4 to 8 weeks with pauses in taper as needed *Consider for patients taking high doses of long-acting opioids for many years*	Reduce by 5 to 20% every 4 weeks with pauses in taper as needed **MOST COMMON TAPER**	Reduce by 10 to 20% every week	Reduce by 20 to 50% of first dose if needed, then reduce by 10 to 20% every day
Ex: morphine SR 90 mg Q8h = 270 MEDD **Month 1:** 90 mg SR qam, 75 mg noon, 90 mg qpm [5% reduction]* **Month 2:** 75 mg SR qam, 75 mg noon, 90 mg qpm **Month 3:** 75 mg SR (60 mg+15 mg) Q8h **Month 4:** 75 mg SR qam, 60 mg noon, 75 mg qpm **Month 5:** 60 mg SR qam, 60 mg noon, 75 mg qpm **Month 6:** 60 mg SR Q8h **Month 7:** 60 mg SR qam, 45 mg noon, 60 mg qpm **Month 8:** 45 mg SR qam, 45 mg noon, 60 mg qpm **Month 9:** 45 mg SR Q8h**	Ex: morphine SR 90 mg Q8h = 270 MEDD **Month 1:** 75 mg (60 mg+15 mg)SR Q8h [16% reduction] **Month 2:** 60 mg SR Q8h **Month 3:** 45 mg SR Q8h **Month 4:** 30 mg SR Q8h **Month 5:** 15 mg SR Q8h **Month 6:** 15 mg SR Q12h **Month 7:** 15mg SR QHS, then stop***	Ex: morphine SR 90 mg Q8h = 270 MEDD **Week 1:** 75 mg SR Q8h [16% reduction] **Week 2:** 60 mg SR (15 mg x 4) Q8h **Week 3:** 45 mg SR (15 mg x 3) Q8h **Week 4:** 30 mg SR (15 mg x 2) Q8h **Week 5:** 15 mg SR Q8h **Week 6:** 15 mg SR Q12h **Week 7:** 15 mg SR QHS x 7 days, then stop***	Ex: morphine SR 90 mg Q8h = 270 MEDD **Day 1:** 60 mg SR (15 mg x 4) Q8h [33% reduction] **Day 2:** 45 mg SR (15 mg x 3) Q8h **Day 3:** 30 mg SR (15 mg x 2) Q8h **Day 4:** 15 mg SR Q8h **Days 5-7:** 15 mg SR Q12h **Days 8-11:** 15 mg SR QHS, then stop***

*Continue the taper based on patient response. Pauses in the taper may allow the patient time to acquire new skills for management of pain and emotional distress while allowing for neurobiological equilibration.

**Continue following this rate of taper until off the morphine or the desired dose of opioid is reached.

***May consider morphine IR 15 mg ½ tablet (7.5 mg) twice daily.

****Rapid tapers can cause withdrawal effects and patients should be treated with adjunctive medications to minimize these effects; may need to consider admitting the patient for inpatient care. If patients are prescribed both long-acting and short-acting opioids, the decision about which formulation to be tapered first should be individualized based on medical history, mental health diagnoses, and patient preference. Data shows that overdose risk is greater with long-acting preparations.

Consider use of adjuvant medications during the taper to reduce withdrawal symptoms:[6-9, 11-19]

Short-term oral medications can be utilized to assist with managing the withdrawal symptoms, especially during fast tapers.

Indication	Treatment Options
Autonomic symptoms (sweating, tachycardia, myoclonus)	**First line** • Clonidine 0.1 to 0.2 mg oral every 6 to 8 hours; hold dose if blood pressure <90/60 mmHg (0.1 to 0.2 mg 2 to 4 times daily is commonly used in the outpatient setting) – Recommend test dose (0.1 mg oral) with blood pressure check 1 hour post dose; obtain daily blood pressure checks; increasing dose requires additional blood pressure checks – Re-evaluate in 3 to 7 days; taper to stop; average duration 15 days **Alternatives** • Baclofen 5 mg 3 times daily may increase to 40 mg total daily dose – Re-evaluate in 3 to 7 days; average duration 15 days – May continue after acute withdrawal to help decrease cravings – Should be tapered when it is discontinued • Gabapentin start at 100 to 300 mg and titrate to 1800 to 2100 mg divided in 2 to 3 daily doses* – Can help reduce withdrawal symptoms and help with pain, anxiety, and sleep • Tizanidine 4 mg three times daily, can increase to 8 mg three times daily
Anxiety, dysphoria, lacrimation, rhinorrhea	• Hydroxyzine 25 to 50 mg three times a day as needed • Diphenhydramine 25 mg every 6 hours as needed**
Myalgias	• NSAIDs (e.g., naproxen 375 to 500 mg twice daily or ibuprofen 400 to 600 mg four times daily)*** • Acetaminophen 650 mg every 6 hours as needed • Topical medications like menthol/methylsalicylate cream, lidocaine cream/ointment
Sleep disturbance	• Trazodone 25 to 300 mg orally at bedtime
Nausea	• Prochlorperazine 5 to 10 mg every 4 hours as needed • Promethazine 25 mg orally or rectally every 6 hours as needed • Ondansetron 4 mg every 6 hours as needed
Abdominal cramping	• Dicyclomine 20 mg every 6 to 8 hours as needed
Diarrhea	• Loperamide 4 mg orally initially, then 2 mg with each loose stool, not to exceed 16 mg daily • Bismuth subsalicylate 524 mg every 0.5 to 1 hour orally, not to exceed 4192 mg/day

*adjust dose if renal impairment; ** avoid in patients > 65 years old; ***caution in patients with risk GI bleed, renal compromise, cardiac disease

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Real Provider Resources
Real Patient Results

U.S. Department of Veterans Affairs

This reference guide was created to be used as a tool for VA providers and is available to use from the Academic Detailing SharePoint.

These are general recommendations only; specific clinical decisions should be made by the treating provider based on an individual patient's clinical condition.

VA PBM Academic Detailing Service Email Group:
PharmacyAcademicDetailingProgram@va.gov

VA PBM Academic Detailing Service SharePoint Site:
https://vaww.portal2.va.gov/sites/ad/SitePages/Home.aspx

VA PBM Academic Detailing Public Website:
http://www.pbm.va.gov/PBM/academicdetailingservicehome.asp

October 2016

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VA/DoD CLINICAL PRACTICE GUIDELINE FOR THE USE OF OPIOIDS IN THE MANAGEMENT OF CHRONIC PAIN

Department of Veterans Affairs

Department of Defense

Patient Summary

I. Chronic Pain

- Pain is a complex human experience that is strongly affected by physical factors. It is also strongly affected by what you think, feel, and do when you hurt.
- Acute pain acts as an instant warning from the nervous system telling you that you may be hurt. It lets you know that you need to stop doing what you are doing to stay safe. It also tells you that you may need to seek medical attention. The reasons for acute pain can usually be found. Reasons may include an injury, a fracture, a heart attack, surgery, or other acute medical conditions. Acute pain usually does not last long. It usually responds to treatments such as short-term medications, rest, casting, specified safe movement programs (e.g., physical therapy), or surgery.
- Chronic pain is pain that stays after your body should have healed from the injury. This is usually three months or longer. Chronic pain can be caused by conditions that have no cures, like diabetes. Certain lifestyle factors can make chronic pain worse. These include inactivity, stress, nicotine dependence, poor sleep, unhealthy eating, or substance use.
- Pain related to certain types of cancer may be both acute and chronic. The pain may be related to the cancer itself or cancer treatments such as surgery, diagnostic testing, and radiation therapy.
- Acute and chronic pain can often feel the same. Both can be very painful. However, they are different problems with different solutions. Treating chronic pain problems with acute pain solutions may make your pain worse.

Did You Know?

- Chronic pain is very common. In the U.S., about 50.2 million adults experience chronic pain on most days or every day.(1)
- Pain is associated with about 20% of ambulatory primary care and specialty visits in the U.S.(2-4)
- Some types of chronic pain include low back pain, neck pain, and other muscle and joint pain.

- The medical conditions that cause acute pain may threaten your life or health. Chronic pain threatens your lifestyle and all aspects of your life. Others may not notice your chronic pain or understand how the pain affects you. However, chronic pain may make it hard for you to carry out day-to-day activities. It could make other medical problems worse. Chronic pain may make it hard for you to carry out physical activities. Chronic pain can make you stressed or impact your sleep. Chronic pain can also impact your personal relationships and your work.
- The treatment of chronic pain begins with ways you can help manage your pain and ways you can reduce the effects the pain has on other parts of your life. This is called self-management. Follow your treatment plan. Also, think about how you can use self-management strategies to improve your day-to-day life. More information on self-management and other treatments for chronic pain is included below.

A. What causes chronic pain?

Chronic pain can be caused by many different factors. We do not always fully understand what causes chronic pain. Conditions that come with normal aging may affect bones and joints in ways that cause chronic pain. Injuries that fail to heal properly, nerve damage, or ongoing medical conditions can also cause chronic pain. Chronic pain can also occur without a known cause. Medical tests may not completely explain the reason for the pain or the intensity of the pain. This does not mean that your pain is not real. It is. No matter the cause of your chronic pain, how you respond when you hurt is important. Many efforts to reduce pain in the short term may create more pain, suffering, and disability in the long term. These efforts may include taking more medication or avoiding activities that make your pain worse.

B. How is chronic pain diagnosed?

Pain is a private and personal experience. It cannot be measured by tests or machines. The level of your pain is whatever you say it is. Pain is different for every person. Discuss the type, timing, and location of your pain with your healthcare provider. Also discuss other aspects of your health. These can include other medical conditions, treatments you have tried for your pain, your daily activities, and how you cope with your pain on a day-to-day basis. Your healthcare provider will help tell whether your pain is chronic. If it is chronic, the important questions are: how does pain affect your life and how can your healthcare providers help you move forward? Discuss your personal goals and purpose in life with your healthcare provider. You can work together to determine steps to reach your health goals and maximize your enjoyment of life.

II. Treatment

A. What are the goals of chronic pain treatment?

The goal of chronic pain treatment is to lessen your pain and improve your daily functioning and quality of life. Work with your healthcare provider to set reachable goals and develop your individual treatment plan. In general, goals should focus on what you can do for yourself to help lessen the impact of your chronic pain, improve your quality of life, and reach your goals. Goals should focus less on what your healthcare provider can do with medications, surgeries, and other treatments. By focusing on ways to improve your reaction to the effects of chronic pain, you can improve your day-to-day functioning and overall quality of life.

Potential Goals of Chronic Pain Treatment
• Restore your physical function (your ability to move, exercise, and participate in life) • Restore your emotional function (happiness and satisfaction with life) • Restore your social function (activities and connections with others) • Improve the overall quality of your life • Reconnect with what is important to you (your personal goals, aspirations, and purpose) • Understand why you want to be healthy (your goals) • Improve how well you can manage your pain and return to a healthy lifestyle (e.g., healthy diet, weight, and sleep patterns) • Gain understanding of the nature of your chronic pain • Address any underlying injuries that might help you feel better

B. How can I manage my chronic pain?

It may not be possible to be completely pain-free. However, you can manage many symptoms by exercising, using coping skills, and maintaining a healthy weight and lifestyle. In addition, there are several non-medication and non-opioid treatment options that can help you manage your chronic pain and reach your goals. Treatment of chronic pain requires a comprehensive approach. Talk with your healthcare provider to learn more about the possible treatment options and decide which ones are best for you.

a. Self-management

Self-management is important in any chronic condition. Self-management refers to everything you can do on your own to manage your health problems and live your life as fully as possible. You must make many decisions every day about medications, exercise, managing stress, and dealing with life problems. There are ways you can help yourself feel more in control of your pain and lessen your pain's negative effects on your life. You are the most important person on your care team. Self-management is the basis for managing your day and making sure that other treatments work as well as possible. For example, you can use treatments such as ice and heat at home on your own schedule. You can also break up daily activities, such as mowing the lawn, into shorter periods with breaks to not worsen your pain.

b. Non-medication Treatments

Did you know there are many options for non-medication treatment for chronic pain? Some common treatments are physical therapy, acupuncture, and yoga.

Non-medication treatments help patients reduce their pain and improve their quality of life. Non-medication treatments also help patients avoid increasing their risk of side effects. Some side effects of medications are serious. These could be addiction, injury, or death. Behavioral therapies can help patients learn to react to pain in ways that help them function better and reduce their pain. Exercise programs given to you by healthcare providers can slowly improve physical function and reduce your sensitivity to pain. Exercise programs can include physical therapy or gentle whole-body movement programs like yoga or tai chi. Complementary medical treatments like acupuncture, meditation/mindfulness practices, and biofeedback may also be helpful. Work with your healthcare provider to make a treatment plan that includes non-medication treatments. Considering non-medication treatments can help you develop a longer-term plan that makes sense for you. You should be able to carry out the plan over a long period of time to help cope with your pain.

c. Non-opioid Medication Treatments

Some non-opioid medication treatments (medications other than opioids) can also help reduce chronic pain. Examples of non-opioid medications are anti-inflammatory, antidepressant, and anticonvulsant medications. For most people, non-opioid medication treatments are safer than opioids. However, they are generally not as safe as the non-medication treatments described above. Following the directions of your healthcare provider can help you reduce your chances of negative side effects from non-opioid medication treatments.

d. Opioids

Opioids are natural or manmade chemicals that can reduce pain. Prescription opioids work by changing the way your brain senses pain. Some common prescription opioids are Vicodin (hydrocodone/acetaminophen), Percocet (oxycodone/acetaminophen), OxyContin (oxycodone), and morphine (morphine sulfate). Researchers and medical professionals have learned two key things through studying opioids and chronic pain. No matter how much you take, opioids can only "take the edge" off the pain. You will not be pain-free long-term. Also, there are serious risks that come with using opioids. Higher doses have more risks. In most cases, using more opioids is not better for pain. Instead, using more opioids can be unsafe and result in worse side effects. While opioids can have an important role in acute and cancer pain management, their place in chronic pain treatment is very limited.

