

NAVIGATING THE COMPLEXITIES OF PAIN MANAGEMENT IN GERIATRIC PATIENTS

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OBJECTIVES

- Utilize non-pharmacologic and pharmacologic treatments for common pain conditions in older adults.
- Counsel and monitor potential side effects of medication treatment.
- Refer patients with substance use disorder to appropriate resources.

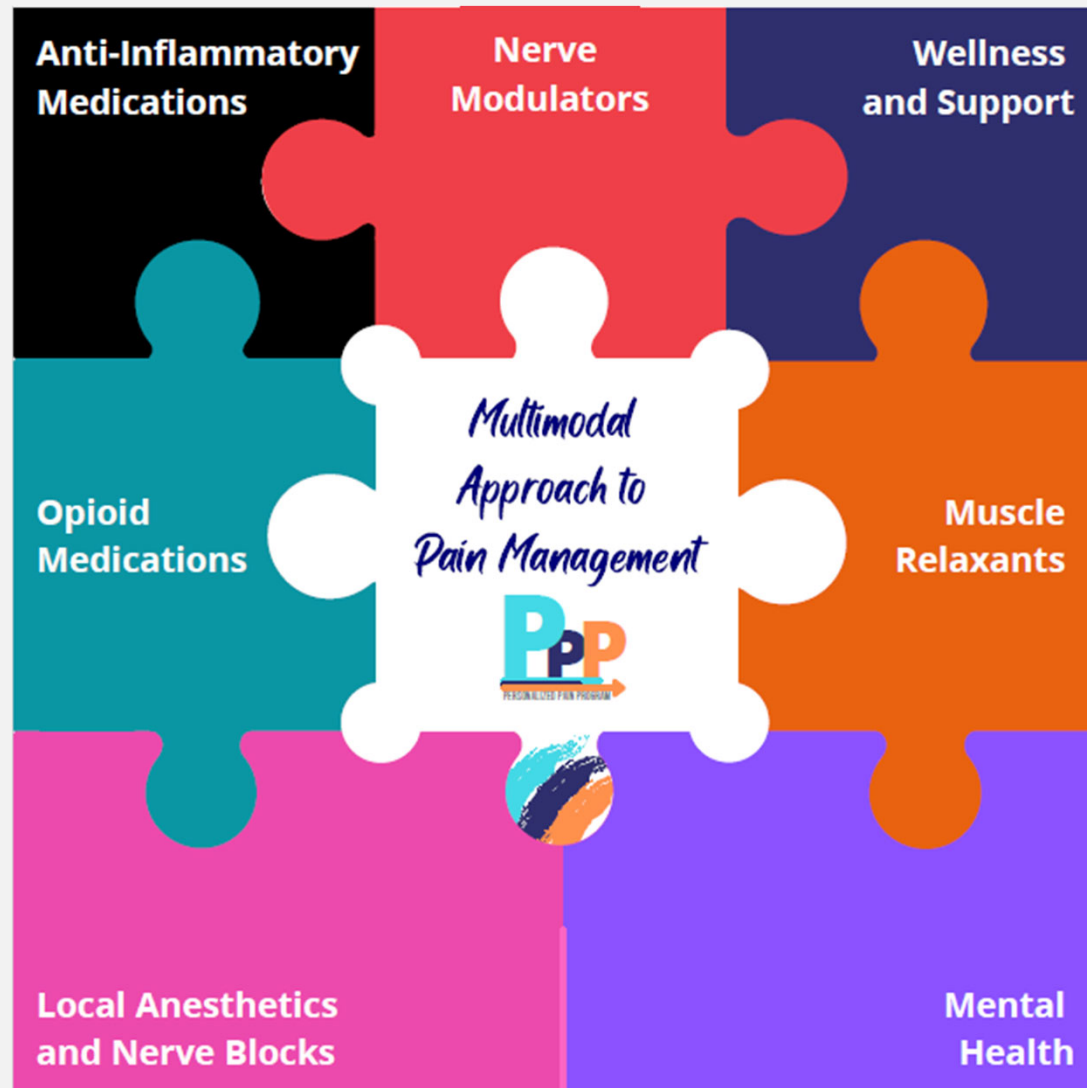
INTRODUCTION

- Prevalence:
 - Chronic pain affects 50-70% of adults >65 years.
- Etiology:
 - Often multifactorial
 - Commonly due to trauma, age-related changes, cancer, and other end-stage chronic disease
- Common Pain Conditions
 - Lower back pain
 - Arthritis
 - Typically knees and hips
 - Neuropathic pain
 - Post-surgical pain

