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# Safer Opioid Prescribing

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I have no actual or potential conflicts of interest related to this program/presentation

# Minimal requirements for candidacy for chronic opioid therapy

1. You have a specific diagnosis

2. You have a treatment plan

3. You have fulfilled the basic standards for chronic pain treatment

4. You have no indication that your prescription is being misused or diverted

# You have a specific diagnosis*

*** For which treatment with opioids is appropriate**

Guidelines for starting opioids by indication, according to the American Academy of Pain Medicine:

1. For **neuropathic** pain: Only if there is no response to antidepressants (TCAs or SNRIs) or anticonvulsants
2. For **Chronic Back Pain**: Limited evidence for benefit >16 weeks
3. For chronic **Headache**: Not recommended given risk of medication overuse headache*
4. For **Osteoarthritis**: Not recommended as first line treatment. Only trial if NSAIDs and acetaminophen are contraindicated or failed. No evidence for long term use.
5. For **Nociceptive Pain** (maintained by continual injury): standard of care for moderate-severe pain

Chronic Pain Medical Treatment Guidelines, 2009, AAPM

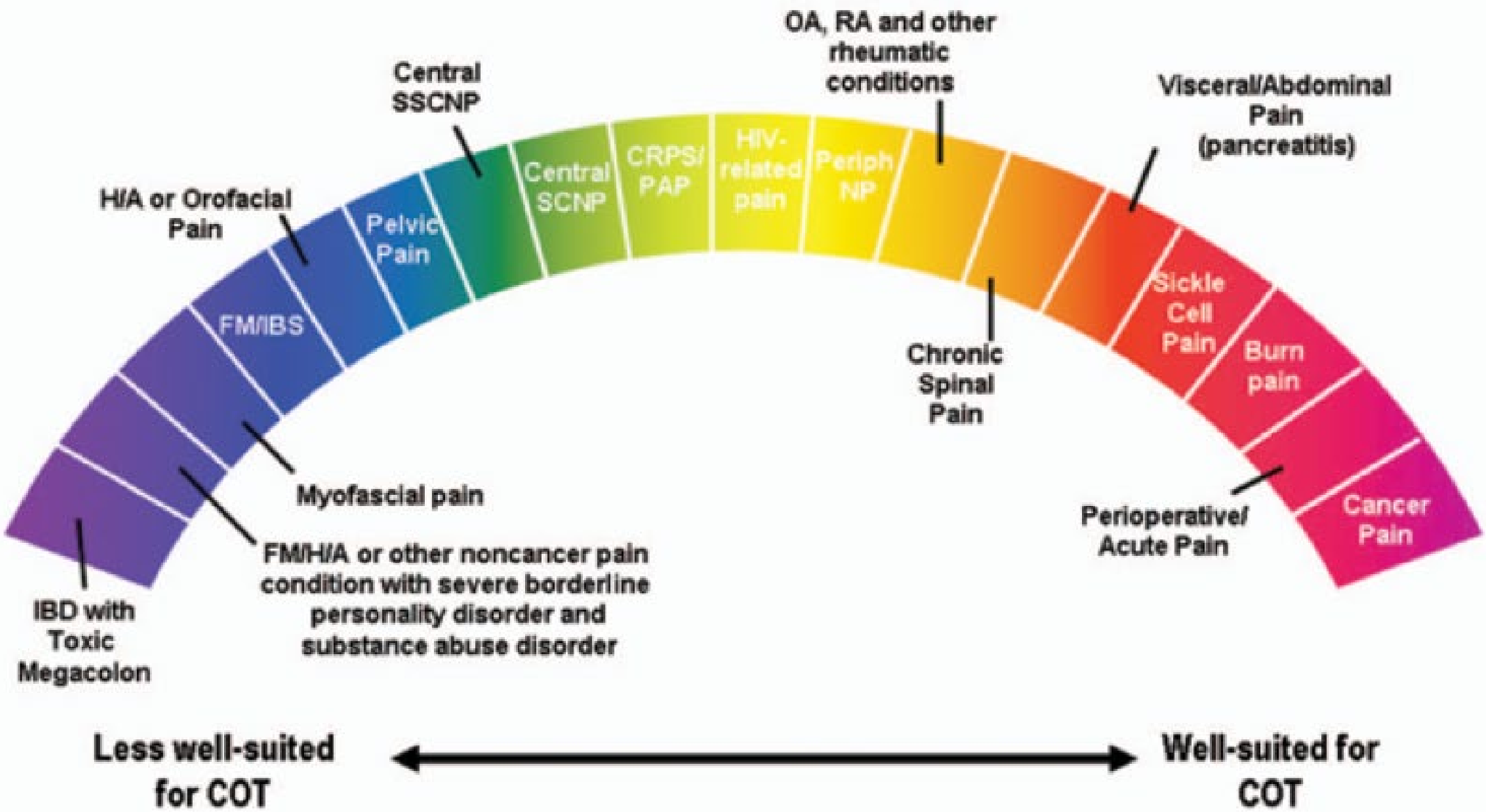
# You have a specific diagnosis*

Examples of a specific diagnosis:

- Grade 2 spondylolesthesis at L4/5 with severe spinal stenosis
- Type II Chronic Regional Pain Syndrome of the right lower extremity
- Left L3 radiculopathy

Examples of a NONspecific diagnosis:

- Low Back Pain
- Chronic Pain




COT – chronic opioid therapy; NP – neuropathic pain; FM – fibromyalgia; H/A – headache; IBM – inflammatory bowel disease; OA – osteoarthritis; RA – rheumatoid arthritis; CRPS – complex regional pain syndrome; PAP – post-amputation pain; IBS – irritable bowel syndrome; HIV – Human immunodeficiency disease; SSCNP – supraspinal central neuropathic pain; SCNP – spinal central neuropathic pain

Smith, HS. Pain Physician, 2012;15:ES1-ES7

# 2016 CDC Guidelines for COT for Chronic Pain

1. Non-pharmacologic therapy and non-opioid therapy are preferred for chronic pain