Did You Know?

- Healthcare providers used to think that opioids alone were safe and effective in treating chronic pain. Now we know this isn't true.
- New information has shown that chronic pain treatment requires a multimodal approach. This type of approach includes various treatment options and disciplines working together to help a patient with their pain condition. It also includes self-management options.
- Long-term opioid use can lead to multiple problems including loss of pain-relieving effects, increased pain, accidental death, opioid use disorder or addiction, and problems with sleep, mood, hormones, and the immune system.
- It is now understood that the best treatments for chronic pain are not opioids.
- When considering the benefits and harms of various treatments, non-medication treatments may provide the most benefit with the least risk of harm.

III. Safety

A. What is an opioid overdose? Is there any way to prevent an overdose?

Opioids have many effects in addition to reducing pain. Opioids affect the part of the brain that helps you breathe normally. When people take high doses of opioids, it can lead to an overdose. Overdoses can slow or stop someone's breathing and sometimes cause death. Overdose can occur even when following your prescription correctly. The best way to prevent overdose is to use opioids as infrequently as possible and at the lowest dose. Talk to your provider about your dose if you are concerned about the risk of overdose.

B. How can I improve my own safety when I am using opioids?

Always follow the plan you and your provider have developed when using opioids. If your dose is not working for you, contact your provider. Do not make any changes to your dose on your own. Do not mix

opioids with other medications or substances like alcohol. It is important to regularly communicate with your provider and go to follow-up appointments. This helps keep you safe when using opioids. Safely store your medications. This helps protect others (especially children) when you are using opioids. Safely dispose of any opioid prescriptions you do not use.

You may want to talk to your healthcare provider about naloxone. Naloxone is a medication that can be given by injection or nasal spray. It can be used to treat an overdose in emergencies. Naloxone combined with basic life support can quickly and easily reverse an opioid overdose. It is simple to use and causes no harm if given when not experiencing an overdose. This medication is available over the counter. Your healthcare provider can also prescribe it for you. Your healthcare provider can provide instruction on how to administer it.

IV. Questions to Ask Your Provider

A. Other than opioids, what options do I have to manage my chronic pain?

There are many options for treating chronic pain. No matter what treatment option you use, you must be involved in your own care. Non-opioid medications, physical therapy, nerve blocks, and sometimes surgery can be helpful. Both exercise and learning to respond to pain differently through behavioral therapy help many people. In general, the better you take care of your physical and mental health, the better you will be able to manage your chronic pain and its effects on your life.

B. Why have doctors and other healthcare providers changed their viewpoint on the use of opioids for chronic pain?

New information clearly shows that opioid medications are not as safe and are not as effective as we once thought. The Centers for Disease Control and Prevention (CDC) has shown that there is an epidemic in the U.S. related to the overprescribing and overuse of opioids.[1] This new information has changed medical practice.

C. Have healthcare providers been told they must take everyone off opioids?

No. But the new information about the risks of opioids means that steps must be taken to provide safer care for patients. Providers need to think more carefully about how opioids are used. Many patients who are using opioids now can start using other treatments instead. They can also start using fewer opioids. These patients will get equal or better pain relief and function with fewer risks.

D. Are opioids right for me?

Short-term use of opioids may be a useful tool as one small part of a comprehensive pain treatment plan when there are few risk factors. Opioids rarely work when they are used by themselves. It is important to understand that being “pain-free” is not possible when you use opioids for a long time.

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[1] For more information on the opioid epidemic, see: https://www.cdc.gov/opioids/basics/epidemic.html

E. I have been on opioids for years, and I am doing fine. Will my healthcare provider stop giving me my medications?

This is a question that can only be answered after your healthcare provider does a detailed "risk-benefit analysis" of your situation. Your risks depend on your general health, your pattern of opioid use, and other factors. Your pattern of opioid use relates to how much opioid medication you take and how closely you follow your directions for using opioids. Other factors can include conditions such as a history of alcohol or other substance misuse or serious emotional or social problems. Benefits are determined by how much these medications help you function better. Safety and long-term benefit are more important than short-term pain relief in making decisions about your use of opioids.

F. Am I at risk if I only take my medications as prescribed?

There is no absolutely safe dose of opioids. An overdose is possible even when you are using your opioids as prescribed. Previously safe doses may become dangerous if you develop health problems or if your body's ability to process these medications changes with age.

G. What is opioid use disorder? How can I tell whether I am developing an opioid use disorder?

Opioid use disorder is a complex condition with physical and mental components. People can develop this condition when they use opioids for a long time. Speak with your healthcare provider if you are worried about your opioid use. Your provider can assess your situation and refer you for help if needed.

V. Resources for More Information

- *VHA Pain Management*, from VA: https://www.va.gov/painmanagement/
- *Pain Management*, from the Military Health System: https://health.mil/Military-Health-Topics/Conditions-and-Treatments/Pain-Management
- *Chronic Pain Information Page*, from the National Institute of Neurological Disorders and Stroke: https://www.ninds.nih.gov/Disorders/All-Disorders/Chronic-Pain-Information-Page
- *Taking Opioids Responsibly for Your Safety and the Safety of Others: Patient Information Guide on Long-term Opioid Therapy for Chronic Pain*, from the VA National Pain Management Program: https://www.va.gov/PAINMANAGEMENT/docs/TakingOpioidsResponsibly20121017.pdf
- *Opioids Information for Patients*, from the Centers for Disease Control and Prevention: https://www.cdc.gov/opioids/patients/index.html
- *VA/DoD Clinical Practice Guidelines,* from VA: https://www.healthquality.va.gov/guidelines/
- *Unhealthy Drug Use: Screening*, from the U.S. Preventive Services Task Force: https://www.uspreventiveservicestaskforce.org/uspstf/recommendation/drug-use-illicit-screening

VI. References

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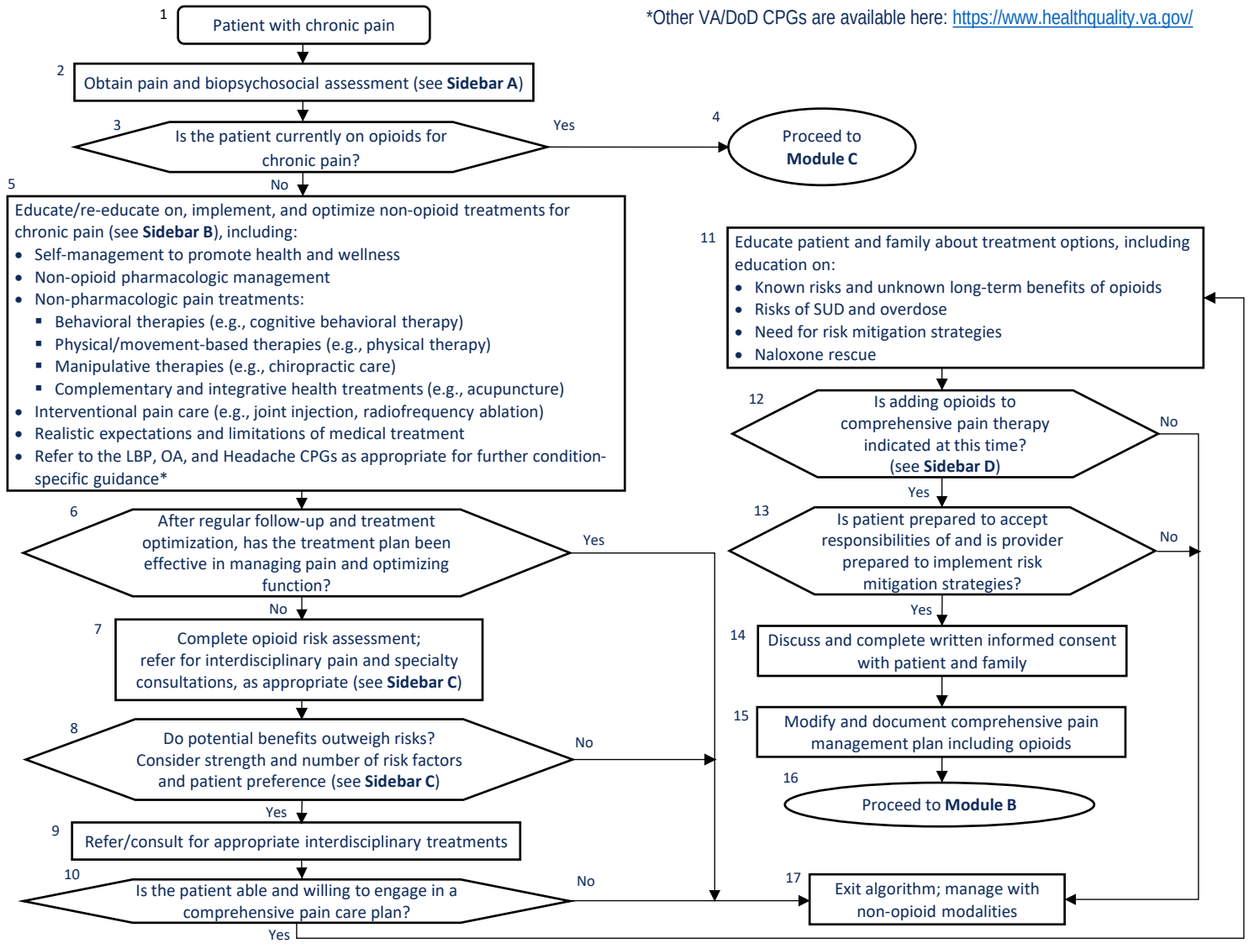
The Use of Opioids in the Management of Chronic Pain

Module A: Determination of Appropriateness for Opioids for Chronic Pain

*Other VA/DoD CPGs are available here: https://www.healthquality.va.gov/



Sidebar A: Components of Pain/Biopsychosocial Assessment

- Conduct a pain assessment (e.g., information about the onset of pain, location, duration, exacerbating factors, relieving factors, whether there is radiation [location of the radiation and what triggers the radiation], 24 hour pain pattern, quality of pain)
- Assess history of previous treatments and effect on pain
- Assess impact of pain on daily functioning and quality of life (e.g., pain interference, family, education, work, community, social activities, sleep quality)
- Assess patient's functional goals
- Evaluate psychological/behavioral factors, including suicide risk, a that may affect treatment (e.g., pain avoidance, pain catastrophizing)
- Evaluate social factors that may affect treatment (e.g., employment, homelessness)
- Assess current and past co-occurring conditions (medical and behavioral health comorbidities)
- Conduct physical exam
- Confirm diagnosis (review previous diagnostic studies)
- Consider consultations and referrals
- Patient beliefs and understanding of:
- The cause of their pain
  - ♦ Their treatment preferences
  - ♦ The perceived efficacy of various treatment options

For patients already on prescribed opioids, see Module C.

[a] See the VA/DoD CPG for the Assessment and Management of Patients at Risk for Suicide, available at: https://www.healthquality.va.gov/

Sidebar B: Non-opioid Treatments for Chronic Pain

- Rehabilitation and manipulative therapies (e.g., provided by physical therapists, occupational therapists, chiropractors)
- Pharmacologic therapy (e.g., over-the-counter medications, non-opioid prescription pain medications)
- Interventional procedures (e.g., trigger point injections, joint injections, acupuncture)
- Psychological and behavioral interventions (e.g., motivational interviewing, CBT)
- Complementary and integrative treatments (e.g., yoga, tai chi)

Sidebar F: Considerations for Tapering, Dosage Reduction, and Discontinuation

- Patient preference
- Patient characteristics and needs
- Lack of clinically meaningful improvement in functional goals (review treatment goals at onset of treatment)
- Concomitant use of medications that increase risk of overdose
- Co-occurring medical or behavioral health conditions, including SUD, that increase risk
- Patient non-compliance with opioid safety measures and opioid risk mitigation strategies
- Patient non-participation in a comprehensive pain care plan
- Higher dosage which increases risk of adverse events (see Sidebar L)
- Pain condition not effectively treated with opioids (e.g., back pain with normal MRI; fibromyalgia)
- Improvement in the underlying pain condition being treated
- Significant side effects
- Experiences overdose or other serious adverse events
- Diversion

Abbreviations: CBT: cognitive behavioral therapy; CPGs: VA/DoD Clinical Practice Guidelines; LBP: low back pain; MAT: medication assisted treatment; MEDD: morphine equivalent daily dose; mg: milligram(s); MOUD: medication for opioid use disorder; MRI: magnetic resonance imaging; OA: osteoarthritis; OEND: Overdose Education and Naloxone Distribution; OUD: opioid use disorder; PDMP: Prescription Drug Monitoring Program; SUD: substance use disorders; UDT: urine drug testing; VA/DoD SUD CPG: VA/DoD Clinical Practice Guideline for the Management of Substance Use Disorders

Additional Sidebars referenced throughout the algorithm can be found in the full guideline (on pages 28-32).

