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  - Type your question & hit Enter
  - Questions will be answered at the program's end, or offline if time runs out
- About technical issues or CE credit —
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  - Our team will reply to your question right away

Housekeeping notes

- This webinar is being recorded for on-demand access later, after the series' conclusion
- To earn CE, you must attend the entire session
- **For those sharing a computer**
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  - Instructions will also be emailed to the program registrant

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Administrator credit

This program has been approved for Continuing Education for one total participant hour by NAB/NCERS. Approval #20210604-1-A66886-DL

Pain Management

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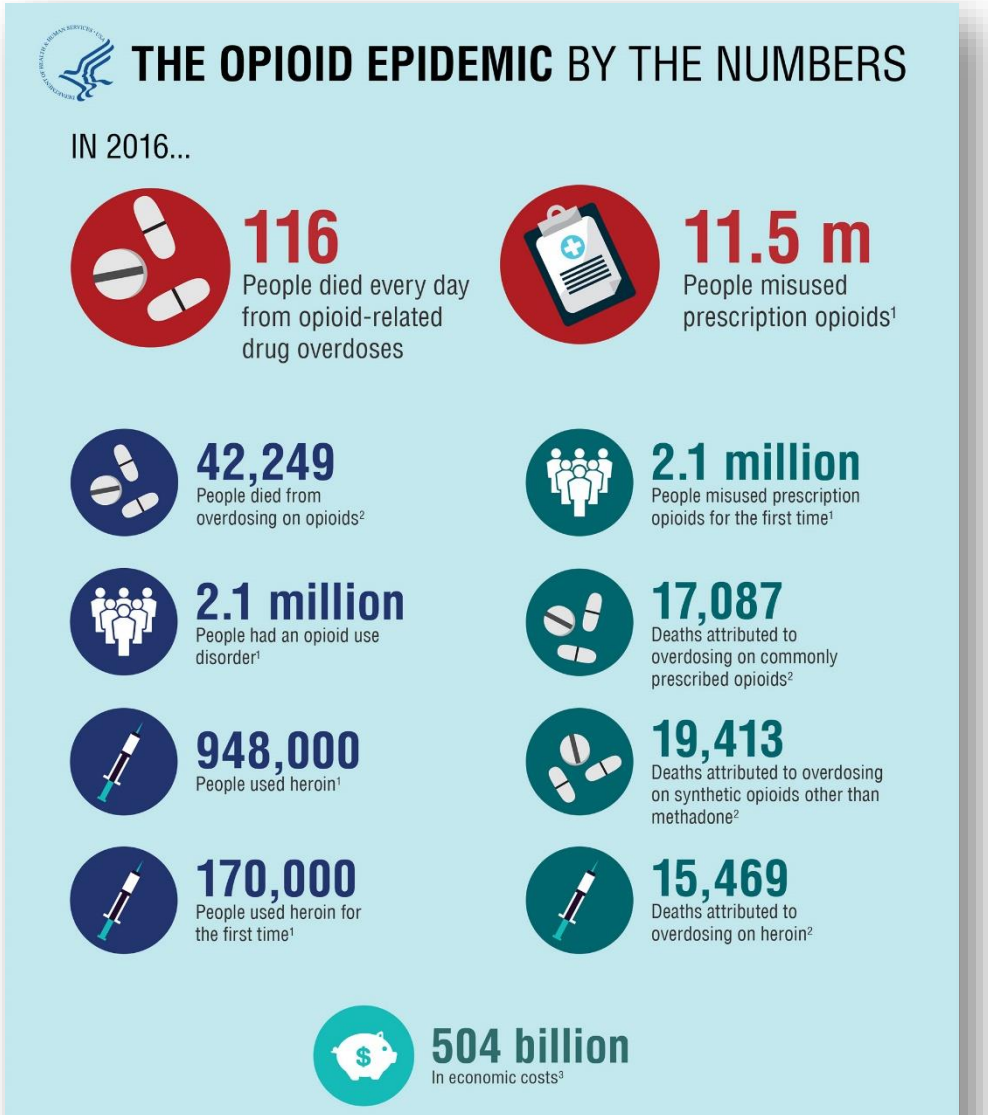
What is Pain?

Pain is whatever and wherever the experiencing person says it is.