2. Before starting opioids for chronic pain, establish treatment goals and realistic goals for pain and function, & define parameters and strategy for discontinuing opioids if benefits do not outweigh risks
3. Discuss risks and realistic benefits before starting and periodically
4. Do not start with LA/ER formulations
5. Use caution when exceeding 50 MEQs, and avoid exceeding 90 MEQs or carefully justify the decision to do so
6. When prescribing opioids for acute pain, use lowest dose and shortest duration: typically 3 days, and rarely more than 1 week
7. Evaluate risks/benefits within 1-4 weeks of starting opioids or with a dose escalation. Reevaluate q3 months or more frequently. If benefits do not outweigh risks, taper or discontinue opioids.
8. Evaluate for opioid related harms, and prescribe naloxone rescue kits
9. Review the PDMP at start and at least q3 months
10. Perform urine drug testing before starting opioids, and at least annually* (*q6 months per NM Medical Board)
11. Clinicians should avoid prescribing opioid pain medication and benzodiazepines concurrently whenever possible
12. Clinicians should offer or arrange evidence-based treatment (usually MAT) for patients with opioid use disorders

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# 1. Non-pharmacologic therapy and non-opioid therapy are preferred for chronic pain

- Will cover non-opioid medications in another talk
- Acupuncture
- Exercise (equal efficacy to PT for low back pain, OA of hip, OA of knee, fibromyalgia)
- Cognitive behavioral therapy
- Tai-Chi
- Occupational therapy
- Surgery

2. Before starting opioids for chronic pain, establish treatment goals and realistic goals for pain and function, & define parameters and strategy for discontinuing opioids if benefits do not outweigh risks

- “The clinical evidence review found insufficient evidence to determine long-term benefits of opioid therapy for chronic pain and found an increased risk for serious harms related to long-term opioid therapy that appears to be dose-dependent.” -CDC guideline

- Pain intensity and function improvement by 30% or greater is new standard

# Example of a tool that measures changes in pain and function: Brief Pain Inventory

**3. Please rate your pain by marking the box beside the number that best describes your pain at its worst in the last 24 hours.**