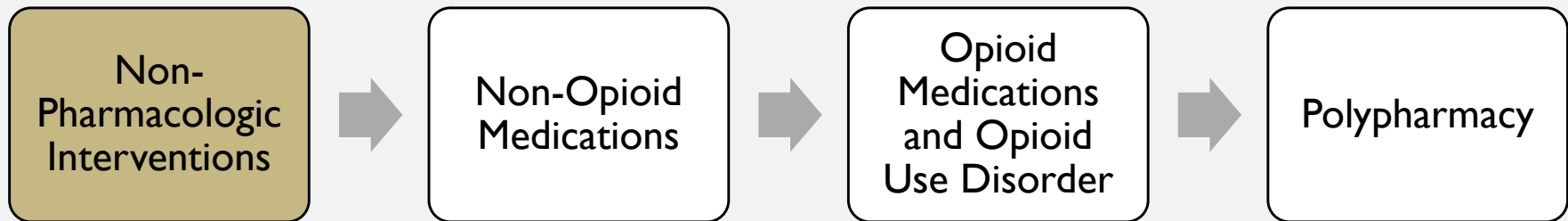
WHY SPECIAL ATTENTION IS NEEDED WHEN MANAGING PAIN IN OLDER ADULTS

- High incidence of **co-morbidities**
- High prevalence of **polypharmacy**
- Pain is influenced by **multiple factors**, including **biological**, psychological, and social factors.
- Chronic pain often co-occurs with **behavioral health conditions** (mental and substance use disorders).
- Preventions, assessment, and treatment of pain is a **persistent challenge** for clinicians.
- Significant impact on quality of life

MULTIMODAL APPROACH



TODAY'S TOPIC OUTLINE



NON-PHARMACOLOGIC INTERVENTIONS (ADJUNCT THERAPY)

Physical Treatments

- Heat therapy
- Acupressure
- Spinal Manipulation
- Remote Electrical Neuromodulation
- Exercise Therapy
- Weight Loss

Behavioral Treatments

- Cognitive behavioral therapy (CBT)
- Mindfulness-based stress reduction

ESTABLISHING GOALS

1. Establish realistic goals for pain and function

Goal 1 Pain Reduction

- Total pain relief is not a realistic expectation.
- Goal is to reduce pain by 20-30 %
- Utilize **PEG scores** at every visit to track and monitor pain levels *

Goal 2 Improved Function

- Goal is to improve quality of life
- Level of pain that interferes with quality of life depends on the individual

Goal 3 Minimize Side Effects

- Understand the side effects and risks of chosen pain treatments

Specific

S
G

What *exactly* are you trying to achieve?

Measurable

M
O

How will you know when you've achieved it?

Attainable

A
A

Is it genuinely possible to achieve it?

Relevant

R
L

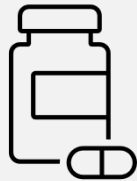
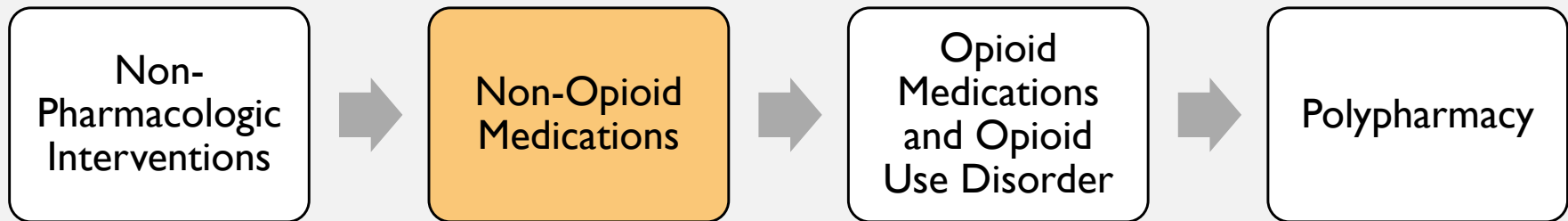
Does it contribute to your agency's revenue growth?

Time-bound

T
S

When do you want to achieve this by?