Access to the full guideline and additional resources are available at: https://www.healthquality.va.gov/

Module B: Initiation of Treatment with Opioids

18 Candidate for opioids with consent (begin a trial in conjunction with comprehensive pain care plan)

19 Initiate opioids using the following approach:
- Use short duration (e.g., 1-week initial prescription)
- Plan to reevaluate at 30 days or fewer
- Use lowest effective dose, recognizing that no dose is completely safe
  - A strategy of escalating dose to achieve benefit increases risk (see **Sidebar L**) and has not been shown to improve function
- Long-acting opioids should not be prescribed for opioid-naïve individuals (see Recommendation 11 and Appendix D)
- Consider alternatives to methadone and transdermal fentanyl (see Appendix D)
- Assess improvement in pain and functional status and adverse effects
- Complete risk mitigation strategies (see **Sidebar E**)
- Provide medication and overdose education, offer naloxone prescription

20 Reevaluation as needed clinically and based on patient risk factors (e.g., 1-4 weeks after initiation of opioids, not later than 30 days)
- Assess:
  - Function, plan, risks, and benefits of opioids
  - Adverse effects
  - Adherence to treatment plan
  - Complications or co-occurring conditions (e.g., medical, behavioral health, and/or SUD)
  - Patient preference
- Complete risk mitigation strategies (see **Sidebar E**)
- Review and optimize comprehensive pain care plan (e.g., non-opioid treatments, self-management strategies)

21 Does the patient want to continue opioid therapy?
- No → 22
- Yes → 23

22
- Taper to discontinuation (consult **Module C** if needed)
- Manage with non-opioid modalities

23 Is there clinically meaningful improvement in function and pain that outweighs risks?
- No → 22
- Yes → 24

24 Is the patient sufficiently medically and behaviorally stable to continue opioid medication?
- No → 25
- Yes → 26

25 Provide medical and/or behavioral health treatment to stabilize as indicated; consider tapering opioids to discontinuation (consult **Module C**)

26 Are there factors that increase risks of opioids (e.g., non-adherence, co-occurring conditions, indications of OUD)?
- Yes → 27
- No → 28

27 Consider one or more of the following:
- Shortening prescribing interval
- Intensifying risk mitigation strategies (see **Sidebar E**)
- Referring to interdisciplinary care
- Consulting with or referring to specialty care
- Switching to partial agonist opioids
- See VA/DoD SUD CPG if there are indications of OUD*

29 Are there indications to discontinue or taper? (see **Sidebar F**)
- No → 28
- Yes → 30

30 Taper to reduced dose or taper to discontinuation; proceed to **Module C**

28 Reassess in 1-3 months or more frequently as determined by patient risk factors (see **Sidebar G**)

*VA/DoD SUD CPG is available here: https://www.healthquality.va.gov/

Module C: Maintaining, Tapering, Discontinuing, or Switching from Full Agonist Opioids

31 Indication to discontinue, continue, taper, or reduce treatment with opioids (see **Sidebars H and I**)

32 Repeat comprehensive biopsychosocial assessment (see **Sidebars A and C**)

33 Does the patient demonstrate signs or symptoms of SUD? (see VA/DoD SUD CPG*)
- Yes → 34
- No → 35

34
- Initiate or refer to SUD treatment with appropriate monitoring and follow-up (e.g., MOUD, treatment for comorbidities) (see VA/DoD SUD CPG*)
- Consider switch to partial agonist opioids or taper opioids to discontinuation (see **Sidebar J**)
- Manage with non-opioid modalities (see **Sidebar B**)
- Exit algorithm

35 Is there evidence of diversion?**
- Yes → 36
- No → 37

36
- Address safety and misuse
- Assess for elevated suicide risk
- Assess for withdrawal symptoms and offer expedited taper, immediate discontinuation, or medically-assisted withdrawal as indicated
- Continue to monitor for SUD and behavioral health comorbidities and offer treatment as indicated (see VA/DoD SUD CPG* and Academic Detailing Tapering Document)
- Consider switch to partial agonist opioids or taper opioids to discontinuation (see **Sidebar J**)
- Manage with non-opioid modalities (see **Sidebar B**)
- Exit algorithm

37 Is there high risk or dangerous behavior (e.g., overdose event, accidents, threatening provider)?
- Yes → 36
- No → 38

38 Develop individualized treatment plan (including pace of tapering if applicable and setting of care) based on patient and treatment characteristics (see **Sidebar J** and Recommendations 12 and 13)

39
- Follow-up as clinically indicated after each change in dosage and after discontinuation, considering patient and treatment characteristics
- Consider the following at each interaction with patient:
  - Educate on self-management and risks of opioids (see **Sidebar K**)
  - Optimize whole person approach to pain care
  - Optimize treatment of co-occurring behavioral health conditions
  - Optimize non-opioid pain treatment modalities
  - Reassess for OUD and readiness for OUD treatment as indicated
- If continuing treatment with opioids, use the following approach:
  - Shortest duration
  - Use lowest effective dose (recognizing that no dose is completely safe and overdose risk increases at doses >20-50 mg MEDD) (see **Sidebar L**)
  - Continual assessment of improvement in pain and functional status and adverse effects

40 Are one of the following present?
- Patient resistance to taper
- High risk or dangerous behaviors (including elevated risk of suicide)
- Increase in patient distress

- No → 39
- Yes → 32

**According to the CDC, drug diversion is when prescription medicines are obtained or used illegally.

How to Dispose of Unused Medicines

Is your medicine cabinet filled with expired drugs or medications you no longer use? How should you dispose of them?

Most drugs can be thrown in the household trash, but consumers should take certain precautions before tossing them out, according to the Food and Drug Administration (FDA). A few drugs should be flushed down the toilet. And a growing number of community-based "take-back" programs offer another safe disposal alternative.

Guidelines for Drug Disposal

FDA worked with the White House Office of National Drug Control Policy (ONDCP) to develop the first consumer guidance for proper disposal of prescription drugs. Issued by ONDCP in February 2007 and updated in October 2009, the federal guidelines are summarized here:

- Follow any specific disposal instructions on the drug label or patient information that accompanies the medication. Do not flush prescription drugs down the toilet unless this information specifically instructs you to do so.
- Take advantage of community drug take-back programs that allow the public to bring unused drugs to a central location for proper disposal. Call your city or county government's household trash and recycling service (see blue pages in phone book) to see if a take-back program is available in your community. The Drug Enforcement Administration, working with state and local law enforcement agencies, is sponsoring National Prescription Drug Take Back Days (*www.deadiversion.usdoj.gov*) throughout the United States.
- If no instructions are given on the drug label and no

Take drugs out of their original containers and mix them with an undesirable substance, such as used coffee grounds …

take-back program is available in your area, throw the drugs in the household trash, but first:

- Take them out of their original containers and mix them with an undesirable substance, such as used coffee grounds or kitty litter. The medication will be less appealing to children and pets, and unrecognizable to people who may intentionally go through your trash.
- Put them in a sealable bag, empty can, or other container to prevent the medication from leaking or breaking out of a garbage bag.

FDA's Deputy Director of the Office of Compliance Ilisa Bernstein, Pharm.D., J.D., offers some additional tips:

- Before throwing out a medicine container, scratch out all identifying information on the prescription label to make it unreadable. This will help protect your identity and the privacy of your personal health information.
- Do not give medications to friends. Doctors prescribe drugs based on a person's specific symptoms and medical history. A drug that works for you could be dangerous for someone else.
- When in doubt about proper disposal, talk to your pharmacist.

Bernstein says the same disposal methods for prescription drugs could apply to over-the-counter drugs as well.

Why the Precautions?

Disposal instructions on the label are part of FDA's "risk mitigation" strategy, says Capt. Jim Hunter, R.Ph., M.P.H., senior program manager on FDA's Controlled Substance Staff. When a drug contains instructions to flush it down the toilet, he says, it's because FDA, working with the manufacturer, has determined this method to be the most appropriate route of disposal that presents the least risk to safety.

Drugs such as powerful narcotic pain relievers and other controlled substances carry instructions for flushing to reduce the danger of unintentional use or overdose and illegal abuse.

For example, the fentanyl patch, an adhesive patch that delivers a potent pain medicine through the skin, comes with instructions to flush used or leftover patches. Too much fentanyl can cause severe breathing problems and lead to death in babies, children, pets, and even adults, especially those who have not been prescribed the drug. "Even after a patch is used, a lot of the drug remains in the patch," says Hunter, "so you wouldn't want to throw something in the trash that contains a powerful and potentially dangerous narcotic that could harm others."

Environmental Concerns

Despite the safety reasons for flushing drugs, some people are questioning the practice because of concerns about trace levels of drug residues found in surface water, such as rivers and lakes, and in some community drinking water supplies. However, the main way drug residues enter water systems is by people taking medications and then naturally passing them through their bodies, says Raanan Bloom, Ph.D., an environmental assessment expert in FDA's Center for Drug Evaluation and Research. "Most drugs are not completely absorbed or metabolized by the body, and enter the environment after passing through waste water treatment plants."

A company that wants FDA to approve its drug must submit an application package to the agency. FDA requires, as part of the application package, an assessment of how the drug's use would affect the environment. Some drug applications are excluded from the assessment requirement, says Bloom, based on previous agency actions.

"For those drugs for which environmental assessments have been required, there has been no indication of environmental effects due to flushing," says Bloom. In addition, according to the Environmental Protection Agency, scientists to date have found no evidence of adverse human health effects from pharmaceutical residues in the environment.

Nonetheless, FDA does not want to add drug residues into water systems unnecessarily, says Hunter. The agency reviewed its drug labels to identify products with disposal directions recommending flushing or disposal down the sink. This continuously revised listing can be found at FDA's Web page on Disposal of Unused Medicines (*www.fda.gov/Drugs/ResourcesForYou/Consumers/BuyingUsingMedicineSafely/EnsuringSafeUseofMedicine/SafeDisposalofMedicines/ucm186187.htm*).

Another environmental concern lies with inhalers used by people who have asthma or other breathing problems, such as chronic obstructive pulmonary disease. Traditionally, many inhalers have contained chlorofluorocarbons (CFC's), a propellant that damages the protective ozone layer. The CFC inhalers are being phased out and replaced with more environmentally friendly inhalers.

Depending on the type of product and where you live, inhalers and aerosol products may be thrown into household trash or recyclables, or may be considered hazardous waste and require special handling. Read the handling instructions on the label, as some inhalers should not be punctured or thrown into a fire or incinerator. To ensure safe disposal, contact your local trash and recycling facility.

Find this and other Consumer Updates at *www.fda.gov/ForConsumers/ConsumerUpdates*

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DISPOSAL ACT: GENERAL PUBLIC FACT SHEET

On September 8, 2014, the Drug Enforcement Administration (DEA) made available for public view a final rule regarding the disposal of pharmaceutical controlled substances in accordance with the Controlled Substance Act, as amended by the Secure and Responsible Drug Disposal Act of 2010 ("Disposal Act"). The final rule is available for public view at http://www.federalregister.gov/public-inspection. The final rule will officially publish in the *Federal Register* on September 9, 2014, and will be available on http://www.regulations.gov, and our website, http://www.DEAdiversion.usdoj.gov. This General Public Fact Sheet contains a general summary of some of the effects of the new rule on the general public. For detailed information, please visit our website or contact your local DEA office.

1. What is the Disposal Act?

- The Disposal Act amended the Controlled Substances Act (CSA) to give the DEA authority to promulgate new regulations, within the framework of the CSA, that will allow ultimate users to deliver unused pharmaceutical controlled substances to appropriate entities for disposal in a safe and effective manner consistent with effective controls against diversion. The goal of the Disposal Act is to encourage public and private entities to develop a variety of methods of collection and disposal in a secure, convenient, and responsible manner.

2. Who is an "ultimate user"?

- The CSA defines an "ultimate user" as "a person who has lawfully obtained, and who possesses, a controlled substance for his own use or for the use of a member of his household or for an animal owned by him or a member of his household."

3. Are my options for disposing of pharmaceuticals more limited now?

- No. These regulations don't limit the ways that ultimate users may dispose of pharmaceutical controlled substances—they expand them. The DEA's new regulations outline the methods by which pharmaceutical controlled substances may be transferred to authorized collectors for disposal. Ultimate users now have expanded options to safely and responsibly dispose of their unused and unwanted, lawfully-possessed pharmaceutical controlled substances: through collection receptacles, mail-back packages, and take-back events.

4. May I continue to dispose of pharmaceutical controlled substances using methods that were valid prior to this final rule?

- Yes. Any method of pharmaceutical disposal that was valid prior to these regulations continues to be valid.

- For example, ultimate users may continue to utilize the FDA and EPA guidelines for the disposal of medicines, available through the DEA website at http://www.deadiversion.usdoj.gov/drug_disposal/index.html.

5. **Will there still be take-back events every six months?**

   - Law enforcement may continue to conduct take-back events at any time. Any person or community group, registrant or non-registrant, may partner with law enforcement to conduct take-back events. The DEA encourages communities to partner with law enforcement to continue to conduct take-back events.

   - The next DEA-sponsored nationwide take back event will be on September 27, 2014. The DEA will not continue to sponsor nationwide take-back events in order to prevent competing with local take-back efforts conducted in accordance with the new regulations.