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10

No Pain — Pain As Bad As You Can Imagine

**4. Please rate your pain by marking the box beside the number that best describes your pain at its least in the last 24 hours.**

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4

No Pain

**5. Please rate your pain by marking the box bes**

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4

No Pain

**6. Please rate your pain by marking the box bes**

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4

No Pain

**9. Mark the box beside the number that describes how, during the past 24 hours, pain has interfered with your:**

**A. General Activity**

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10

Does Not Interfere — Completely Interferes

**B. Mood**

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10

Does Not Interfere — Completely Interferes

**C. Walking ability**

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10

Does Not Interfere — Completely Interferes

**D. Normal Work (includes both work outside the home and housework)**

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10

Does Not Interfere — Completely Interferes

**E. Relations with other people**

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10

Does Not Interfere — Completely Interferes

**F. Sleep**

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10

Does Not Interfere — Completely Interferes

**G. Enjoyment of life**

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10

Does Not Interfere — Completely Interferes

# 3. Discuss risks and realistic benefits before starting and periodically

- Opioids can help acutely, but there is no evidence that they help long-term or improve function
- Opioids are not expected to eliminate pain. Realistic effect is 20%-30% reduction in pain intensity
- Emphasize improvement in function, even if pain persists
- Opioids are dangerous when combined with alcohol, benzodiazepines, other intoxicating substances
- People at home who might take these opioids are at risk of dangerous outcomes
- 85% of people experience unpleasant opioid side-effects: constipation, nausea, physiological dependence, hormone imbalance, addiction, hyperalgesia, respiratory depression, death

# Chronic opioid use results in:

## Opioid Endocrinopathy

- Opioids inhibit the hypothalamus

Inhibits gonadotropin releasing hormone & corticotropin releasing factor

- Thus inhibiting pituitary hormone release

| Luteinizing Hormone |
| --- |
| Follicle Stimulating Hormone |
| Adrenocorticotropic Hormone (ACTH) |
| Beta-endorphins |

# ASIPP Guidelines on Opioid Induced Endocrinopathy

"...should anticipate the potential for its occurrence...and develop appropriate management strategies."