TODAY'S TOPIC OUTLINE



NON-OPIOID PHARMACOLOGIC INTERVENTIONS

Nonopioid Medications

- Acetaminophen (Tylenol)
- NSAIDS (oral and topical)
- SNRIs
- TCAs
- Gabapentinoids
- Skeletal Muscle Relaxants

NSAID: Nonsteroidal Anti-Inflammatory Drug
SNRIs: Serotonin-Norepinephrine Reuptake Inhibitors
TCAs: Tricyclic Antidepressants

ACETAMINOPHEN (TYLENOL)

- **Magnitude of benefits:** small
- **Possible Harms:** Hepatotoxicity (at large doses)
- **Place in therapy:**
 - First line for mild to moderate musculoskeletal pain due to limited side effects
 - Osteoarthritis: Acetaminophen provides minimal, clinically insignificant relief for hip or knee OA pain, showing no greater effectiveness than placebo, even at higher doses or in extended-release formulations (1)
- **Dosing:**
 - 2000mg/day in patients with liver disease
 - 4000mg/day in patients without liver disease

SYSTEMIC NONSTEROIDAL ANTI-INFLAMMATORY DRUGS (NSAID)

- **Magnitude of benefits:** small to moderate
- **Possible Harms:** GI ulceration, increased CV risk, renal toxicity
- **Place in therapy:**
 - First line for musculoskeletal pain, acute/chronic lower back pain
- **Contraindications:** CABG patients
- **Pearls:**
 - Adding to a pain regimen containing an opioid may have an opioid-sparing effect of approximately 20-30%
 - NSAID rotation may be beneficial

SYSTEMIC NONSTEROIDAL ANTI-INFLAMMATORY DRUGS (NSAID)

- **Two Classes:**
 - *Non-selective:* COX 1 and COX 2 (eg. Ibuprofen, Naproxen)
 - *Selective:* COX-2 (eg. Celecoxib, Meloxicam)
 - Reduced risk of GI side effects, potential prothrombotic effect
- **Side effects:**
 - GI side effects: nausea, diarrhea, and mucosal damage (ulcers, perforations, bleeding)
 - Renal toxicity
 - Cardiovascular risks: increase risk of heart failure and exacerbate heart failure symptoms
 - Avoid in patients with a significant cardiovascular history

SYSTEMIC NONSTEROIDAL ANTI-INFLAMMATORY DRUGS (NSAID)

BEERs Recommendations:

- Increased risk of GI bleeding of peptic ulcer disease
 - **Avoid use** unless other alternatives are not effective and the patient can take a gastroprotective agent (PPI or misoprostol)
- Kidney Dysfunction:
 - **Avoid use** in patients with severe renal dysfunction (CrCl < 30mL/min) due to increased risk of acute kidney injury (AKI) and further decline in renal function
- Heart Failure:
 - **Avoid use** due to increased fluid retention, worsening symptoms, increased blood pressure

SYSTEMIC NONSTEROIDAL ANTI-INFLAMMATORY DRUGS (NSAID)

- **Prevention of GI toxicity:**

- Add PPI, high dose H2 blocker, or misoprostol for individuals at high risk

PPI = Proton Pump Inhibitor; omeprazole, esomeprazole, pantoprazole, dexlansoprazole
H2 blocker = histamine H2 receptor blockers; famotidine, cimetidine

- Patient risk factors:

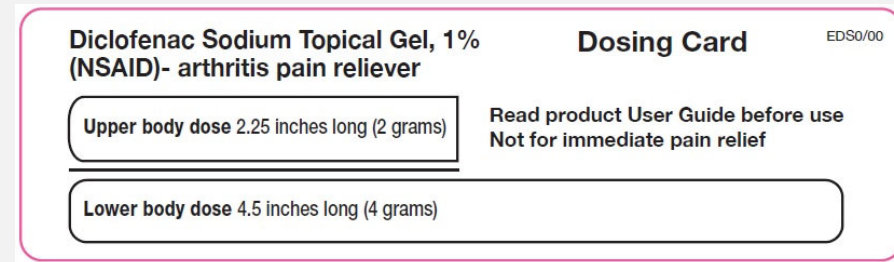
- Age > 65, history of GI bleed or peptic ulcer
- Use of steroids, anticoagulants, or other NSAIDs including aspirin
- Helicobacter pylori infection

- **Minimize Cardiac Risk**

- Avoid use in patients with a history of cardiovascular disease or high baseline cardiovascular risk
- Naproxen may have the lowest risk of cardiac side effects

TOPICAL NONSTEROIDAL ANTI-INFLAMMATORY DRUGS (NSAIDS)

- **Agent:** Diclofenac Gel
- **Place in therapy:**
 - Localized osteoarthritic pain
 - Strong recommendation for knee; conditional recommendation for hand; no recommendation for hip (2019 ACR/AF OA Management Guidelines)
- **Clinical Pearls:**
 - Limited side effect profile compared to systemic NSAIDs, available OTC
 - Limited use due to the required multiple applications per day, and it can be messy