6. **Can I dispose of a friend or family member's pharmaceutical controlled substances for them?**

   - You may dispose of a member of your household's unused or unwanted pharmaceutical controlled substances. But, if they are *not* a member of your household, you may not dispose of their pharmaceutical controlled substances on their behalf. Only ultimate users may dispose of pharmaceutical controlled substances. An ultimate user, which includes a household member of the person or pet who was prescribed the medication, may transfer pharmaceutical controlled substances to authorized collectors or law enforcement via a collection receptacle, mail-back package, or take-back event.

   - Exceptions:

     - If someone dies while in lawful possession of pharmaceutical controlled substances, any person lawfully entitled to dispose of the decedent's property may dispose of the pharmaceutical controlled substances; and

     - A long-term-care facility may dispose of a current or former resident's pharmaceutical controlled substances.

7. **My mother has pharmaceutical controlled substances delivered to her home. She passed away, and I would like to dispose of her unused pharmaceutical controlled substances. I did not live with her. Can I dispose of them?**

   - Yes, so long as you are lawfully entitled to dispose of her property, you may dispose of her unused pharmaceutical controlled substances.

8. **How can I find a collection receptacle location near me?**

   - Members of the public may call the DEA's Registration Call Center at 1-800-882-9539 to find a collection receptacle location near them.

9. **I live in a rural location. There are no collection receptacles, mail-back programs, or take-back events in the vicinity. How can I safely and securely dispose of my unwanted pharmaceutical controlled substances?**

   - There are no restrictions on using a mail-back package obtained from another state. You may dispose of your unwanted pharmaceutical controlled substances in a mail-back package that you received from another state, even if the mail-back package is delivered to a location outside of your state.

- Additionally, these regulations expand—not limit—the options that ultimate users have to dispose of unwanted pharmaceutical controlled substances. You may continue to dispose of your unwanted pharmaceutical controlled substances using the lawful methods you used prior to the effective date of the new regulations, as long as those methods are consistent with Federal, State, tribal, or local laws and regulations, including surrendering pharmaceutical controlled substances to law enforcement.

10. Can I dispose of illicit drugs through a collection receptacle, mail-back package, or take-back event? How can I safely and securely dispose of my unwanted marijuana?

- No. Persons may not dispose of illicit drugs (*e.g.*, schedule I controlled substances such as marijuana, heroin, LSD) through any of the three disposal methods.

- Persons may not dispose of any controlled substances that they do not legally possess. This includes schedules II-V controlled substances that are illegally obtained and possessed.

11. I don't have a mail-back package, but I remember the address from the last mail-back package I used. Can I mail pharmaceutical controlled substances to that address without an official mail-back package?

- No. Persons must use the mail-back package that was provided by an authorized collector or one of their partners. The mail-back package must meet certain specifications, to include having a unique identification number. If an authorized collector receives a sealed mail-back package that they did not provide, the collector must reject it, or if they inadvertently accept it, they must notify the DEA.

- If persons would like to use a mail-back package and don't possess one, they may contact an authorized collector to obtain one.

12. Can I dispose of my insulin syringes through one of the disposal methods? What about my child's asthma inhaler?

- No. Persons may not dispose of any dangerous, hazardous, or non-compliant items in a collection receptacle or a mail-back package. This includes medical sharps and needles (*e.g.*, insulin syringes), and compressed cylinders or aerosols (*e.g.*, asthma inhalers).

- Other non-compliant items that may not be placed into a collection receptacle or mail-back package include iodine-containing medications and mercury-containing thermometers.

- Accepting these materials places the collector at risk, and might cause a dangerous situation. You should continue to use any valid methods you currently utilize to dispose of those medications and medical implements.

- Carefully review the authorized collector's instructions for what is and is not acceptable to place into the collection receptacle or mail-back package. If you have any questions, you should ask an employee of the authorized collector.

13. Can my pharmacy or other collector force me to give personal information, like my name, my prescription information, or my physician information?

- No. A collector may not force anyone to provide any personal information about themselves, their prescription, or their physician.

- In order to protect personally identifiable information, the DEA encourages persons not to place prescription bottles in collection receptacles or mail-back packages.

14. What happens to my pharmaceuticals after I dispose of them? Can they be sold, given away, re-packaged, or re-dispensed for use by another patient? Can they be otherwise recycled?

- Pharmaceutical controlled substances transferred from ultimate users to authorized collectors via either collection receptacles or mail-back programs shall be securely stored or transferred until rendered non-retrievable. They may not be re-sold, donated, repackaged, or re-dispensed. Currently, the most common method of rendering pharmaceutical controlled substances non-retrievable is incineration.

15. Are there environmental impacts?

- Disposed pharmaceuticals must be rendered non-retrievable in compliance with all applicable Federal, State, tribal, and local laws, including those relating to environmental protection. By expanding options on how ultimate users may dispose of their pharmaceutical controlled substances, fewer of these substances may end up in our nation's water system.

Talking About Your Opioid Use

Fast Facts

- Overdose is a significant risk of opioid use[1]
- In 2019, over 70% of the 71,000 deaths due to a drug overdose involved an opioid (p. 5)[1]
- Fatal opioid overdoses reached an all-time high in the United States in 2021[2]
- Overdose deaths involving opioids increased from an estimated 70,029 in 2020 to 80,816 in 2021[2]
- Each day, 227 people died from overdoses involving prescription opioids in 2021[2]
- More than 70% of deaths occurred among males[3]
- In 2020, approximately 2.7 million people were diagnosed with an opioid use disorder (OUD) in the United States. Approximately two million people with OUD misuse a prescription opioid[4]
- Opioid-related deaths can be prevented through overdose reversal medication such as naloxone[1]
- Long-term opioid use can have negative side effects, including sexual dysfunction, fractures, myocardial infarction, constipation, and sleep disordered breathing (p. 6)[1]

What is Opioid Use Disorder?

OUD is a chronic problem in which people continue to use opioids despite harms caused by their use. The misuse of opioids can disrupt relationships with family and friends, harm performance at work or school, and can result in serious health and legal consequences.

Who is at Risk?

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Risk factors for OUD include:[5]

- **Past or current substance abuse**
- **Family history of substance abuse**
- **Social or family environment that encourages misuse**
- **Access to and availability of opioids**
- **Untreated psychiatric disorders like posttraumatic stress disorder or depression**

OUD is defined/diagnosed by at least two of the following, occurring within a 12-month period:[6]

1. Opioids are taken in larger amounts or over a longer period than was intended
2. There is a persistent desire or unsuccessful efforts to cut down or control opioid use
3. A great deal of time is spent in activities necessary to obtain the opioid, use the opioid, or recover from their effects
4. Craving, or a strong desire or urge to use opioids
5. Recurrent opioid use resulting in a failure to fulfill major role obligations at work, school, or home
6. Continued opioid use despite having persistent or recurrent social or interpersonal problems caused or exacerbated by the effects of opioids
7. Important social, occupational, or recreational activities are given up or reduced because of opioid use
8. Recurrent opioid use in situations in which it is physically hazardous
9. Continued opioid use despite knowledge of having a persistent or recurrent physical or psychological problem that is likely to have been caused or exacerbated by the substance
10. Tolerance, as defined by either of the following:*
    a. A need for markedly increased amounts of opioids to achieve intoxication or desired effect
    b. A markedly diminished effect from opioids when continuing to use the same amount of opioids
11. Withdrawal, as manifested by either of the following:*
    a. Worsening pain, loss of function, increased suffering, worsening depression, increased suicidal ideations and attempts, and use of other substances (p. 53)[1]
    b. Opioids (or a closely related substance) are taken to relieve or avoid withdrawal symptoms

* NOTE: This criterion is not considered to be met for those individuals taking opioids solely under appropriate medical supervision.

CAUTION

- ⚠ **Not everyone who uses opioids develops OUD**
- ⚠ **Even if the opioids are taken as prescribed by a physician, you can develop OUD**
- ⚠ **Because opioids produce euphoria in addition to pain relief, they can be misused**
- ⚠ **Opioid misuse may begin by taking opioids for reasons other than for which they were originally prescribed**
- ⚠ **Opioid misuse may include trying to obtain prescription opioids from friends and family members**

Opioid use disorder is a treatable problem.

How is Opioid Use Disorder Treated?

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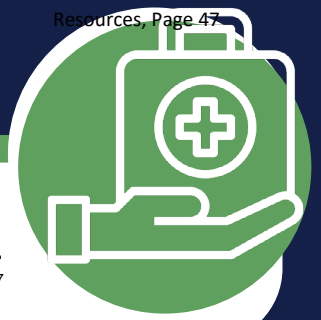

Effective interventions for OUD combine use of medication and behavioral treatment. Behavioral treatments include increasing motivation to change and rewarding new behaviors, as well as adhering to prescribed medications. The goal of therapy is to minimize drug use relapse, help to sustain recovery, and prevent or reduce opioid overdose.[7]

Medication

Medications for OUD: Buprenorphine, methadone, and naltrexone are used to treat OUDs. They are approved by the Food and Drug Administration (FDA). These medications are safe to use for months, years, or even a lifetime.

Medication for OUD involves replacing an opioid with a longer-acting but less euphoric and addictive opioid. Buprenorphine and methadone are opioids, but they block the effects of other opioids, lessen withdrawal symptoms, and reduce cravings for other opioids.

- Buprenorphine can be prescribed by any healthcare provider with prescription authority such as physicians and nurse practitioners
- Methadone can only be obtained at special licensed treatment facilities

Naltrexone is not an opioid. It blocks opioids from binding to receptors in the brain, so that they will not produce desired effects like euphoria. Therefore, an individual is less likely to continue opioid use or to relapse.

- Naltrexone can be prescribed by any healthcare provider with prescription authority

Opioid Overdose Prevention Medication: Naloxone is an opioid overdose prevention medication. It can be administered by injection or nasal spray and can be used to treat an overdose in emergencies. Naloxone combined with basic life support can quickly reverse an opioid overdose. It is simple to use and causes no harm if given when not experiencing an overdose. This medication is available over-the-counter. A health care provider can provide instruction on how to administer naloxone.[8]

Behavioral Treatment and Counseling

Cognitive Behavioral Therapy (CBT): Strategies used in CBT include identifying alternatives to opioid use, reducing exposure to high-risk situations for opioid use, identifying triggers that create craving to use opioids, training in skills to manage triggers, and increasing participation in non-use related activities. CBT aims to help patients recognize and reframe negative modes of thought that may play a role in maintaining their opioid use.

Group Therapy: Group therapy can help patients to maintain self-control and restraint. Participants support and learn from one another in their recovery from OUD.

Motivational Enhancement Therapy (MET): MET is a counseling approach that may help patients resolve their ambivalence about engaging in treatment and reducing their opioid use. It also intends to help foster motivation and commitment to address OUD.

Family Counseling: Family counseling can help patients with OUD and their families understand and cope with OUD and the harm it causes.

Resources

Veterans Crisis Line provides free, confidential support for service members and veterans in crisis. Dial **988**, then press **1**. Or text 838255. https://www.veteranscrisisline.net/

Military OneSource provides 24/7 support and information on housing, financial, legal, medical and psychological services.

- State-side: 800-342-9647
- Overseas: 800-342-9647
- Collect: 484-530-5908

www.militaryonesource.mil

inTransition offers specialized coaching and assistance for active-duty service members, National Guard members, reservists, veterans, and retirees to help them adapt to their transitions between systems of care.

- State-side: 800-424-7877
- Overseas: 800-748-81111 (in Australia, Germany, Italy, Japan, and South Korea only)

www.health.mil/inTransition

National Institute on Drug Abuse offers general information and related resources on opioids, opioid crisis, safe opioid prescribing, and overdose prevention. https://nida.nih.gov/research-topics/opioids

U.S. Department of Veterans Affairs provides an opioid safety initiative toolkit. It contains documents and presentations that can aid in your clinical decisions about starting, continuing, or tapering opioid therapy, and other challenges related to safe opioid prescribing. https://www.va.gov/painmanagement/opioid_safety_initiative_osi.asp

SAMHSA: Learn warning signs of opioid overdose and how medication-assisted treatment programs can help treat and prevent it. https://www.samhsa.gov/medication-assisted-treatment/medications-counseling-related-conditions/opioid-overdose

If you need help right now: Get treatment referrals and other information at this free, confidential helpline, available 24/7, 365 days a year

1-800-662-HELP (4357)

https://www.samhsa.gov/find-help/disorders

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Department of Defense health care providers who use this information are responsible for considering all applicable regulations and policies throughout the course of care and patient education. Updated February 2023 by the Psychological Health Center of Excellence.

SAMHSA
Substance Abuse and Mental Health Services Administration

BUPRENORPHINE
QUICK START GUIDE

Important Points to Review With the Patient

Specifically discuss safety concerns:

- Understand that discontinuing buprenorphine increases risk of overdose death upon return to illicit opioid use.
- Know that use of alcohol or benzodiazepines with buprenorphine increases the risk of overdose and death.
- Understand the importance of informing providers if they become pregnant.
- Tell providers if they are having a procedure that may require pain medication.