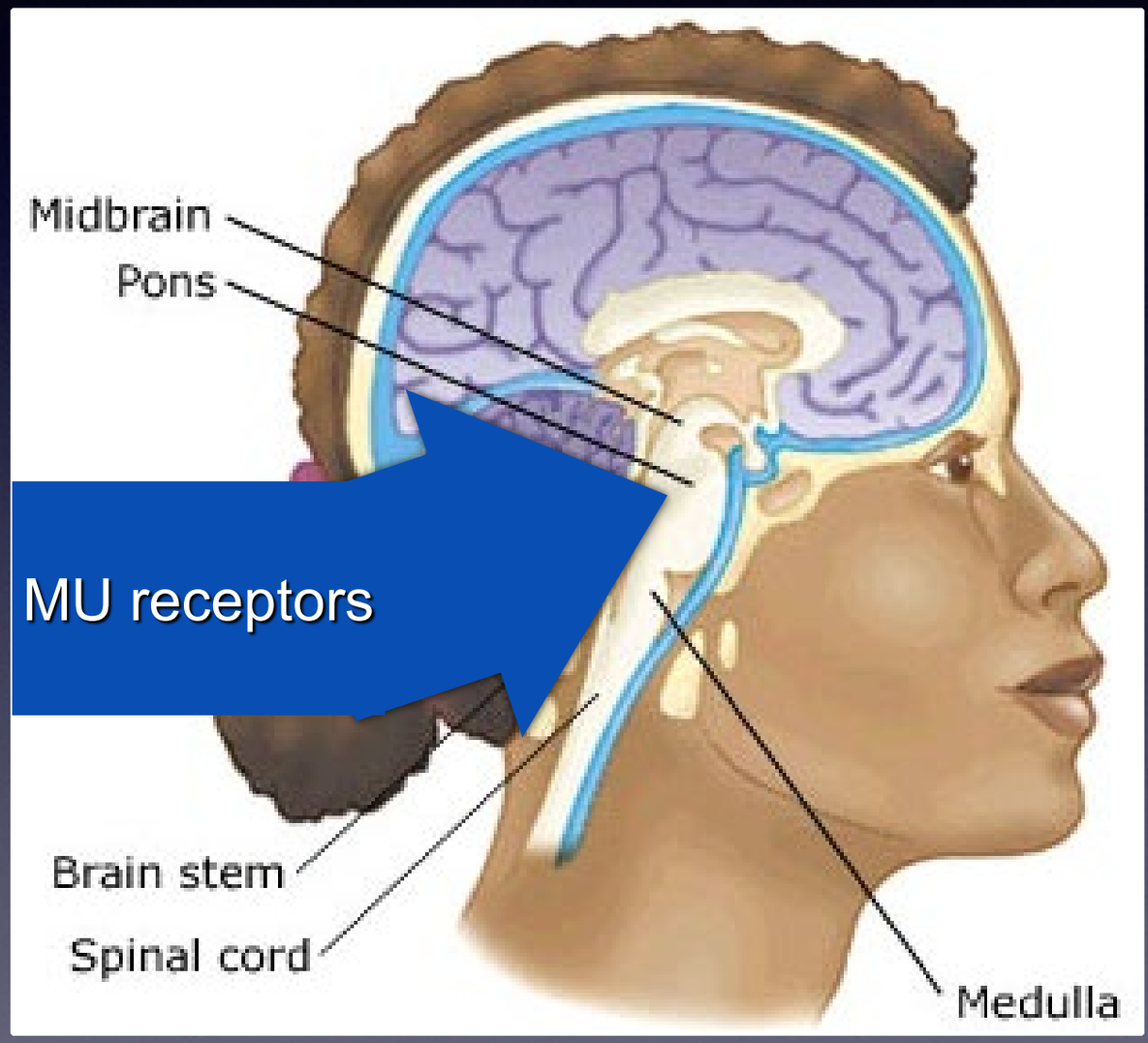
## Secondary hypogonadal hypogonadism

Reduced libido, fatigue, hot flashes, depressed mood, reduced facial hair, anemia, reduced muscle mass, weight gain, osteopenia/-porosis, erectile dysfunction.

Manchicanti, et al. Pain Physician, 2012;15:S67-S116

# Opioid Induced Respiratory Depression

- Opioids depress respiratory rate and tidal volume
- Causes central sleep apnea
    - Reduces medullary responsiveness to carbon dioxide levels
- Worsens obstructive sleep apnea
- Apnea severity is compounded by concomitant use of any other CNS depressant




Manchicanti, et al. Pain Physician, 2012;15:S67-S116

Bonica's Management of Pain, 2001. Loeser, JD, Ed.

Thomson Learning, Inc. 2002

# Opioid Induced Hyperalgesia (OIH)

**Heightened pain perception with opioid use, in the absence of disease progression**

- Mechanism not yet fully understood
- Evidence supports the phenomenon, but specific, official diagnostic criteria do not yet exist
- AAPMedicine Guidelines: "...must be handled appropriately.....[by] reducing the opioid doses or weaning patients off of opioids."
- Should include in informed consent

Brush, DE. Journal of Medical Toxicology, 2012;DOI 10.1007/s13181-012-0260-0
Manchicanti, et al. Pain Physician, 2012;15:S67-S116

# Cognitive Impairment

- Driving, operating machinery, climbing a staircase, making important decisions, and the ability to survive sleep are all impaired in certain circumstances:
  - Start of therapy
  - Change in dose
  - Change in interacting medication
  - Change in pregnancy status
  - Mixed with another intoxicant
- Stable doses in the absence of other factors *typically* do not impair cognition significantly

Wilhelmi & Cohen. Pain Physician, 2012;15:S215-S230

# Opioids & Driving

ASIPP guidelines:

- Recommend developing and monitoring a clinic policy on Driving Under the Influence of medications and drugs