SEROTONIN NOREPINEPHRINE RECEPTOR ANTAGONIST

- **Agents:** Duloxetine and venlafaxine
- **Magnitude of Benefit:** small-moderate
- **Possible Harms:** Weight gain, sexual dysfunction, insomnia/agitation, orthostatic hypotension, QTc prolongation
- **Place in therapy:**
 - First line: Neuropathic pain (diabetic or chronic musculoskeletal pain)
- **Pearls:**
 - Useful in patients with concurrent depression and/or anxiety
- **BEERs Recommendations:**
 - Duloxetine: consider **avoiding use** in patients with renal dysfunction due to increased GI adverse effects (nausea, diarrhea)
 - **Use with caution** in patients with a history or risk factors for SIADH or hyponatremia due to increased risk in older adults
 - *SIADH (Syndrome of Inappropriate Antidiuretic Hormone Secretion)*

TRICYCLIC ANTIDEPRESSANTS (EG. AMITRIPTYLINE, IMIPRAMINE, NORTRIPTYLINE)

- **Agents:** Nortriptyline, amitriptyline
- **Magnitude of Benefit:** Small to moderate
- **Place in therapy:**
 - First line for neuropathic pain (diabetic or musculoskeletal pain)
- **Pearls:**
 - Useful in patients with concurrent depression and/or anxiety
- **BEERs Recommendation:** **AVOID**, highly anticholinergic

Anticholinergic effects: dry mouth, blurred vision, constipation, urinary retention, tachycardia, cognitive impairment, dizziness/drowsiness

GABAPENTINOIDS

- **Agents:** Gabapentin and pregabalin
- **Magnitude of Benefit:** small to moderate
- **Possible Harms:** sedation, dizziness, ataxia
- **Place in therapy:**
 - First line: for diabetic nerve pain
- **Clinical Pearls:**
 - Pregabalin is approved for fibromyalgia
- **BEERs Recommendations:**
 - **Use with caution** in patients with renal dysfunction

SKELETAL MUSCLE RELAXANTS

- **Agents:** tizanidine, baclofen, cyclobenzaprine, methocarbamol
- **Magnitude of benefit:** limited evidence for pain, often used for muscle spasms
- **Possible harms:**
 - Dizziness, sedation, anti-cholinergic side effects and weakness
- **Place in therapy:**
 - Some evidence to support its use in the treatment of acute lower back pain
- **Clinical Pearls:**
 - Baclofen may have fewer anticholinergic side effects compared to the other skeletal muscle relaxants

SKELETAL MUSCLE RELAXANTS (TIZANIDINE, BACLOFEN, CYCLOBENZAPRINE, METHOCARBAMOL)

- **BEERs Criteria Recommendations:**
 - Effectiveness at dosages tolerated by older adults is questionable
 - **Renal Dysfunction:**
 - **Avoid use** in patients with CrCl < 60ml/min due to increased risk of encephalopathy requiring hospitalization
 - **Anticholinergic Adverse Effects:**
 - **Avoid due** to the high risk of sedation and increased risk of fractures

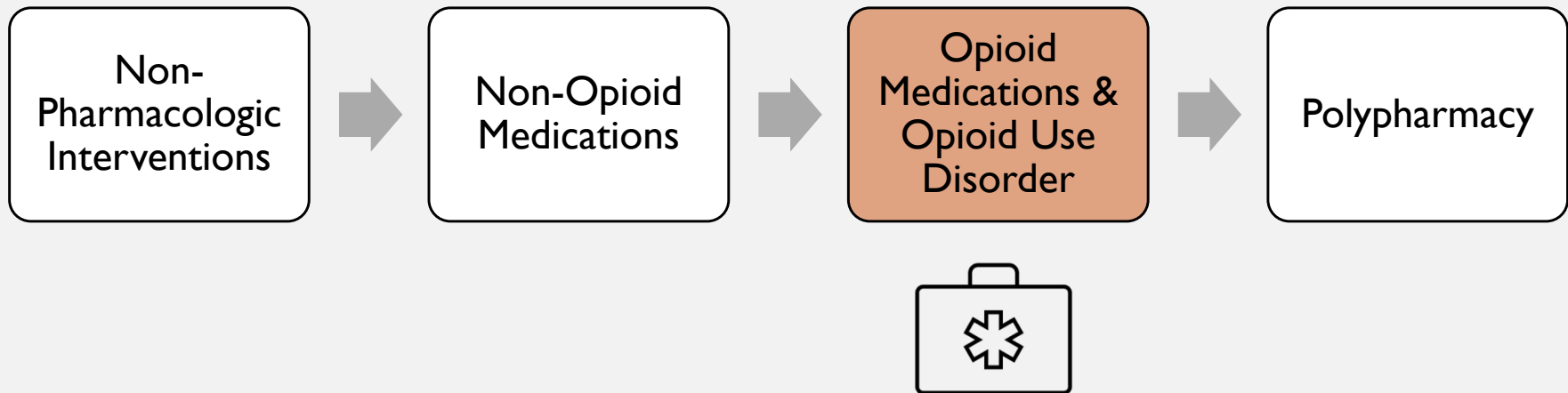
LIDOCAINE

- **Agents:** Lidocaine gel, lidocaine patches
- **Magnitude of benefit:** small to moderate
- **Possible harms:**
 - Limited side effects due to minimal systemic absorption
- **Place in therapy:**
 - Neuropathic pain, postoperative pain
- **Clinical Pearls:**
 - Do not apply to open wounds
 - Patch requires 12 hour off period