Facts About Buprenorphine

- FDA approved for Opioid Use Disorder treatment in an office-based setting.
- For those with tolerance to opioids as a result of OUD, buprenorphine is often a safe choice.
- Buprenorphine acts as a partial mixed opioid agonist at the μ-receptor and as an antagonist at the κ-receptor. It has a higher affinity for the μ-receptor than other opioids, and it can precipitate withdrawal symptoms in those actively using other opioids.
- It is dosed daily, has a long half-life, and prevents withdrawal in opioid dependent patients.
- Can be in tablet, sublingual film, or injectable formulations.
- Many formulations contain naloxone to prevent injection diversion. This formulation is the preferred treatment medication. The buprenorphine only version is often used with pregnant women to decrease potential fetal exposure to naloxone.
- There is a "ceiling effect" in which further increases above 24mg in dosage does not increase the effects on respiratory or cardiovascular function.
- Buprenorphine should be part of a comprehensive management program that includes psychosocial support. Treatment should not be withheld in the absence of psychosocial support.
- Overdose with buprenorphine in adults is less common, and most likely occurs in individuals without tolerance, or who are using co-occurring substances like alcohol or benzodiazepines.

Checklist for Prescribing Medication for the Treatment of Opioid Use Disorder

1

Assess the need for treatment

For persons diagnosed with an opioid use disorder,* first determine the severity of patient's substance use disorder. Then identify any underlying or co-occurring diseases or conditions, the effect of opioid use on the patient's physical and psychological functioning, and the outcomes of past treatment episodes.

Your assessment should include:

- A patient history
- Ensure that the assessment includes a medical and psychiatric history, a substance use history, and an evaluation of family and psychosocial supports.
- Access the patient's prescription drug use history through the state's Prescription Drug Monitoring Program (PDMP), where available,

to detect unreported use of other medications, such as sedative-hypnotics or alcohol, that may interact adversely with the treatment medications.
- A physical examination that focuses on physical findings related to addiction and its complications.
- Laboratory testing to assess recent opioid use and to screen for use of other drugs. Useful tests include a urine drug screen or other toxicology screen, urine test for alcohol (ethyl glucuronide), liver enzymes, serum bilirubin, serum creatinine, as well as tests for hepatitis B and C and HIV. Providers should not delay treatment initiation while awaiting lab results.

2

Educate the patient about how the medication works and the associated risks and benefits; obtain informed consent; and educate on overdose prevention.

There is potential for relapse & overdose on discontinuation of the medication. Patients should be educated about the effects of using opioids and other drugs while taking the prescribed medication and the potential for overdose if opioid use is resumed after tolerance is lost.

3

Evaluate the need for medically managed withdrawal from opioids

Those starting buprenorphine must be in a state of withdrawal.

4

Address co-occurring disorders

Have an integrated treatment approach to meet the substance use, medical and mental health, and social needs of a patient.

5

Integrate pharmacologic and nonpharmacologic therapies

All medications for the treatment of the opioid use disorder may be prescribed as part of a comprehensive individualized treatment plan that includes counseling and other psychosocial therapies, as well as social support through participation in mutual-help programs.

6

Refer patients for higher levels of care, if necessary

Refer the patient for more intensive or specialized services if office-based treatment with buprenorphine or naltrexone is not effective, or the clinician does not have the resources to meet a particular patient's needs. Providers can find programs in their areas or throughout the United States by using SAMHSA's Behavioral Health Treatment Services Locator at www.findtreatment.samhsa.gov.

*See The Criteria from American Psychiatric Association (2013). Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition,. Washington, DC, American Psychiatric Association, page 541.

Induction Considerations

The dose of buprenorphine depends on the severity of withdrawal symptoms, and the history of last opioid use (see flowchart in appendix for dosing advice).
- Long acting opioids, such as methadone, require at least 48-72 hours since last use before initiating buprenorphine.
- Short acting opioids (for example, heroin) require approximately 12 hours since last use for sufficient withdrawal to occur in order to safely initiate treatment. Some opioid such as fentanyl may require greater than 12 hours.
- Clinical presentation should guide this decision as individual presentations will vary.

Determine Withdrawal

Objective withdrawal signs help establish physical dependence

The risk with initiating buprenorphine too soon is that buprenorphine has a very high affinity for the mu receptor and will displace any other opioid on the receptor, thereby causing precipitated opioid withdrawal.

COWS Wesson & Ling, J Psychoactive Drugs. 2003 Apr-Jun;35(2):253-9.
Clinical Opiate Withdrawal Scale

Resting 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 1/2 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 1/2 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: _____

Score: 5-12 mild; 13-24 moderate; 25-36 moderately severe; more than 36 = severe withdrawal

Information on Precipitated Withdrawal

- Precipitated withdrawal can occur due to replacement of full opioid receptor agonist (heroin, fentanyl, or morphine) with a partial agonist that binds with a higher affinity (Buprenorphine).
- Symptoms are similar to opiate withdrawal.
- Avoid by ensuring adequate withdrawal before induction (COWS > 12; Fentanyl may require higher COWS score and lower initial dosing), starting Buprenorphine at a lower dose (2.0mg/0.5 mg), and reassessing more frequently.
- Should precipitated withdrawal occur, treatment includes:
  - Providing support and information to the patient
  - Management of acute symptoms
  - Avoid the use of benzodiazepines
  - Encourage the patient to try induction again soon

Buprenorphine Side Effects

- Buprenorphine's side effects may be less intense than those of full agonists. Otherwise, they resemble those of other mu-opioid agonists.
- Possible side effects include: Oral numbness, constipation, tongue pain, oral mucosal erythema, vomiting, intoxication, disturbance in attention, palpitations, insomnia, opioid withdrawal syndrome, sweating, and blurred vision
- Buprenorphine FDA labels list all potential side effects

Co-prescribing of overdose reversal agents such as Naloxone is also recommended

Maintenance Therapy

Goal = once-daily dosing, no withdrawal between doses. Ideally, average dosing does not exceed 16 mg/4 mg (See flowchart in appendix)

- Check PDMP regularly to ensure prescriptions are filled, and to check other prescriptions.
- Order urine drug testing (UDT) and consider confirmatory testing for unexpected results. UDT can facilitate open communication to change behavior.
- Assess for readiness for extended take-home dosing

Psychosocial Therapies

- Although people often focus on the role of medications in MAT, counseling and behavioral therapies that address psychological and social needs may also be included in treatment. To find treatment, please consult www.findtreatment.gov.

Diversion

Diversion is defined as the unauthorized rerouting or misappropriation of prescription medication to someone other than for whom it was intended (including sharing or selling a prescribed medication); **misuse** includes taking medication in a manner, by route or by dose, other than prescribed.

How can providers minimize diversion risk?

1. Early in treatment patients should be seen often, and less frequently only when the provider determines they are doing well.
2. Providers should inquire about safe and locked storage of medications to avoid theft or inadvertent use, especially by children. Patients must agree to safe storage of their medication. Counsel patients about acquiring locked devices and avoiding storage in parts of the home frequented by visitors.
3. Limit medication supply. Prescribe an appropriate amount of medications until the next visit. Do not routinely provide an additional supply "just in case."
4. Use buprenorphine/naloxone combination products when medically indicated. Reserve daily buprenorphine monoproducts for pregnant patients and/or patients who could not afford treatment if the combination product were required.
5. Counsel patients on taking their medication as instructed and not sharing medication.
6. Ensure that the patient understands the practice's treatment agreement and prescription policies. Providers can utilize the sample treatment agreement in SAMHSA's TIP 63, Page 3-78. A treatment agreement and other documentation are clear about policies regarding number of doses in each prescription, refills, and rules on "lost" prescriptions.
7. Directly observe ingestion randomly when diversion is suspected.
8. Providers should order random urine drug testing to check for other drugs and for metabolites of buprenorphine. Providers should also consider periodic point of care testing.
9. Doctors should schedule unannounced pill/film counts. Periodically ask patients to bring in their medication containers for a pill/film count.
10. Providers should make inquiries with the Prescription Drug Monitoring program in their state to ensure that prescriptions are filled appropriately and to detect prescriptions from other providers.
11. Early in treatment, providers can ask the patient to sign a release of information for a trusted community support individual, such as a family member or spouse, for the purpose of communicating treatment concerns including diversion.

What should I do if a patient diverts or misuses the medication?

- Misuse or diversion doesn't mean automatic discharge from the practice.
- Document and describe the misuse and diversion incident. Also document the clinical thinking that supports the clinical response, which should be aimed at minimizing future risk of diversion while still supporting the use of MAT.
- Strongly consider smaller supplies of medication and supervised dosing.
- Treatment structure may need to be altered, including more frequent appointments, supervised administration, and increased psychosocial support.
- When directly observed doses in the office are not practical, short prescription time spans can be considered.
- In situations where diversion is detected, open communication with the patient is critical. Providers may consider injectable and implantable buprenorphine to reduce diversion, once verified.

DSM-5 Criteria for Diagnosis of Opioid Use Disorder

Diagnostic Criteria*

These criteria not considered to be met for those individuals taking opioids solely under appropriate medical supervision

Check all that apply

	Opioids are often taken in larger amounts or over a longer period of time than intended.
	There is a persistent desire or unsuccessful efforts to cut down or control opioid use.
	A great deal of time is spent in activities necessary to obtain the opioid, use the opioid, or recover from its effects.
	Craving, or a strong desire to use opioids.
	Recurrent opioid use resulting in failure to fulfill major role obligations at work, school or home.
	Continued opioid use despite having persistent or recurrent social or interpersonal problems caused or exacerbated by the effects of opioids.
	Important social, occupational or recreational activities are given up or reduced because of opioid use.
	Recurrent opioid use in situations in which it is physically hazardous
	Continued use despite knowledge of having a persistent or recurrent physical or psychological problem that is likely to have been caused or exacerbated by opioids.
	*Tolerance, as defined by either of the following: (a) a need for markedly increased amounts of opioids to achieve intoxication or desired effect (b) markedly diminished effect with continued use of the same amount of an opioid
	*Withdrawal, as manifested by either of the following: (a) the characteristic opioid withdrawal syndrome (b) the same (or a closely related) substance are taken to relieve or avoid withdrawal symptoms

Total Number Boxes Checked: _____

Severity: **Mild**: 2-3 symptoms. **Moderate**: 4-5 symptoms. **Severe**: 6 or more symptoms

*Criteria from American Psychiatric Association (2013). Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition,. Washington, DC, American Psychiatric Association page 541. For use outside of IT MATTTRs Colorado, please contact ITMATTTRsColorado@ucdenver.edu

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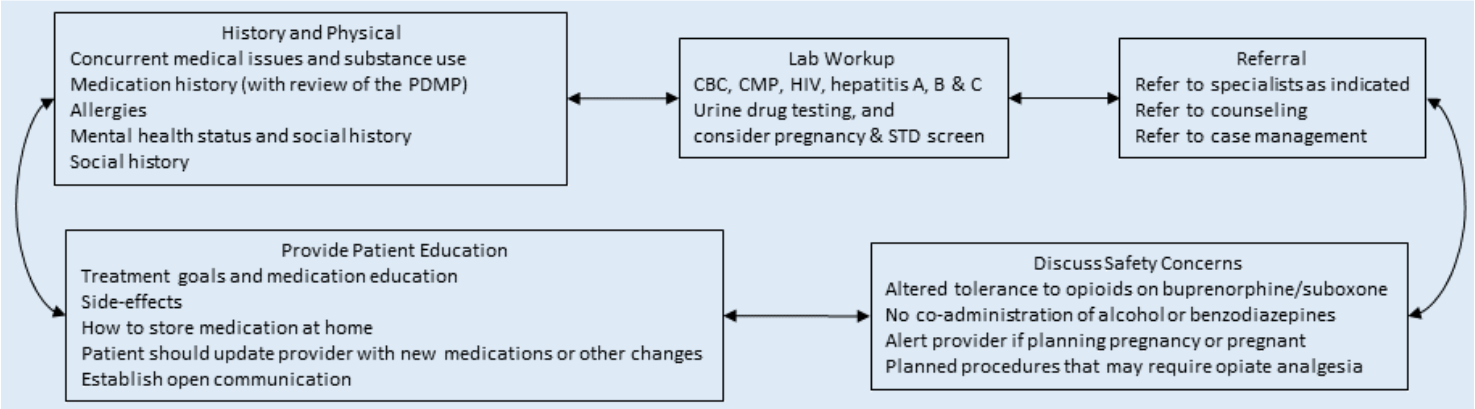
Important Considerations: Buprenorphine/Naloxone Dosing

- Tablets/film may be split if necessary
- May take up to 10 min to dissolve completely (no talking, smoking, or swallowing at this time)
- Absorption better with moistened mouth