Public Health Challenge

- Acute and chronic pain affects large numbers of Americans
  - ~100 million (1 in 3) U.S. adults experience chronic pain
- Pain is a leading reason why people seek medical care
- Pain costs the nation $560-635 billion each year in medical treatment and lost productivity
- A number of barriers limit the availability of pain care & contribute to disparities found among some groups


THE OPIOID EPIDEMIC BY THE NUMBERS
IN 2016...
116
People died every day from opioid-related drug overdoses
11.5 m
People misused prescription opioids[1]
42,249
People died from overdosing on opioids[2]
2.1 million
People misused prescription opioids for the first time[1]
2.1 million
People had an opioid use disorder[1]
17,087
Deaths attributed to overdosing on commonly prescribed opioids[2]
948,000
People used heroin[1]
19,413
Deaths attributed to overdosing on synthetic opioids other than methadone[2]
170,000
People used heroin for the first time[1]
15,469
Deaths attributed to overdosing on heroin[2]
504 billion
In economic costs[3]
Sources: [1] 2016 National Survey on Drug Use and Health, [2] Mortality in the United States, 2016 NCHS Data Brief No. 293, December 2017, [3] CEA Report: The underestimated cost of the opioid crisis, 2017
Updated January 2018. For more information, visit: http://www.hhs.gov/opioids/

"Appointment after appointment, test after test, and of course, nothing to really confirm (the diagnosis)....Having pain that I did not understand, as a physical therapist, fearing some dreadful disease was hard enough....So, in addition to pain, I had anxiety and depression....The medication that finally gave me better relief was pulled off the market recently by the FDA."

—A person with chronic pain

"Addressing the nation's enormous burden of pain will require a cultural transformation in the way pain is understood, assessed, and treated."

"Education, Education, Education. Educate more physicians on proper diagnosis and proper pain management. Educate the person living with pain and their family on addiction versus physical dependency and proper storage of medication. Educate the public and press about the realities of pain medication and people living with pain."

—A person with chronic pain


FACT
MYTH

Myths and Misperceptions: Elderly and Pain

Pain is a normal part of aging.

Pain is mostly an emotional or psychological problem.

Pain medication often causes addiction in older adults.

Myths and Misperceptions: Elderly and Pain

Doctors and Nurses are the experts about pain.

Residents with Dementia cannot report their own pain.

Pain Assessment in Advanced Dementia Scale (PAINAD)

Instructions: Observe the patient for five minutes before scoring his or her behaviors. Score the behaviors according to the following chart. Definitions of each item are provided on the following page. The patient can be observed under different conditions (e.g., at rest, during a pleasant activity, during caregiving, after the administration of pain medication).

Behavior	0	1	2	Score
Breathing Independent of vocalization	• Normal	• Occasional labored breathing • Short period of hyperventilation	• Noisy labored breathing • Long period of hyperventilation • Cheyne-Stokes respirations	
Negative vocalization	• None	• Occasional moan or groan • Low-level speech with a negative or disapproving quality	• Repeated troubled calling out • Loud moaning or groaning • Crying	
Facial expression	• Smiling or inexpressive	• Sad • Frightened • Frown	• Facial grimacing	
Body language	• Relaxed	• Tense • Distressed pacing • Fidgeting	• Rigid • Fists clenched • Knees pulled up • Pulling or pushing away • Striking out	
Consolability	• No need to console	• Distracted or reassured by voice or touch	• Unable to console, distract, or reassure	
			TOTAL SCORE	

(Warden et al., 2003)