OTHER TOPICAL OPTIONS

- **Capsaicin cream**
 - Limited use due to initial burning
 - Avoid accidental application to any mucous membranes
- **Methylsalicylate**
 - Limit benefit: although it may help alleviate some soreness/stiffness

TODAY'S TOPIC OUTLINE



OPIOID USE IN GERIATRIC PATIENTS

- Frequent use due to limited non-opioid options.
- Increased risks with aging.
- Routine assessment for adverse effects.
- Use validated screening tools for assessing opioid use disorder (OUD) and changes in cognition.
- **Side Effects:**
 - Sedation, cognitive impairment, constipation
 - Increased risk of falls and hospitalization

MANAGING OPIOID SIDE EFFECTS

- **Constipation:**
 - High prevalence in older adults and when increasing opioid dose
- **Management strategies:**
 - Non-Pharmacologic:
 - High fiber diet, increased fluid intake, and increased physical activity
 - Pharmacologic: daily stool softeners **IN ADDITION** to stimulant laxatives
 - Docusate twice daily and senna daily
 - If unsuccessful, add polyethylene glycol
 - For severe opioid-induced constipation, consider methylnaltrexone

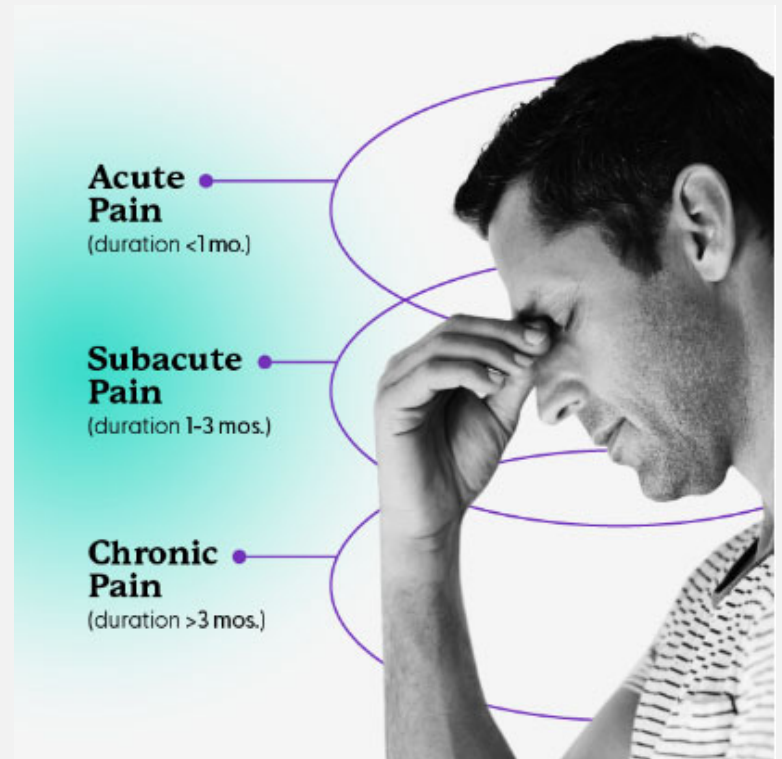
2022 CDC Clinical Practice Guideline for Prescribing Opioids for Pain

Includes

- Recommendations for managing acute, subacute, and chronic pain.
- Outpatients age ≥ 18 years

Does NOT include

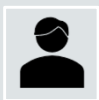
- Pain management recommendations for patients with **sickle cell disease, cancer, or those receiving palliative or end-of-life care.**



Five Guiding Principles from the CDC



Acute, subacute, and chronic pain needs to be appropriately assessed and treated independent of whether opioids are part treatment.



Recommendations are voluntary and are intended to support, no supplant, individualized, patient-centered care.



A multimodal and multidisciplinary approach to pain management is critical.



Special attention should be given to avoid misapplying this clinical practice guidelines beyond its intended use that might lead to unintended patient harm.



Clinicians, practices, health systems, and payers should vigilantly attend to health inequities.