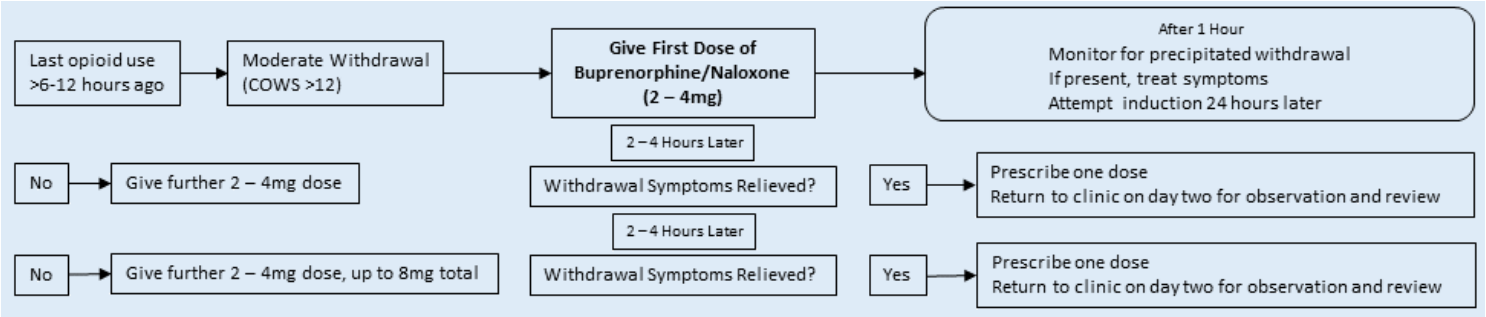
SUBOXONE sublingual tablets, including generic equivalents	Corresponding dosage strength of ZUBSOLV sublingual tablets
One 2 mg/0.5 mg buprenorphine/naloxone sublingual tablet	One 1.4 mg/0.36 mg ZUBSOLV sublingual tablet
One 8 mg/2 mg buprenorphine/naloxone sublingual tablet	One 5.7 mg/1.4 mg ZUBSOLV sublingual tablet
12 mg/3 mg buprenorphine/naloxone taken as: • One 8 mg/2 mg sublingual buprenorphine/naloxone tablet AND • Two 2 mg/0.5 mg sublingual buprenorphine/naloxone tablets	One 8.6 mg/2.1 mg ZUBSOLV sublingual tablet
16 mg/4 mg buprenorphine/naloxone taken as: • Two 8 mg/2 mg sublingual buprenorphine/naloxone tablets	One 11.4 mg/2.9 mg ZUBSOLV sublingual tablet

Algorithm for In-Office Induction (for home induction prescriptions may be given)

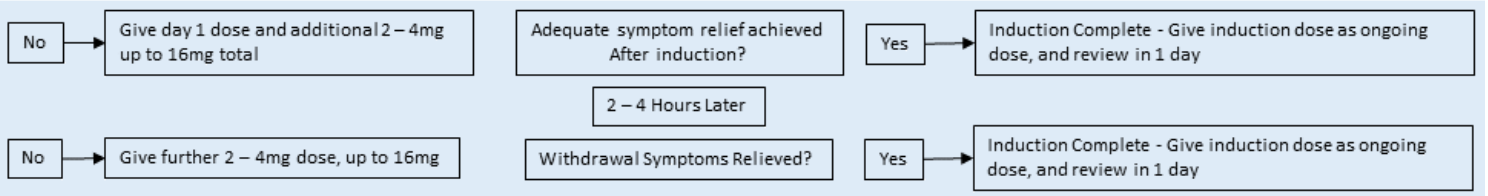
Initial Assessment



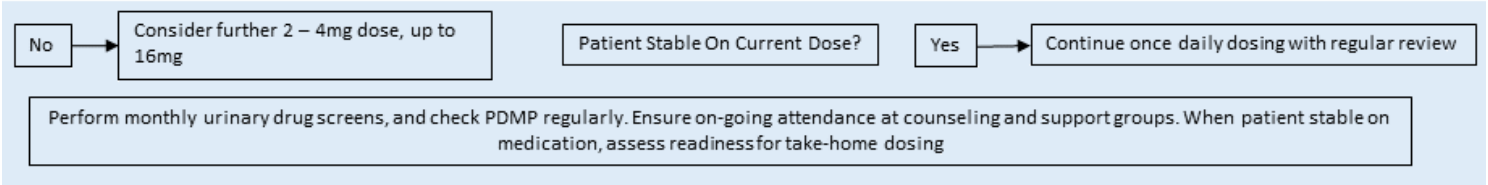
Day One (Induction)



Day Two



Maintenance



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OXFORD

EDUCATION & TRAINING SECTION

Original Research Article

SCOPE of Pain: An Evaluation of an Opioid Risk Evaluation and Mitigation Strategy Continuing Education Program

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Abstract

Objective. Due to the high prevalence of prescription opioid misuse, the US Food and Drug Administration (FDA) mandated a Risk Evaluation and Mitigation Strategy (REMS) requiring manufacturers of extended-release/long-acting (ER/LA) opioid analgesics to fund continuing education based on a *FDA Blueprint*. This article describes the Safe and Competent Opioid Prescribing Education (*SCOPE of Pain*) program, an ER/LA opioid analgesic REMS program, and its impact on clinician knowledge, confidence, attitudes, and self-reported clinical practice.

Method. Participants of the 3-h *SCOPE of Pain* training completed pre-, immediate post- and 2-month post-assessments.

Subjects. The primary target group (n = 2,850), and a subset (n = 476) who completed a 2-month post-assessment, consisted of clinicians licensed to prescribe ER/LA opioid analgesics, who care for patients with chronic pain and who completed the 3-h training between February 28, 2013 and June 13, 2014.

Results. Immediately post-program, there was a significant increase in correct responses to knowledge questions (60% to 84%, $P \leq 0.02$) and 87% of participants planned to make practice changes. At 2-months post-program, there continued to be a significant increase in correct responses to knowledge questions (60% to 69%, $P \leq 0.03$) and 67% reported increased confidence in applying safe opioid prescribing care and 86% reported implementing practice changes. There was also an improvement in alignment of desired attitudes toward safe opioid prescribing.

Conclusions. The *SCOPE of Pain* program improved knowledge, attitudes, confidence, and self-reported clinical practice in safe opioid prescribing. This national REMS program holds potential to improve the safe use of opioids for the treatment of chronic pain.

Key Words. Chronic Pain; Opioid Medications Continuing Education

Introduction

Chronic pain affects approximately 100 million in the United States, making it one of the most common reasons patients seek medical care [1,2]. Undertreated chronic pain causes reduced function and quality of life [3], and is associated with increased rates of suicidality [4,5]. However, more aggressive chronic pain management with opioid analgesics over the past two decades has been associated with an increase in prescription

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opioid misuse including addiction, diversion, and overdose deaths [6–11]. Determinants for increased opioid-related mortality have been described including high-volume and high-dose prescribing [12]. Despite concerns over misuse, opioid analgesics remain an important treatment for some patients' chronic severe pain [1,13–15]. According to the Institute of Medicine report, "regulatory, legal, educational, and cultural barriers inhibit the medically appropriate use of opioid analgesics [1]." Numerous safe opioid prescribing guidelines have been published [16–21], however, recent reports show that adherence with these guidelines is low [22–24].

Clinicians struggle to balance the benefits and harms associated with opioid prescribing [4,25]. While pain management education remains inadequate [26–30], it is a key strategy to address the prescription opioid misuse problem [31]. In July 2012, the US Food and Drug Administration (FDA) approved a single shared Risk Evaluation and Mitigation Strategy (REMS) required of manufacturers of extended-release/long-acting (ER/LA) opioid analgesics to promote safe use of these medications [32]. While most FDA-mandated REMS programs include medication guides and communication plans and are associated with a single medication, this REMS requires all manufacturers to jointly fund accredited continuing education for the approximately 320,000 ER/LA opioid prescribers in the United States [33]. The FDA created the *Blueprint for Prescriber Education for Extended-Release and Long-Acting Opioid Analgesics* ("FDA Blueprint") to define the content that must be included in REMS educational programs [34,35]. Boston University School of Medicine (BUSM), the first Continuing Medical Education provider to receive ER/LA opioid REMS funding, launched its Safe and Competent Opioid Prescribing Education (*SCOPE of Pain*) program on February 28, 2013.

As a new national strategy, the effectiveness of requiring manufacturers to contribute funds to support independent education based on an FDA Blueprint is unknown. The purpose of this study is to describe the *SCOPE of Pain* program and report on its impact on participants' knowledge, attitudes, confidence, and self-reported practice. As the first report on an ER/LA opioid REMS program, the data from this project can offer an initial assessment of effectiveness of this national strategy to improve practices.

Methods

SCOPE of Pain Description

SCOPE of Pain is based on the FDA Blueprint [36] and is offered as a 3-h live or online activity available at www.scopeofpain.org. The live programs included 20 half-day standalone meetings across the United States in 16 different states. The live and online curricula are identical and presented using a clinical case involving three separate visits: *initial visit*—assessing chronic pain and opioid misuse risk; *one week later*—initiating (continuing) opioid therapy safely and *months later*—assessing and managing aberrant medication taking behaviors. This allows participants to apply the ER/LA opioid REMS content to a common clinical scenario. *SCOPE of Pain* was created based on an existing online and live education program we developed in 2010 called "*Safe and Effective Opioid Prescribing for Chronic Pain*" (www.opioidprescribing.org) that had trained approximately 19,000 clinicians. A team of 13 faculty with expertise in pain management, addiction, primary care, and medical education created the original *Opioid Prescribing* program and a team of five experts tailored that content to cover all aspects of the FDA Blueprint to make the program REMS compliant. While the original content was well aligned with the FDA Blueprint, specific topics were expanded including opioid prescribing using a risk/benefit framework, effective communication skills for assessing and managing aberrant medication taking behaviors and strategies for team-based care. While the content was not formally tested, evaluation data from the over 5,000 participants of the original *Opioid Prescribing* program were used to inform the creation of the *SCOPE of Pain* program.

To ensure that the curriculum covered all FDA Blueprint elements, BUSM conducted both internal and external audit processes and an additional independent audit was conducted by the Accreditation Council for Continuing Medical Education (ACCME). The Boston University Medical Campus Institutional Review Board (IRB) determined this evaluation to be exempt from further IRB review.

Outcomes

A repeated measures design was used to assess the impact of *SCOPE of Pain* in changing clinicians' knowledge, attitudes, confidence, and clinical practice. Data were collected from participants at three time points: 1) pre-program (PRE), 2) immediate post-program (IMMED), and 3) 2-months post-program (2MO) (Figure 1). This design assessed changes over time with specific attention to increased alignment with practices described in the FDA Blueprint.

Items to assess participants' changes were designed by a multidisciplinary team including: a faculty expert in opioid prescribing, primary care and addiction medicine (DPA), experts in educational design (LZ, JLW, IH) and experts in outcomes assessments (SMH, SP, PN). Items were developed with the four key metrics of change that *SCOPE of Pain* targets: 1) twenty (20) items to assess improvements in *knowledge* (of which only 10 were repeated at 2MO to minimize respondents' burden and allow for additional questions about changes in performance), 2) six (6) items regarding change in

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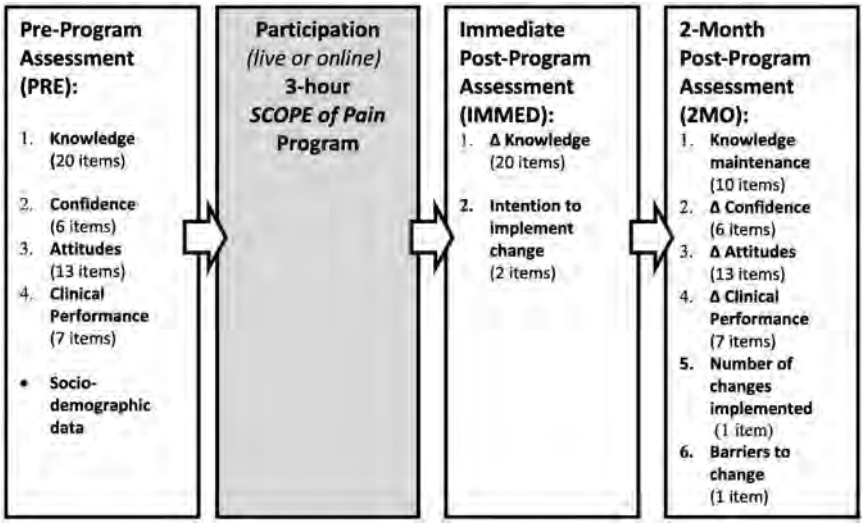

Figure 1 Evaluation of SCOPE of Pain: Data collection points and associated outcome metrics.

participant *confidence* to manage patients with chronic pain, 3) thirteen (13) items assessing change in *attitudes* (*motivation and willingness)* when treating patients with chronic pain and using guideline-based care; and 4) multiple items addressing changes in *clinical practice* including: a) two (2) items assessing intention to change clinical practice; b) seven (7) items assessing participants' reported changes in clinical performance; c) one (1) item assessing number of changes implemented; and d) one (1) item assessing barriers to implementing change in practice.

To be REMS compliant, the assessment was required to have knowledge-based questions from each of the six sections of the FDA Blueprint [36]. The course director (DPA) who specializes in primary care, pain management and addiction medicine and program education experts (LZ, IH, JLW) determined which elements from each section were best suited for knowledge-based questions and most relevant to practicing clinicians. Confidence and performance questions were based on guideline-based [17–21] safe opioid prescribing practices (e.g., risk and benefit assessments, monitoring and management strategies) and important communication skills. Each item was tested and retested for face validity, and linked explicitly to elements within the six sections of the FDA Blueprint for content validity. All questions were tested by primary care clinicians from general internal medicine and family medicine and pain and addiction medicine experts. The questionnaires used did not undergo validity testing as the evaluation was designed for a new educational program without a known gold standard or preexisting criterion by which to validate.

The PRE/IMMED/2MO items are quantitative using forced choice (drop-down) options. Knowledge-testing questions were a combination of multiple nominal choice responses (including dichotomous true/false questions and item-matching questions). Likert-type response formats were used for self-reported assessment of confidence, attitudes, and clinical practice.

Participant Recruitment

The primary target group included clinicians who manage patients with chronic pain longitudinally. This included primary care and other specialties that manage chronic pain such as hematology, oncology, rheumatology, rehabilitation medicine, sports medicine, neurology, orthopedics, and anesthesiology. While promotion for the program and collection of pre-assessment (PRE) and post-assessment (IMMED and 2MO) data extended beyond the primary target group, only participants whose specialty indicated a likelihood for managing chronic pain were included in this study.