Manchicanti, et al. Pain Physician, 2012;15:S67-S116

www.prevention.com

# Constipation

- Does not diminish with chronic use
- All guidelines recommend treating it
- Can treat prophylactically or reactively
- Complications include: discomfort, bowel obstructions, bowel perforation, diverticulosis

Chou, et al. The Journal of Pain, 2009;10(2):113-130
Manchicanti, et al. Pain Physician, 2012;15:S67-S116

# Opioids & the elderly

- Age-related decline in clearance of hepatic opioid metabolites
- More likely to have medication interactions: codeine and tramadol metabolism:  CYP2D6
- American Geriatrics Society 2012 Guidelines: Avoid meperidine; no other opioids mentioned
- Risk of falling is doubled at/above 50mg MEQ
- Risk of fracture is quadrupled with opioid therapy
- Associated with Community Acquired Pneumonia
- Constipation, nausea, and dizziness are most commonly reported

O'Neil, et al. The American Journal of Geriatric Pharmacotherapy, DOI:10.1016/j.amjopharm.2012.09.004
American Geriatrics Society Beers Guidelines, The American Journal of Geriatric Pharmacotherapy, 2012

# 4. Do not start with LA/ER formulations

- Higher risk of lethal overdose when LA/ER formulations are initiated first

# 5. Use caution when exceeding 50 MEQs, and avoid exceeding 90 MEQs or carefully justify the decision to do so

- VA Population:

- **20mg** Morphine 0.11 deaths per 1000

- **100mg** Morphine: 1.24 deaths per 1000

- Washington State HMO:

- Morphine equivalence of **50-99mg: 4** fold risk of overdose

- Morphine equivalence **> 100mg: 9 fold** risk of overdose

Manchicanti, et al. Pain Physician, 2012;15:S67-S116

# Opioid Conversion

| OPIOID | CONVERSION FACTOR |
|---|---|
| Codeine | 0.15 |
| Morphine | 1 |
| Oxycodone | 1.5 |
| Hydrocodone | 1 |
| Oxymorphone | 3 |
| Fentanyl transdermal (mcg/hr) | 2.4 |
| Hydromorphone | 4 |

Examples:

| | | |
|---|---|---|
| 10mg Oxycodone QID | 40mg x 1.5 | 60 MEQs |
| 30 mg Oxycontin BID + 5mg Oxycodone QID | 80mg x 1.5 | 120 MEQs |
| Fentanyl 25 mcg/hr + HC/APAP 5/325 q6h | 25mcg/hr x 2.4 + 20mg x 1 | 80 MEQs |

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# 6. When prescribing opioids for acute pain, use lowest dose and shortest duration: typically 3 days, and rarely more than 1 week

- Post-operative analgesia not covered by this guideline
- Study on acute low back pain showed large improvement on days 1-3, and diminishing returns thereafter
- Should not prescribe extra opioids “just in case” pain continues longer. Re-evaluate in the clinic

Coste, et al. BMJ, 1994;308:577-580

# 7. Evaluate risks/benefits within 1-4 weeks of starting opioids or with a dose escalation. Reevaluate q3 months or more frequently. If benefits do not outweigh risks, taper or discontinue opioids.

- Reassess more frequently than q3 months if:
  - Hx of Substance use disorder, depression or other mental health condition, history of overdose, taking other CNS depressants, or dose >/= 50 MEQs
- Reduce or discontinue opioids when:
  - Clinically meaningful improvements in pain and function are not sustained, opioid dose >/= 50 MEQ or combining opioids and benzodiazepines without evidence of benefit, patient experiences overdose or serious adverse event, or warning sign of serious adverse event

# Opioid Weaning Options

1. Abruptly discontinue (will result in acute withdrawal)
2. Aggressively wean over 2-3 weeks: decrease dose by 10% daily or 20% every 2-3 days
3. Slowly wean: decrease dose by 10% every 2-4 weeks, slowing to 5% reductions in the final third of the original dose
4. Transition to buprenorphine, and wean slowly