OPIOIDS

- **2022 CDC Clinical Practice Guidelines for Prescribing Opioids for Pain Recommendations:**
 - After non-opioid therapies have been maximized
 - After determining whether the perceived benefits outweigh the risks
 - **Acute pain:** Nonopioid therapies are at least as effective as opioids
 - **Subacute/chronic pain:** Nonopioid therapies are preferred

OPIOIDS

- **BEERs Recommendations:**
 - **Avoid use** in combination with **benzodiazepines and benzodiazepine-like medications** due to increased risk of overdose and adverse events (respiratory depression and sedation)
 - **Avoid use** in combination with **gabapentinoids** due to the increased risk of severe sedation-related adverse events like respiratory depression and death

SELECTING AND DETERMINING DOSAGES

- When starting opioid therapy for **acute, subacute, or chronic pain**:
 - **Prescribe immediate-release (IR) opioids** instead of extended or long-acting (ER/LA) opioids
- When opioids are initiated for **opioid-naïve patients** with acute, subacute, or chronic pain
 - **Prescribe the lowest effective dosage.**
- For patients **already receiving opioid therapy**, carefully weigh benefits and risks and exercise care when changing opioid dosage
 - If benefits **do not** outweigh risks to continue opioid therapy:
 - Optimize other therapies and work closely with patients to **gradually taper to lower dose** OR
 - Appropriately **taper and discontinue opioids** (if warranted based on the individual clinical circumstances of the patient)
 - Opioid therapy **should not be discontinued abruptly** and opioid dosages **should not be rapidly reduced**

DECIDING DURATION OF INITIAL OPIOID PRESCRIPTION AND CONDUCTING FOLLOW-UP

- 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.
- **Evaluate benefits and risks with patients within 1 to 4 weeks of:**
 - Starting opioid therapy for **subacute or chronic pain** OR
 - Following dosage escalation
- **Regularly re-evaluate** benefits and risks of continued opioid therapy with patients.



DECIDING DURATION OF INITIAL OPIOID PRESCRIPTION AND CONDUCTING FOLLOW-UP

Acute Pain

- **Duration:** < 1 month
- Assess benefits and risks for opioids at least **every 2 weeks**
- Avoid prescribing additional opioids to patients "just in case" pain continues longer than expected
- Ensure that potentially reversible causes of chronic pain are addressed

Subacute Pain

- **Duration:** 1-3 months
- Re-evaluate within 1 to 4 weeks of starting opioid therapy

Chronic Pain

- **Duration:** > 3 months
- Re-evaluate within 1 to 4 weeks of starting long-term opioid therapy or of dose escalation
- Assess the benefits and risks of opioid at least **every 3 months**

- Use caution when prescribing opioids at any dosage.
- Reassess the patient's pain, function, and treatment course.
- Evaluate carefully individual benefits and risks when considering increasing dosage.
- Avoid increasing dosage above levels likely to yield diminishing returns in benefits relative to risks to patients.
- Address potentially reversible causes of chronic pain.
- Establish treatment goals when seeing new patients receiving opioids.
- Avoid rapid tapering or abrupt discontinuation of opioids.

ASSESSING RISK AND ADDRESSING POTENTIAL HARMS OF OPIOID USE

- Evaluate risk for opioid-related harms and discuss with patients
 - Before starting opioid therapy
 - Periodically during continuation of opioid therapy
- Incorporate strategies to mitigate risks of opioid therapy, including **offering naloxone**.
- Review patient's history of controlled substance prescriptions using state **prescription drug monitoring program (PDMP)** data when:
 - Prescribing initial opioid therapy for acute, subacute, or chronic pain
 - Periodically during opioid therapy for chronic pain

ASSESSING RISK AND ADDRESSING POTENTIAL HARMS OF OPIOID USE

- When prescribing opioids for **subacute or chronic pain**, consider the benefits and risks of **toxicology testing (urine drug screens)** to assess for prescribed medications as well as other prescribed and non-prescribed controlled substances.
- **Use caution** when prescribing opioids with concurrent central nervous system depressants:
 - Benzodiazepines
 - Muscle relaxants
 - Non-benzodiazepine sedative hypnotics
 - Gabapentin and pregabalin
- Offer or arrange treatment with evidence-based medications to treat **patients with opioid use disorder (OUD)**.