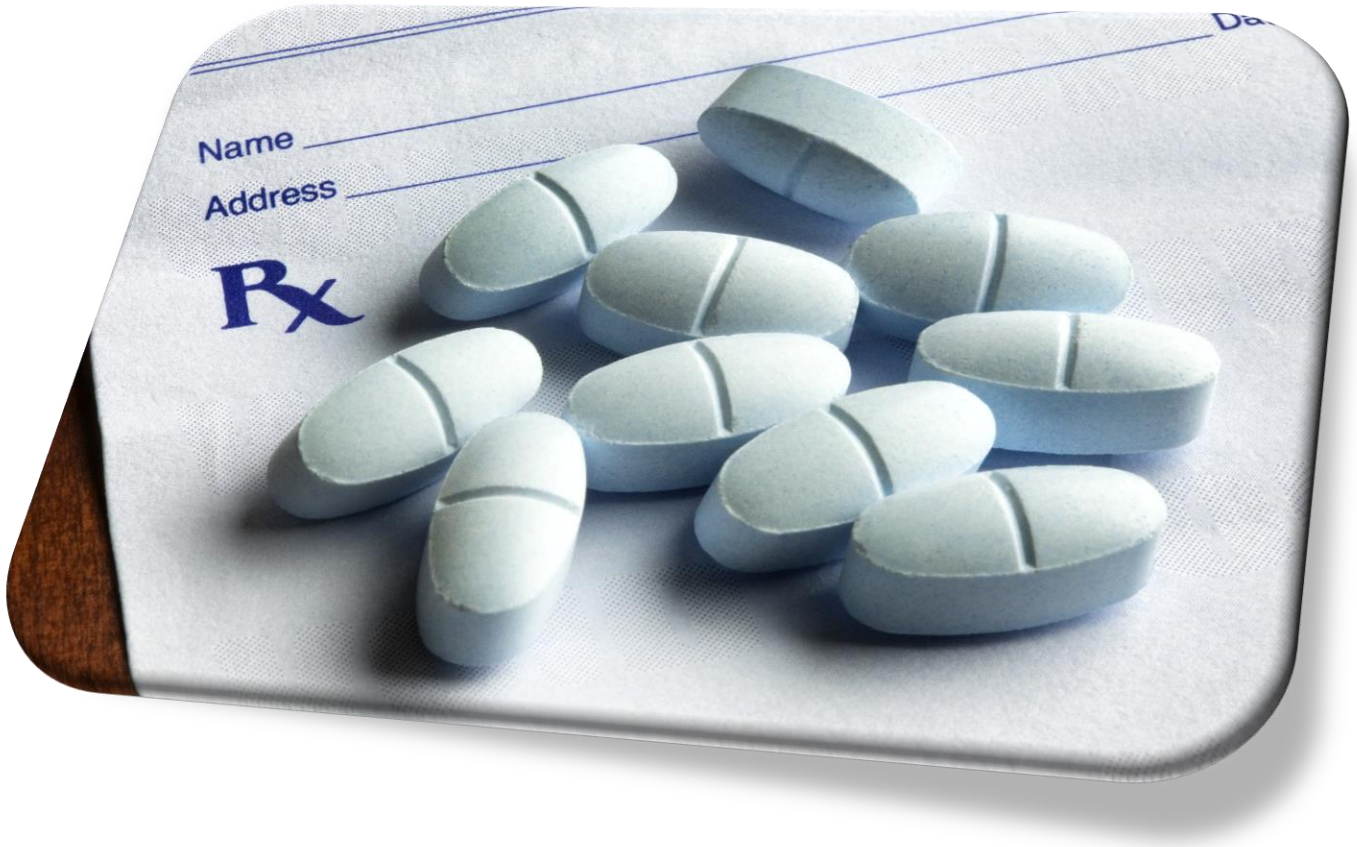
Scoring:

The total score ranges from 0-10 points. A possible interpretation of the scores is: 1-3=mild pain; 4-6=moderate pain; 7-10=severe pain. These ranges are based on a standard 0-10 scale of pain, but have not been substantiated in the literature for this tool.

Source:

Warden V, Hurley AC, Volicer L. Development and psychometric evaluation of the Pain Assessment in Advanced Dementia (PAINAD) scale. *J Am Med Dir Assoc*. 2003;4(1):9-15.

Medication Management



CDC: General Treatment Recommendations

- Opioids are NOT first-line therapy
  - Establish goals for pain and function
  - Discuss risks and benefits
- Use immediate-release opioids when starting
  - Use the lowest effective dose
  - Prescribe short durations for acute pain
  - Evaluate benefits and harms frequently
- Use strategies to mitigate risk
  - Review PDMP data (prescription drug monitoring program)
  - Use urine drug testing
  - Avoid opioid and benzodiazepine prescribing
  - Offer treatment for opioid use disorder

WHO 3-Step Ladder

Non-opioid

Aspirin

Acetaminophen

NSAID

+/- Adjuvant

Weak Opioid

Mild to Moderate

Codeine

Tramadol

+/- Non-opioid

+/- Adjuvant

Strong Opioid

Moderate to Severe

Hydrocodone

Morphine

Oxycodone

+/- Non-Opioid

+/- Adjuvant

Non-Opioid Analgesics

- There is a ceiling on the pain relief these agents can provide
- Unlike opioids, these agents are NOT associated with dependence