(2-3) Chronic Pain Medical Treatment Guidelines, 2009, AAPMedicine

# 8. Evaluate for opioid related harms, and prescribe naloxone rescue kits

- Use caution with mild sleep-disordered breathing (SDB), avoid opioids in patients with moderate to severe SDB
- Try to avoid acute opioid withdrawal in pregnancy
- Use caution in renal or hepatic insufficiency
- Increase frequency of reevaluation in patients with psychiatric illness; treat comorbid depression and anxiety
- Screen for substance use disorders (SUD). When present, treat both SUD and pain condition
- If non-fatal overdose occurs, reduce or DISCONTINUE opioids
- Prescribe narcan rescue kits

# 9. Review the PDMP at start and at least q3 months

- 16.10.14.8 NMAC
- All DEA holders must register with PDMP
- Must check PDMP report before issuing a prescription for schedule II, III, IV, V drug for a period of greater than 4 days
- Must check PDMP report at least every 3 months thereafter
- Exceptions:

| Nursing facility | Hospice |
|---|---|
| Testosterone | Pregabalin |
| Lacosamide | Ezogabine |
| Stimulant therapy for patients under age 14 | |

# 10. Perform urine drug testing before starting opioids, and at least annually* (*q6 months per NM Medical Board)

| | Mechanism | Pros | Cons |
|---|---|---|---|
| Presumptive (Screening) | ELISA | Cheaper<br>Faster | False positives<br>False negatives<br>General results |
| Definitive (Confirmatory) | GC/MS or LC/MS | Accurate<br>Specific | Expensive<br>Longer processing time |

# Presumptive (screening) testing can be inaccurate:

| Common false positive result | Possible cross-reactant |
|---|---|
| THC | Proton pump inhibitor<br>Efavirenz<br>Ibuprofen |
| Amphetamine | Bupropion<br>Promethazine<br>Metformin<br>Sudaphed |
| Opioids | Trazodone (fentanyl)<br>Verapamil (methadone)<br>Rifampicin<br>Diphenhydramine |
| Benzodiazepine | Sertraline |
| PCP | Venlafaxine<br>Lamotrigine |

| Common false negative result | Non-reactive |
|---|---|
| (benzodiazepine) | Clonazepam<br>Lorazepam |

Saitman, et al. Journal of Analytical Toxicology, 2014;38:387-396

# 11. Clinicians should avoid prescribing opioid pain medication and benzodiazepines concurrently whenever possible

- Risk of death is QUADRUPLED with this combination compared to opioids alone
- Co-prescribing with other respiratory depressants should also be avoided
- If both need to be discontinued, consider wean of opioids first
- If benzodiazepines are to be discontinued, can wean by 25% every 1-2 weeks
- CBT and/or non-benzo anxiolytics should be used to help with the process

# 12. Clinicians should offer or arrange evidence-based treatment (usually MAT) for patients with opioid use disorders

- Prevalence of opioid use disorder in primary care population on COT: 3%-26%

# NM Board of Medicine basic documentation standards for chronic pain treatment with COT

Document:

Results of physical exam

Any previous history of significant pain

Past history of alternate treatments for pain

Potential for substance abuse

Coexisting disease or medical conditions

Presence of a medical indication or contra-indication against the use of controlled substances

Prescription Monitoring Program report is appropriate

Controlled Substance Agreement is signed

16.10.14.9 NMAC

# NM Board of Medicine basic documentation standards for chronic pain treatment with COT

- Be familiar with and use screening tools as appropriate
- A written treatment plan shall be developed, tailored to individual needs, and including further testing, consultation and referral or use of other treatment modalities
- Discuss risks and benefits and document that discussion
- For controlled substances: document name of drug, quantity, prescribed dosage, and number of refills. For opioids, must document indication for use.
- For “controlled substance analgesics” use written agreement outlining patient responsibilities

16.10.14.9 NMAC

# NM Board of Medicine basic standards for chronic pain treatment with COT

- Shall review course of treatment, patient's state of health, any new information about the etiology of the chronic pain at least every 6 months
- Consult, when appropriate, with other professionals with more experience
- Require urine drug testing at the start of COT and at least every 6 months thereafter "to assess for prescribed medications as well as other controlled prescription drugs and illicit drugs"
- If, in a practitioner's medical opinion, a patient is seeking pain medications for reasons that are not medically justified, there is no obligation to prescribe the controlled substances