ATYPICAL OPIOIDS AND CLINICAL PEARLS

TRAMADOL

- **Place in therapy:**
 - Avoid ER formulation
 - Has serotonergic activity
- **BEERs Recommendation:**
 - **Avoid use** in patients with severe renal dysfunction (CrCl <30ml/min) due to increased risk of CNS adverse effects
 - Increased risk of serotonin syndrome due to serotonergic activity

COMBINATION OPIOIDS

- **Agents:** APAP/oxycodone, APAP hydrocodone)
 - Ensure the patient does not exceed max dosing of acetaminophen when using combination opioids

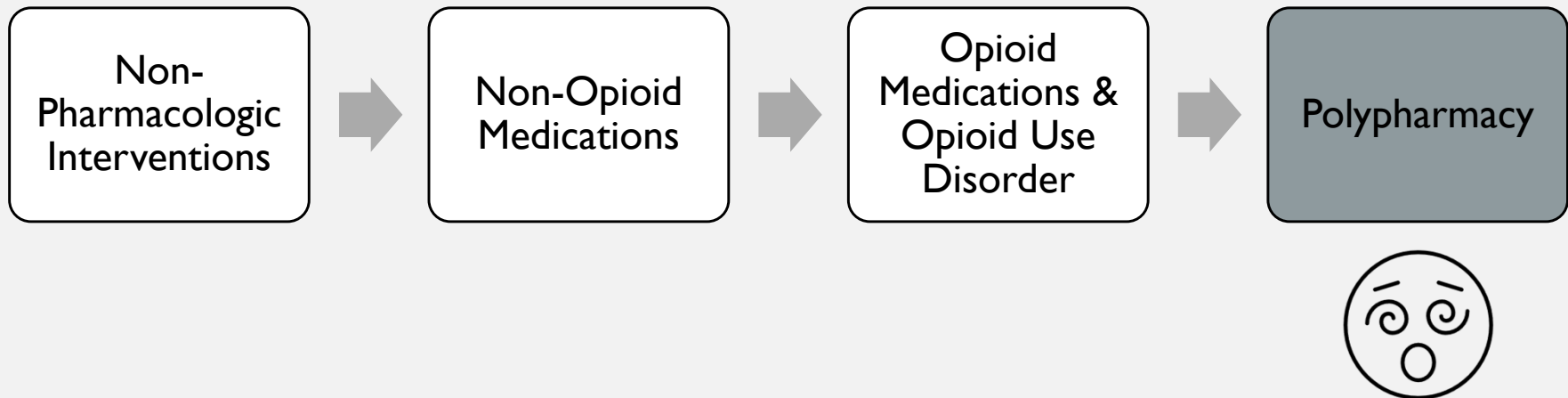
OPIOID USE DISORDER (OUD) IN OLDER ADULTS

- Older adults with OUD appear to be at a higher risk of death
- **Challenges:** underdiagnosis and limited awareness.
- Symptoms may be similar to other medical conditions common in older adults, including depression, delirium, or dementia.
- **First-line treatment options:**
 - Buprenorphine: preferred for safety and efficacy; more widely available (although limited prescribers)
 - Methadone: typically, second line due to limited patient treatment programs (very few in AR; travel barriers)

SCREENING AND MONITORING TOOLS

- **Functional Status:**
 - [PAINAD](#) scale for dementia patients
 - [PROMIS](#) scores for self-reported pain and function
- **Cognitive Decline:**
 - Pain underdiagnosis in cognitively impaired patients
 - Observe non-verbal pain indicators (facial expression, body language, vocalization, changes in behavior and physical function, decrease social interaction)
- **OUD Screening is critical for early identification**
 - Tools: [DSM-5 criteria](#), [Opioid Risk Tool](#)
 - Consider cognitive impairments in assessment

TODAY'S TOPIC OUTLINE



POLYPHARMACY IN OLDER ADULTS

- **Definition:** use of 5 or more medications concurrently.
- Common due to comorbidities and chronic pain.
- **Associated with negative outcomes:**
 - Increased risk of drug-drug interactions, adverse outcomes, and adherence issues.
 - Increased risk of falls and hospitalizations.




SO, WHAT SHOULD WE DO ABOUT POLYPHARMACY?


- **Identify patients who are at a high risk of polypharmacy**
 - BEERS criteria
 - Anticholinergic burden calculator ([ACB Calculator](#))
 - Recognize prescribing cascades
 - Medication without indications
- **Consider the following interventions:**
 - Deprescribing ([Deprescribing Guidelines and Algorithms - Deprescribing.org](#))
 - Considering tapering off certain medications in stable patients
 - Provide education to providers
 - Use “end dates” on short-term prescriptions (NSAIDs, PPIs, diuretics, etc.)




deprescribing.org

ANTICHOLINERGIC BURDEN SCALE OR ([ACB CALCULATOR](#))




Start typing... 

Score:
Medicine:
Brands:

Start typing... 

Score:
Medicine:
Brands:

Start typing... 

