

## Utilizing Non-Opioids for Chronic Pain in the Setting of an Opioid Epidemic

### EDUCATIONAL OBJECTIVES:

After completing this activity, the participant should be able to:

1. Describe the challenges associated with pharmacologic treatment of chronic pain.
2. Identify non-opioid therapies that can substitute for opioids when it comes to treating chronic pain.
3. Compare and contrast the clinical efficacy and safety profiles of alternative therapies for chronic pain management.
4. Recognize the role of the pharmacist in reducing pain.

### CE EXAM RATIONALE

**1. Which of the following is *false* with regard to the challenges of treating chronic pain?**

- A. Pain is highly subjective
- B. Pain is dynamic
- C. The various types of pain may not be properly assessed
- D. There are no effective treatments for pain other than opioids\*\*\*

**Correct answer: D**

*Treating pain is often difficult because of its highly subjective nature. Pain is dynamic; it can change and does not remain static. There are different types of pain, which if not properly assessed, could lead to difficulties in finding an effective treatment option. Acetaminophen is considered first-line treatment for many pain conditions because of its safety advantages. NSAIDs may be an effective alternative to opioids in certain populations. Topical NSAIDs can also be considered for those at high risk for adverse events. Antidepressants and anticonvulsants are important adjunctive groups of medications for pain management.*

**2. Which one of the following pain types would respond best to an antidepressant or anticonvulsant?**

- A. Idiopathic pain
- B. Neuropathic pain\*\*\*
- C. Nociceptive pain
- D. Somatic pain

**Correct answer: B.**

*Neuropathic pain is described as burning, throbbing, nerve related pain and often responds to antidepressants and anticonvulsants. Nociceptive pain is described by tissue or organ-related pain and often responds to acetaminophen, NSAIDs, and opioids.*

**3. All of the following are true regarding the use of opioids for chronic pain except:**

**A. Long-term studies have shown that chronic use of opioids is more effective than non-opioids\*\*\***

B. Studies have shown that chronic use of opioids is correlated to increased abuse and dependence

C. Studies of opioids in elderly patients have shown an increase in risk of falls, fractures, and hospitalizations

D. Studies of opioids show that tolerance may develop requiring escalating doses with chronic use

**Correct answer: A**

*According to the 2016 CDC guidelines for prescribing opioids for chronic pain, there are no long-term studies that meet CDC standards comparing the effectiveness of opioids versus non-opioids or placebo for chronic pain. What is known is that physiologic tolerance can also develop to opioids requiring escalating doses with chronic use. The guidelines provide evidence that chronic use of opioids can be linked with increased opioid abuse or dependence. A higher dose of opioid therapy is associated with higher incidences of overdose. Additional risks in elderly patients include increased rates of falls, fractures, and hospitalizations.*

**4. Which one of the following is true regarding acetaminophen?**

A. Acetaminophen is typically considered last-line therapy for chronic pain conditions

B. When dosed appropriately, acetaminophen is correlated with high rates of efficacy with chronic use

**C. When dosed appropriately, acetaminophen is correlated with low rates of adverse events with chronic use\*\*\***

D. Acetaminophen is not toxic with overdose

**Correct answer: C**

*Acetaminophen is typically considered first-line therapy for chronic pain conditions including osteoarthritis and chronic pain associated with total knee arthroplasty. Compared to other analgesics available, acetaminophen is associated with very few adverse events and is considered safe to use chronically. Safety concerns associated with acetaminophen include serious liver damage if ingestion is greater than the recommended total daily dose of 4,000 mg. The disadvantage to acetaminophen is that it*

can often not provide a sufficient analgesic effect and does not exert a specific anti-inflammatory effect, causing many patients to discontinue or switch therapies.