16.10.14.9 NMAC

# NM Board of Medicine basic standards for chronic pain treatment with COT

- Board will evaluate the quality of care based on:
  - Appropriate diagnosis and evaluation
  - Appropriate medical indication for the treatment prescribed
  - Documented change or persistence of the recognized medical indication
  - Follow up evaluation with appropriate continuity of care
  - The board will review both over-prescription and under-prescription of pain medications using the same standard of patient protection

16.10.14.9 NMAC

# How should opioids be started?

## Start with IR formulations

| OPIOID | STARTING DOSE |
|---|---|
| Hydrocodone | 5-10mg BID-TID |
| Oxycodone | 5-10mg BID-TID |
| Hydromorphone | 2mg BID-TID |
| Oxymorphone | 5mg BID-TID |
| Tramadol | 50mg BID-TID |

IR opioids can be dosed as frequently as Q2h, but typically Q4-8 hours

# Dosing Strategies

- Immediate Release (IR) formulations should be used initially

- Long-acting/extended release (LA/ER) formulations should only be used:

1. When dosing of IR formulation is providing inconsistent analgesia

2. To simplify a stable regimen

# Converting from IR to LA/ER opioids

- EXAMPLE 1: Adequate analgesia at peak concentration
  - Convert 24h current IR dose to LA/ER dose
  - 5mg Oxycodone q4h = 5mg x6 dose =  30mg/24h -> 15mg Oxycontin BID
- EXAMPLE 2: Inadequate analgesia at peak concentration
  - Convert 24h current IR dose to LA/ER dose
  - 5mg oxycodone q4h = 5mg x 6 dose = 30mg/24 h
    - Increase 24h dose by 25%: 30mg + 7.5mg = 37.5mg
    - Convert to 20mg Oxycontin BID

# Converting from IR to LA/ER opioids

- EXAMPLE 3: Episodic inadequate analgesia after conversion to LA/ER formulation

- Breakthrough dosing: 10% of total 24h dose
- MS Contin 15mg BID = 30mg q24h -> 30mg x 10% = 3mg
- Add HC/APAP 5/325 q4-6h PRN for breakthrough

# Indications for opioid rotation

- Occurrence of intolerable adverse effects
- Poor analgesic efficacy despite aggressive dose titration
- Problematic drug-drug interactions
- Preference or need for alternative route of administration
- Change in clinical status (e.g. Malabsorption) or clinical judgment suggesting benefit from agent with different pharmacokinetics
- Financial or drug availability considerations

Fine, et al. Journal of pain and symptom management, 2009;38(3):418-425

# Opioid Rotation Strategy

1. Calculate equianalgesic dose of new opioid

2. For all opioids other than methadone and fentanyl: reduce converted dose by 25%-50% (reduce by 70%-90% if switching to methadone)

3. Reassess and determine need to increase/decrease the converted dose by 15%-30%

4. If "breakthrough" treatment is needed, use 5%-15% of total daily dose, at appropriate intervals

Fine, et al. Journal of pain and symptom management, 2009;38(3):418-425

# Opioid Rotation Example

Original dose:

Oxycontin 60mg TID

Conversion to morphine:

60mg oxy TID -> 180mg oxy/24 h
180mg oxy x 1.5 = 270mg morphine

Reduce converted dose by 50%

270 x 0.5 = 135 mg/24 h

New dose of morphine sulfate:

45mg TID

# Opioid Weaning Options

1. Abruptly discontinue (will result in acute withdrawal)
2. Aggressively wean over 2-3 weeks: decrease dose by 10% daily or 20% every 2-3 days
3. Slowly wean: decrease dose by 10% every 2-4 weeks, slowing to 5% reductions in the final third of the original dose
4. Transition to buprenorphine, and wean slowly

(2-3) Chronic Pain Medical Treatment Guidelines, 2009, AAPMedicine

Questions, comments, refutations?

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