All participants completed the pre-assessment on registration. Participants were required to complete the immediate post-assessment to receive continuing education credit. A drawing for an e-book reader was used to incentivize completion of the 2-month post-assessment. As an email address was collected for all participants, an email was automatically sent to all participants at 60 days, with a reminder at 63 days, and 66 days post-activity for those who did not complete the assessment.

Analyses

Using IBM SPSS 22.0 software (IBM Corporation, Armonk, NY), frequencies and cross-tabulations were calculated for each item. Paired *t*-tests were used to identify participant knowledge change (PRE vs IMMED) and knowledge maintenance (PRE vs 2MO). Paired *t*-tests were also used to compare participants' attitudes and clinical practice (PRE vs 2MO) to establish change in clinical practice two months after participation.

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Table 1 *SCOPE of Pain* participant characteristics

	Primary Target Group (n = 2,850)	Completed 2-Month Post-Program Assessment (n = 476)
Profession n, (%)		
Physician	1,955 (69%)	288 (61%)
Advance practice nurse*	706 (25%)	154 (32%)
Physician assistant	189 (6%)	34 (7%)
Specialty n, (%)		
Family practice	1,179 (41%)	235 (49%)
Internal medicine	791 (28%)	117 (25%)
Anesthesiology	183 (6%)	26 (6%)
Pediatrics	159 (6%)	19 (4%)
Orthopedic surgery	105 (4%)	14 (3%)
Physical medicine and rehabilitation	115 (4%)	17 (4%)
Hematology and oncology	85 (3%)	12 (2%)
Obstetrics and gynecology	83 (3%)	12 (2%)
Neurology	63 (2%)	11 (2%)
Rheumatology	52 (2%)	5 (1%)
Infectious disease	25 (1%)	6 (1%)
Sports medicine	7 (0.2%)	1 (0.2%)
Adolescent medicine	3 (0.1%)	1 (0.2%)
Years of practice n, (%)		
1–5 years	659 (23%)	118 (25%)
6–10 years	405 (14%)	74 (16%)
11–20 years	783 (27%)	116 (24)
>21 years	950 (33%)	160 (34)
Other	21 (2%)	8 (1%)
Participant type n, (%)		
Online	2,203 (77%)	315 (66%)
Live	647 (23%)	161 (34%)

*Significant difference between the group that completed the *SCOPE of Pain program* and those that completed the 2-MO post-assessment at the $P = 0.05$ level.

Results

Participants

A total of 10,566 participants completed *SCOPE of Pain* between February 28, 2013 and June 13, 2014. Twenty-seven percent (2,850/10,566) were considered our primary target group (defined as being physicians, advanced practice nurses, or physician assistants licensed to prescribe opioid analgesics and a member of 13 specialties that routine manage patients with chronic pain (Table 1). The primary target group was made up of mostly physicians (69%), primary care specialties (75%), and clinicians practicing for greater than 10 years (60%). A majority of participants (77%) completed the training online rather than live. All 2,850 participants completed the PRE and IMMED assessments. Of those, 17% (476/2,850) completed the 2MO assessment. Table 1 presents the socio-demographics for the primary target group who completed *SCOPE of Pain* compared with the subset who also completed the 2MO assessment. The two groups were similar, except for a higher proportion of advanced practice nurses completing the 2MO assessment ($P < 0.001$).

The following section focuses on the findings divided into two sections 1) IMMED and 2) 2MO assessment. Findings are grouped by the type of expected impact of *SCOPE of Pain* on participants (knowledge, confidence, attitudes, and clinical practice).

IMMED: Immediate Post-Program Assessment (N = 2,850)

Knowledge. A significantly higher proportion of participants responded correctly to the 20 knowledge items in the IMMED compared with PRE, 84% vs 60% ($P \leq 0.02$), respectively.

Intention to Change. Immediate post-program, 87% of participants stated they were planning to make at least one change to align their practice with guideline-based

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Table 2 Changes in confidence in performing guideline-based clinical practices

Statements	2-Months Post-Program Assessment (n = 476)		
	Rate your confidence in your ability to accomplish each of the following as you attended the program:		
	Increased	Remained the same	Decreased
Assess pain in a new patient?	65% (311)	32% (153)	3% (12)
Assess the potential benefit and risk of opioids for chronic pain in a new patient?	72% (341)	26% (126)	2% (9)
Communicate and collaborate with patients around opioid initiation?	71% (338)	28% (132)	1% (6)
Monitor patients on chronic opioid therapy for opioid misuse, including addiction and diversion?	63% (301)	34% (164)	2% (11)
Effectively and efficiently assess your patients for potential misuse of opioids?	67% (318)	32% (151)	1% (7)
Effectively communicate with your patients when treatment has shown no benefit	63% (300)	34% (160)	3% (16)

care. The most frequently stated changes were 1) to improve opioid prescribing documentation (56%); 2) to implement or improve opioid prescribing patient education or communication (53%); and 3) to institute or improve Patient-Prescriber Agreements (47%).

2MO: 2-Months Post-Program Assessment (N = 476)

Knowledge Maintenance. Compared with the PRE, the proportion of correct responses at 2MO was significantly ($P \leq 0.03$) higher for 7 out of the 10 knowledge questions on opioid misuse risk factors and risk assessment. While the improvement in correct responses in the 2MO (69%) compared with PRE (60%) was modest, it was significant.

Confidence. Approximately two-thirds of participants reported increased confidence in guideline-based opioid prescribing practices including assessing pain and opioid misuse risk and assessing, monitoring and discussing opioid benefits, risks, and harms with their patients (Table 2).

Attitudes. Participants reported on average an increase of 9% in alignment with increased trust in their patients and with guideline-based care ($P \leq 0.01$). For example, to the statement *I trust that available pain scales provide reliable assessment of pain in my patients*, 48% of participants responded 4 or 5 on the agreement scale (1 is completely disagree and 5 is completely agree) at 2MO, as compared with 31% at PRE, a 17% increase ($P < 0.01$). For the items for which a decrease in agreement was desired, the proportion of participants who reported being in agreement decreased on average by 7% ($P \leq 0.02$) (Table 3).

Clinical Practice (Patient Communication and Guideline-Based Care)

Patient Communication (Table 4)

Improvements were made in all seven recommended communication skills with a significant increase from PRE to 2MO in participants reporting performing these behaviors with most/all of their patients with chronic pain from an average of 64% to 78% ($P < 0.01$), respectively.

Guideline-Based Care (Table 5)

When presented with nine specific clinical practice changes at 2MO: 68% had either partially or fully improved their opioid prescribing documentation in patient medical records, 67% reported having implemented or improved patient education and communication relating to opioid prescribing and 52% reported having implemented/improved urine drug testing for monitoring opioid adherence and misuse. Approximately 60% reported partially/fully implementing four or more changes in their practice with 35% implementing 7–9 changes.

Barriers to Change

Eighty-three percent of participants reported at least one barrier to making practice change. The most significant barriers reported were patients' resistance to change (23%) followed by other providers' or institutional resistance to change (17%).

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Table 3 Changes in attitude in managing patients with chronic pain (n = 476)

Statement	Desired Change	Percent (n) Reported ≥ 4 on the Agreement Scale Scale: 1-Strongly Disagree to 5-Completely Agree			
		Pre-Program	2-Month Post-Program	% Change	*P* value
Statements that should have MORE agreement					
I trust that most of my patients with chronic pain are able to provide an accurate self-assessment of their pain	↑	48% (227)	50% (239)	+2%	0.314
I trust that available pain scales provide reliable assessment of pain in my patients	↑	31% (149)	48% (230)	+17%	<0.001
It is my responsibility and role to discuss with my patients not to give away their medications to relatives or friends	↑	92% (437)	96% (459)	+4%	0.001
I am comfortable responding to family calls about my patients' possible misuse of opioids	↑	50% (237)	62% (296)	+12%	<0.001
Statements that should have LESS agreement					
There is no reliable way to identify those of my patients who are drug-seekers	↓	29% (138)	21% (102)	−8%	0.020
Treating and managing patients with chronic pain is time-consuming and frustrating	↓	68% (326)	64% (304)	−4%	0.054
I will never prescribe ER/LA opioids to a patient with history of mental health issues	↓	16% (77)	17% (82)	+1%	0.564
I cannot get my patients to be truthful about illicit drug use	↓	29% (137)	22% (107)	−7%	0.004
I am uncomfortable communicating an unexpected urine drug test result to my patients	↓	24% (112)	20% (97)	−4%	0.187
I am unsure I am effectively assessing opioids misuse risk in my patients with chronic pain on ER/LA opioids	↓	48% (226)	31% (147)	−4%	<0.001
I suspect there is more I should be doing in the treatment and management of my patients who report chronic pain	↓	76% (360)	58% (275)	−18%	<0.001
I prefer to stop seeing/following a patient who has misused his/her opioid prescription	↓	57% (273)	51% (242)	−8%	0.007
I would only ask for a urine drug test from a patient that I thought was abusing the opioid prescription	↓	19% (90)	13% (63)	−6%	0.003

Discussion

SCOPE of Pain, an ER/LA opioid REMS program, resulted in improvements in knowledge and attitudes about safe opioid prescribing, as well as increases in self-reported confidence and implementation of improved communication skills and guideline-based opioid prescribing practices. There were increases in clinician trust in patients with chronic pain and in the tools available to assess patients' pain and to detect opioid misuse.

For the first time, an FDA REMS included the mandate for independent continuing education to be funded by commercial entities to help mitigate the risks of their medications. While education is a natural part of any REMS, whether you must teach about a mandated registry or how to document safe-use conditions (e.g., pregnancy tests), this REMS included an extensive, prescribed curriculum developed by the FDA and not the providers of the education. This is distinct from the usual process of how content for continuing education is created by the provider.

While the need for prescriber education is universally accepted, this REMS has been met with some skepticism [37]. This study is a first step in evaluating this national strategy of clinician continuing education as a way to improve safe opioid prescribing. The comparison among PRE, IMMED, and 2MO assessment data suggest that not only did clinicians learn more about safe opioid prescribing, but they have more confidence and

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Table 4 Changes in patient communication (n = 476)

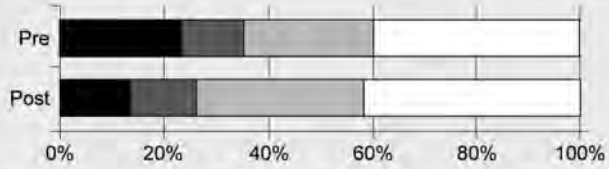
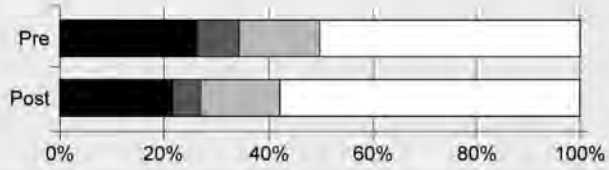
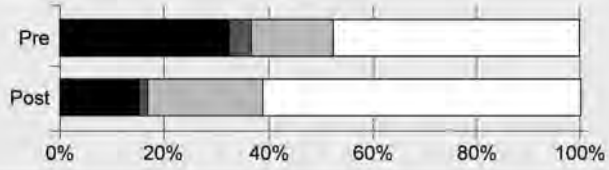
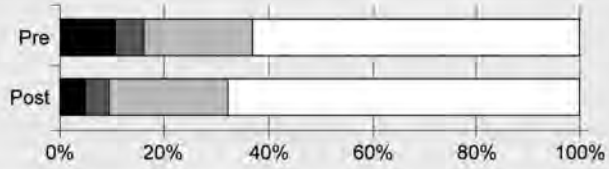
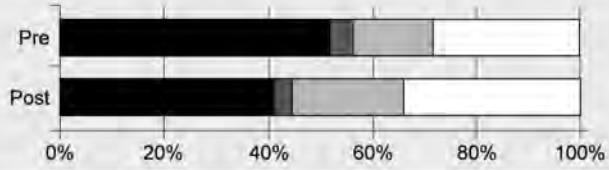
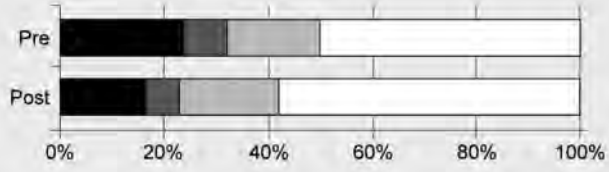
Clinical Performance Item	I am not currently performing this behavior in my practice; With my high risk pain patients only; With most of my pain patients; With all my pain patients
1 Talk with my patients' previous primary care providers and review prior medical records	
2 Implement and co-sign a Patient-Prescriber agreement (including informed consent and plan of care)	
3 Inform my patients about taking medication exactly as prescribed (e.g., don't increase dose; don't crush tablets, etc.))	
4 Educate my patient about proper storage and disposal of ER/LA Opioids	
5 Counsel my patients about risk of respiratory depression and overdose.	
6 Give my patients a patient counselling document and tools as part of the discussions with them when prescribing opioid analgesics	
7 Explain to my patient the methods I use to monitor opioid misuse (i.e., urine drug tests and/or pill counts)	

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Table 5 Changes in guideline-based practices (n = 476)

	2-Months Post-Program Assessment		
	Have you made any changes in your practice, system care, and/or patient care as you participated the program entitled Scope of Pain: Safe and Competent Opioid Prescribing Education?		
Changes to Practice	% (n) who partially/fully implemented	% (n) who implemented before participating in this activity	% (n) who are planning on implementing in next 6–12 months or not planning to implement
Implement or improve . . .			
Patient Prescriber "Agreements"	47% (225)	26% (143)	27% (128)
Informed consent procedures	45% (216)	18% (84)	37% (176)
Urine drug testing for monitoring	52% (246)	19% (92)	29% (138)
Pill counts for monitoring	43% (204)	10% (49)	47% (223)
Patient education or communication strategies	67% (319)	13% (63)	20% (94)
Office-wide policies/ procedures	49% (233)	18% (86)	33% (157)
Multidisciplinary team approach	48% (227)	14% (65)	39% (184)
Documentation in patient medical records	68% (325)	17% (80)	15% (71)
Register/begin using the Prescription Drug Monitoring Program	45% (214)	26% (124)	23% (108)

were able to make changes to align with guideline-based practices. While knowledge gain did decrease in the 2MO, it did not return to baseline, and in fact continued to be significantly higher than the PRE-assessment. Without repeated exposure deterioration of knowledge is an expected outcome in education studies.