Score:
Medicine:
Brands:

[+ Add new medicine](#) [Reset](#)

Total ACB Score:

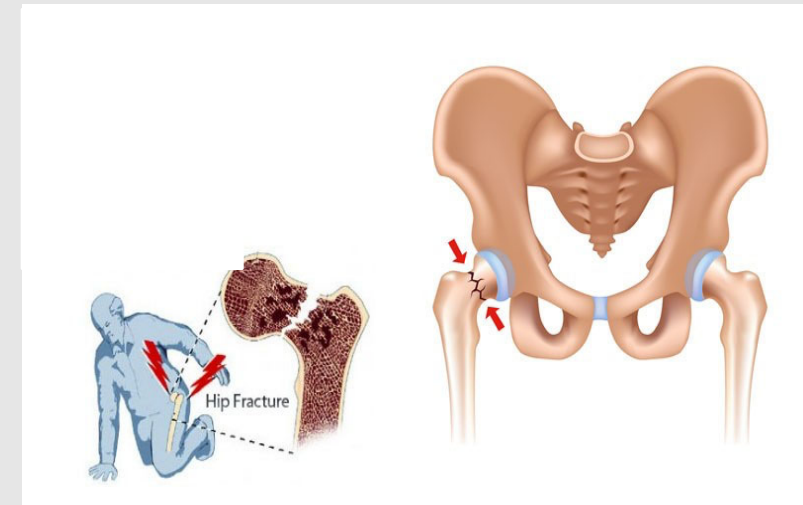
- Drugs with possible anticholinergic burden score 1.
- Drugs with definite anticholinergic burden score 2 or 3.
- If you cannot find your medication listed in the calculator, you can assume it scores 0.

Neuropathic Pain	
Agent	ACB score
amitriptyline , and other TCAs	3
duloxetine, venlafaxine	0-1
gabapentinoids	0

Muscle Relaxants	
Agent	ACB score
Methocarbamol	3
Baclofen	1
Tizanidine	3
Cyclobenzaprine	2

BEERS CRITERIA AND POLYPHARMACY

- **CNS Active Medications:**
 - **Avoid the use** of 3 or more of these medications due to the increased risk of falls and fractures.
 - EX: Antidepressants, antiepileptics, antipsychotics, benzodiazepines, muscle relaxants, opioids
- **Anticholinergic Medications:**
 - Minimize the number of anticholinergic medications to reduce the risk of cognitive decline, delirium, and falls or fractures



KEY TAKEAWAYS

- Common geriatric pain conditions require tailored approaches.
- Polypharmacy and opioid risks must be managed carefully.
- Regular reassessments to monitor pain and function.
- Ensure alignment with patient goals.
- Screening and treating OUD improves outcomes.

PATIENT CASE

During a routine follow-up visit, a patient's daughter raises concerns about his opioid use and recent changes in behavior. You are asked to assess the patient for possible opioid use disorder (OUD) and develop a treatment plan.

PATIENT BACKGROUND

Name: John Richardson

Age: 72 years

Gender: Male

Weight: 82 kg (180 lbs)

Height: 5'10"

Past Medical History:

- Chronic low back pain (due to osteoarthritis)
- Hypertension
- Type 2 Diabetes Mellitus
- Mild cognitive impairment (MMSE score: 26/30)
- Gastroesophageal reflux disease (GERD)

Medications:

- Oxycodone 10 mg ER BID (prescribed for chronic pain for 5+ years)
- Lisinopril 10 mg daily
- Metformin 1000 mg BID
- Omeprazole 20 mg daily
- Acetaminophen 650 mg PRN (takes 2-3x/week)

Social History:

- Retired construction worker
- Lives alone; two adult children check in periodically
- Occasional alcohol use (2-3 drinks/week)
- Smoked cigarettes for 30 years, quit at age 60
- No history of illicit drug use

PATIENT CONCERNS

John arrives for a scheduled follow-up visit, but his daughter expresses concerns about his opioid use. She reports that:

- He has been "losing track" of his medication supply and requesting early refills.
- He has become more withdrawn and less engaged in social activities.
- He had a fall at home last month, resulting in bruising.
- She found an old prescription bottle with oxycodone 5 mg IR from another provider, filled a year ago.

Objective Findings:

- **BP:** 138/76 mmHg
- **HR:** 82 bpm
- **RR:** 16 breaths/min
- **Pain score:** 7/10 (reports worse pain in the morning)
- **Cognition:** Slightly slower response time but oriented to person, place, and time

DISCUSSION POINTS

1. How would you assess John for opioid use disorder using validated screening tools?
2. What risk factors increase his likelihood of opioid-related harm?
3. How would you approach discussing opioid tapering or alternative pain management strategies?
4. What pharmacologic and non-pharmacologic treatment options for pain management and possible OUD are appropriate for older adults?

QUESTIONS?

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