**5. Which one of the following patients would be the *best* candidate for NSAID therapy?**

- A. A 42-year-old female with peptic ulcer disease
- B. A 48-year-old female with hypothyroidism\*\*\***
- C. A 56-year-old male with history of coronary heart disease and myocardial infarction
- D. A 62-year-old male with chronic kidney disease

**Correct answer: B**

*Chronic use of NSAIDs should be avoided in patients with significant ischemic heart disease or cerebrovascular disease. Patients who may be at risk for gastrointestinal adverse effects from NSAIDs include those with a history of ulcers, concurrent use of another NSAID, anticoagulants, or corticosteroids; those who require a high dose of an NSAID; and those who are >75 years. Chronic use of NSAIDs should be avoided in anyone with chronic renal insufficiencies.*

**6. Which of the following is *true* regarding the finding of a Cochrane review of treating chronic low back pain with NSAIDs versus opioids?**

- A. Opioids were superior to NSAIDs
- B. NSAIDs were superior to opioids
- C. Opioids did not show superiority over NSAIDs \*\*\***
- D. NSAIDs were inferior to opioids

**Correct answer: C**

*Based on Cochrane reviews, opioids (including morphine and oxycodone) did not show superiority over NSAIDs when used for treating chronic low back pain. Therefore, NSAIDs could be considered as an effective alternative to opioids in this population.*

**7. Which one of the following is *true* regarding duloxetine?**

- A. It is an anticonvulsant therapy used for chronic pain
- B. It is FDA-approved to treat fibromyalgia\*\*\***
- C. It has not been shown to be efficacious in chronic pain
- D. It has not been shown to be cost-effective for chronic pain

**Correct answer: B**

*Duloxetine is currently FDA-approved for the management of chronic pain caused by fibromyalgia and has been shown to be effective in at least three other chronic pain conditions including diabetic peripheral neuropathy, chronic low back pain and knee osteoarthritis. In a pharmacoeconomic study investigating the cost-effectiveness of utilizing duloxetine in chronic pain from osteoarthritis, duloxetine was more cost-effective than oxycodone and tramadol. Additionally, after considering adverse events, duloxetine was also more cost-effective than naproxen.*

**8. Which one of the following is true regarding TCAs?**

- A. TCAs are effective for all pain types
- B. TCAs will provide immediate pain relief
- C. TCAs can have anticholinergic effects\*\*\*
- D. TCAs are expensive so their cost can be a barrier to therapy

**Correct answer: C**

*Antidepressants that are commonly used in patients with neuropathic pain include tricyclic antidepressants (TCAs). Some advantages of using TCAs include their extensive history of use for pain management and their low cost. Although they have been utilized with success in neuropathic pain conditions, TCAs may not be effective for all pain types. Numerous potential side effects also complicate treatment due to the TCAs' anticholinergic profile, including dry mouth, constipation, blurred vision, and sedation. Nortriptyline is associated with fewer of these effects compared to amitriptyline.*

**9. Which one of the following is true regarding anticonvulsants for chronic pain?**

- A. Pregabalin has been shown to be effective only for postherpetic neuralgia
- B. Adding anticonvulsants may increase the amount of opioids required, due to a clinically significant drug interaction
- C. Gabapentin has FDA approval for four different chronic pain conditions
- D. Gabapentinoids can provide fast pain relief, even during titration\*\*\*

**Correct answer: D**

*Gabapentinoids provide fast pain relief during the titration period and have also been found to improve both sleep and mood. However, time may be required to find the correct dose to balance such pain relief alongside minimal adverse drug events. Trials utilizing pregabalin consistently demonstrate that it can improve neuropathic pain control while significantly reducing the amount of opioids a patient consumes. Gabapentin is FDA-approved for postherpetic neuralgia (PHN) where pregabalin has*

*received FDA approval for PHN and additional pain types including diabetic peripheral neuropathy, fibromyalgia, and neuropathic pain associated with spinal-cord injuries.*

**10. Which one of the following is *true* about the role of pharmacists in the treatment of chronic pain?**

- A. Pharmacists can improve patient satisfaction and reduce pain \*\*\*
- B. Pharmacists cannot intervene for chronic pain, as it is outside a pharmacist's scope of practice
- C. Pharmacists should deny all chronic opioid prescriptions
- D. Pharmacists should recommend acetaminophen for first-line treatment for all pain conditions

**Correct answer: A**

*Two systematic reviews evaluating the effectiveness of pharmacist interventions in pain management have proven their importance with regard to both patient satisfaction and statistically significant reduction in pain. Acetaminophen is considered first-line treatment for many chronic pain conditions due to its safety, but this must be individualized for each patient and his or her diagnosis.*