While the evaluation of this REMS education is based on self-reported data and does not include objective measures (e.g., decreases in prescription opioid misuse) to demonstrate the effectiveness of the training, it does demonstrate that education based on content from the FDA, developed by continuing education providers, and funded by commercial interests can still yield a positive impact on self-reported changes in behavior.

There are a growing number of state policy, systems-level, and payer interventions being promulgated to address the prescription opioid misuse problem [31]. While these interventions appear to be efficient solutions to controlling prescription opioid misuse, such blunt instruments risk the unintended consequences of making opioids inaccessible for those that currently or potentially may benefit. In contrast, quality, targeted education can empower clinicians to make appropriate and informed clinical decisions about whether or not to initiate, continue, change or discontinue opioids for each individual patient suffering from chronic pain based on a careful benefit vs risk/harm assessment [38,39]. Educational approaches will maintain access for patients who do, or can, benefit from such medications while mitigating the potential risks to those who are not benefiting or are being harmed. While there has been considerable skepticism about continuing medical education's (CME) ability to improve clinicians' practices [40], recent meta-analyses have supported that, overall, CME, especially using serial educational interventions, is effective in changing clinician performance [41,42]. As opposed to regulations limiting clinician practice, education is a tool that can help clinicians develop the nuanced, informed approach necessary for individualizing patient care with regards to safe opioid prescribing.

Questions remain on next steps to enhance the current REMS education. This speaks to the need for a clinician awareness campaign regarding the availability of these REMS trainings. While the REMS program is mandatory

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for the ER/LA opioid manufacturers, it is not mandatory for clinicians [37]. In one primary care survey [43], less than 10% of physicians were "very familiar" with the REMS education. Since the first announcement by the FDA regarding the opioid REMS program there has been debate as to whether clinician education should be mandated and linked to US Drug Enforcement Administration (DEA) licensure [44]. A training requirement is not unprecedented, as there is such a requirement within the Drug Addiction Treatment Act of 2000 [45] (DATA 2000) which limits the prescribing of buprenorphine for the treatment of opioid use disorders to those that have completed an 8-h training. While the DATA 2000 training requirement is highly supported by addiction medicine/psychiatry societies, only a small number of physicians have taken the training, which has resulted in limited access to this life-saving treatment for those who need it [46,47]. Thus, it would be important to link mandated opioid prescribing training to DEA licensure to avoid having clinicians "opt out" of this requirement leading to decreased treatment access and burn-out for those clinicians that "opt in." However, to make education mandatory there must be evidence that education would positively impact prescription opioid misuse without decreasing appropriate access to prescription opioids. Alternatively the goal could be mandatory demonstration of clinical competence allowing those clinicians well trained in this area to "test out" of the requirement. Finally, including practice-based performance improvement or quality improvement efforts following *SCOPE of Pain* education may lead to more robust clinical practice changes, but would require a more substantial investment in time and resources [48,49].

With any intervention, education or otherwise, it would be ideal to measure changes in clinical outcomes, such as fewer opioid overdoses and overdose deaths, and fewer emergency department visits. However, these important clinical outcomes would be difficult to attribute to any education alone as there are other concurrent efforts [31] that could also improve these outcomes including naloxone distribution [50], expansion of office-based opioid addiction treatment [51] with buprenorphine and naltrexone, and the availability of abuse-deterrent opioid formulations [52,53]. Evaluations focusing on decreasing the number of opioid prescriptions [54] are difficult to interpret as it is unclear what the correct amount of opioid prescribing should be to concurrently decrease opioid misuse while maintaining access to opioids for those who benefit.

The *SCOPE of Pain* evaluation has several limitations worth considering. Because our post-program assessments, with the exception of knowledge-testing questions, were self-reported by the participants there is risk of self-assessment bias and social desirability bias. To mitigate social desirability bias, participants completed their follow-up surveys anonymously to an independent evaluator. Program participants with a particular interest in the program objectives were potentially more likely to participate in the 2-month follow-up assessment. In addition, as this was a voluntary program, those that were interested in changing practice were more likely to enroll and, therefore, may have a greater change than the general population of practitioners. Therefore, there is the potential for participant self-selection bias. However, the demographics of those that completed the 2-month follow-up were similar to those that did not. The lack of a control group makes it difficult to attribute participant changes solely to *SCOPE of Pain*, however, many of the questions asked participants to attribute changes specifically to the program. While we found improvements in participant clinical knowledge, confidence, attitudes, and self-reported practice, we were unable by study design to detect if these improvements impacted patient care. Future research on ER/LA opioid REMS education should consider a more in-depth investigation on the impact on patients' care [55].

There were a few areas where this model did not succeed. First, the FDA Blueprint is very comprehensive and requires up to 2–3 hours of education. Some participants, particularly for the web-based activity, started the program but did not complete it. For the live activity, participants were required to pass a post-test to be counted as a program completer. As clinicians are not accustomed to completing a post-test for live activities, some participants attended the entire meeting, but could not be counted as completers of the education because they did not take the post-test.

In summary, the ER/LA opioid REMS training *SCOPE of Pain* improved clinician-level safe opioid prescribing outcomes, however, its impact on mitigating opioid misuse risk and harm while maintaining access to opioids for those that are or would benefit remains an unanswered question. While education cannot be the only strategy to combat this national crisis, it can help improve clinician behaviors and be a major part of the solution.

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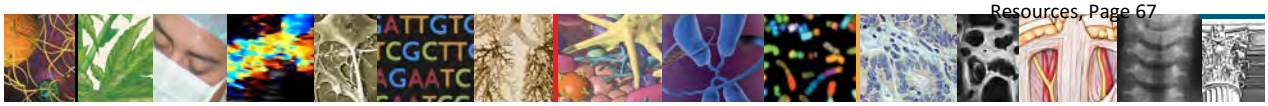

The NEW ENGLAND JOURNAL of MEDICINE

Perspective

JANUARY 28, 2016

Opioid Prescribing for Chronic Pain — Achieving the Right Balance through Education

Daniel P. Alford, M.D., M.P.H.

In recent decades, the United States has seen a dramatic increase in opioid prescribing for chronic pain. That growth has been associated with increasing misuse of prescription opioids[1] and has led to increases in deaths due to unintentional opioid overdose and in the number of people seeking treatment for opioid-misuse disorders. There's probably 100% agreement that we, as a profession and society, have become overly opioid-centric in our management of chronic pain. Far more controversial are the role of long-term opioid therapy in managing chronic pain and the best strategy for ending the epidemic of prescription-opioid misuse.

Groups lobbying against prescribing opioids for chronic pain remind us that the effectiveness of long-term opioid therapy has been inadequately studied.[2] I believe that this is a case of absence of evidence rather than evidence of absence. As we await scientific evidence, questions remain regarding how best to address the epidemic of prescription-opioid misuse now. Groups advocating quick fixes believe that regulations that limit opioid availability are the best plan. This strategy is well intentioned and will certainly reduce opioid prescribing, but such blunt approaches will also limit access to opioids for patients who are benefiting or may potentially benefit from them.

Such an objection is not about protecting clinicians' autonomy, but rather about protecting access to opioids for our patients who are in severe pain. These regulations will lead some clinicians to refuse to prescribe opioids even when they're indicated, seeing it as too risky or too much work. They also create a climate of mistrust between patients and their health care teams. Clinicians are accused of both undertreating pain and overprescribing opioids, and patients with chronic pain who take opioids are viewed with suspicion. In addition, we don't know what impact indiscriminate reductions in access to prescription opioids will have on long-term clinical outcomes.

Prescriber education is a more finely tuned approach to addressing the opioid-misuse epidemic, allowing us to individualize care on the basis of a patient's needs after a careful benefit–risk assessment. That, after all, is the way we manage all chronic diseases. Education can empower clinicians to make appropriate, well-informed decisions about whether to initiate, continue, modify, or discontinue opioid treatment for each individual patient at each clinical encounter. Education has the potential to both reduce overpre-

scribing and ensure that patients in need retain access to opioids.

In July 2012, a national voluntary prescriber-education initiative was begun. The Food and Drug Administration (FDA) approved a single shared Risk Evaluation and Mitigation Strategy (REMS) requiring manufacturers of extended-release and long-acting opioid analgesics to fund accredited education on safe opioid prescribing based on an FDA curricular blueprint. Although this program has not yet trained the targeted number of prescribers, a recent evaluation suggests that REMS education can shift clinicians' self-reported practice toward safer, guideline-concordant care.[3] Comprehensive training in safe opioid prescribing is needed at all stages of medical education (undergraduate, graduate, and continuing), since training in this area has historically been lacking. This education must go beyond opioid prescribing to include comprehensive, multimodal pain management,[4] and it can be designed for the entire health care team: our nursing, pharmacy, and behavioral health colleagues have also been inadequately trained. This education can be coupled with enhanced clinical systems that support these new practices, including decision-support tools in electronic medical records.

Managing chronic pain is complex. Chronic pain is subjective and can present without objective evidence of tissue injury, which results in diagnostic uncertainties despite our most thorough assessments. Patients with chronic pain are desperately seeking immediate relief from their suffering; they tend to have unrealistic expectations regarding the potential benefits of opioids and not to fully appreciate the degree of risk conferred by escalating their own doses in a desperate (yet futile) attempt to obtain pain relief.

Clinicians have limited tools at their disposal to help these patients. Our reimbursement system favors the use of medications alone, despite evidence supporting multimodal care. Clinicians often have no easy access to nonpharmacologic therapies and cannot obtain pain consultations because there are too few pain specialists offering comprehensive pain care. Moreover, whereas clinicians can use objective measures to guide their management of other chronic diseases, here they must rely solely on the patient's (or family's) reports of benefits (such as improved function) and harms (such as loss of control). Clinicians are thus left basing treatment decisions on a brief subjective assessment of whether there's enough benefit to justify continued opioid therapy or enough harm to justify discontinuing it.

Many guidelines for safe opioid prescribing exist, and all include similar recommendations, including use of assessments of risk of opioid misuse, signed agreements that include informed consent, and monitoring strategies such as drug testing, pill counts, and prescription-drug–monitoring programs. But it's also essential for safe-opioid-prescribing education to include teaching of effective communication skills. How does one explain to a patient who's desperate for help that an opioid treatment must be discontinued despite the lack of alternative treatments? How does one deal with a new patient who is already taking high-dose opioids and insists that it's the only treatment that helps?

It's important for clinicians to judge the opioid treatment rather than the patient.[5] When opioid therapy is deemed too risky or inadequately beneficial, discontinuing it means abandoning not the patient but merely an inappropriate treatment. When a clinician changes the treatment approach with a patient who tests positive for an illicit drug, that response is not about punishing the patient, but about changing the treatment plan on the basis of a new risk and addressing a newly identified problem.

When a clinician determines that discontinuing opioid treatment is appropriate, the patient may disagree and express anger. Is such frustration attributable to an appropriate desire for pain relief, inappropriate drug seeking, or a combination of the two? Though a patient-centered approach is always preferred, there are times in managing opioid therapy for patients with chronic pain when the clinician's approach must be at odds with the patient's request but intended to keep the patient safe. Such an approach may be perceived as paternalistic and may threaten the therapeutic alliance. Although transparent communication leading to a patient-centered approach is important, it goes only so far when a patient with chronic pain also shows signs of opioid misuse (e.g., unsanctioned dose escalation), necessitating discontinuation of opioid treatment.

Addressing the crisis of prescription-opioid misuse has become a national priority. To judge from the progress of the REMS program for extended-release and long-acting opioids, voluntary prescriber education may be insufficient to address this problem. Mandatory education may be re-

quired. If so, it will be important to link mandated education to medical licensure to avoid having clinicians opt out — since that could lead to reduced treatment access, as well as burnout among the clinicians who opt in. Alternatively and ideally, we could mandate proof of clinical competence, allowing clinicians who are already well trained to test out of an education requirement. Unfortunately, it may be impossible to measure such skill-based competence on a national scale.

An audio interview with Dr. Alford is available at NEJM.org

I believe that the medical profession is compassionate enough and bright enough to learn how to prescribe opioids, when they are indicated, in ways that maximize benefit and minimize harm. Though managing chronic pain is complicated and time consuming and carries risk, we owe it to our patients to ensure access to comprehensive pain management, including the medically appropriate use of opioids.

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