Acetaminophen

- First used in clinical medicine in 1890's
- Commonly abbreviated APAP
- Possess analgesic and antipyretic activity
- No anti-inflammatory activity or effect on platelet function
- Effective in both acute and chronic pain
- Preferred over NSAIDs
  - Fewer hematologic, renal, and gastrointestinal effects
- Treatment of choice for Osteoarthritis, Minor and Persistent Pain in the Elderly, and the treatment of Aches and Pain due to Influenza

Acetaminophen

- Unintentional or intentional misuse is the number one cause of hepatic failure in the U.S.
- In January 2011, the FDA asked drug manufacturers to limit the strength of APAP in prescription drug products to no more than 325mg per dosage unit
- In January 2014, the FDA recommended that health care professionals discontinue prescribing and dispensing prescription combination drug products that contain more than 325mg of APAP per dosage unit
- Maximum daily dose APAP = 3gm (3000mg) unless followed by prescriber where the maximum daily dose APAP = 4gm (4000mg)
- When calculating total daily dose APAP be sure to include both prescription and nonprescription products
  - New maximum single dose: 650 mg
  - Previous maximum single dose: 1000 mg

NSAIDs

- NSAIDs are indicated for inflammatory disease or mild-to-moderate pain poorly responsive to maximal around-the-clock doses of acetaminophen
- Appropriate for short term use
- All have ceiling effect

NSAIDs
Risk of Therapy

- Gastrointestinal Toxicity
  - Dyspepsia
  - Gastroduodenal Ulcers
  - GI Bleeding and Perforation
- Cardiovascular Adverse Effects
  - Edema
  - Heart Failure
  - Hypertension
  - Myocardial Infarction
  - Stroke and other Thrombotic Events
- Nephrotoxicity
  - Electrolyte Imbalance
  - Sodium Retention
  - Edema
  - Acute/Chronic Kidney Disease

Cardiovascular Thrombotic Event
NSAIDs incr. risk of serious and potentially fatal cardiovascular thrombotic events, incl. MI and stroke; risk may occur early in tx and may incr. w/ duration of use; contraindicated for CABG peri-operative pain

GI Bleeding, Ulceration, and Perforation
NSAIDs incr. risk of serious and potentially fatal GI adverse events incl. bleeding, ulcer, and stomach or intestine perforation; GI events may occur at any time during use and w/o warning sx; elderly pts and pts w/ hx of PUD or GI bleeding at greater risk for serious GI events

Opioid Analgesics

- Stimulates mu opioid receptor
- Used for moderate to severe pain
- Used for both nociceptive and neuropathic pain
- Opioid medications have no ceiling to their analgesic effects and have been shown to relieve all types of pain
- Elderly people, compared to younger people, may be more sensitive to analgesic properties
- Advanced age is associated with a prolonged half-life and prolonged pharmacokinetics of opioid medications

Tramadol

- European availability late 1970s and FDA approved in 1995
- Synthetic analogue of Codeine
- Binds modestly to opioid receptors and produces some analgesia by the same mechanism as opioids
  - One-fifth (1/5) as potent as morphine
- Affects certain neurotransmitters in the brain to decrease perception of pain (NE, 5HT)
- May trigger addiction even in those without history of abuse or previous addiction
- Drug abuse and overdose, seizures, serotonin syndrome, suicides, and anaphylactoid reactions have been associated with tramadol use/misuse

Tramadol

- Advantages
  - Reduces respiratory rate to a lesser extent than opioids in overdoses
  - Does not cause GI irritation like NSAIDs
  - Does not compromise efficacy of certain antihypertensive agents (diuretics and ACE-Inhibitors)
- Disadvantages
  - No anti-inflammatory activity
  - Caution in liver and kidney disease
    - Severe Hepatic Impairment and Moderate to Severe Renal Impairment (CrCl < 30ml/min)
      - Avoid Extended Release therapy, dose every 12 hours, max dose 200mg per day (renal)
  - Risk for serotonin syndrome
  - Reduces seizure threshold
    - Overdose new onset seizure
    - History of seizure disorder, head trauma
    - Concomitant therapy with other threshold reducing therapies

Hydrocodone

- Zohydro & Hysingla ER are the only extended-release formulations
  - APAP Free
  - Twice Daily Dosing
- Hydrocodone products are used to relieve moderate to severe pain while others are used to relieve cough
- Combination products
  - Acetaminophen (Lorcet, Lortab, Norco, Vicodin)
    - NTE 3-4gm/day of Acetaminophen from all sources
  - Ibuprofen (Vicoprofen)
    - Ibuprofen is considered potentially inappropriate in the elderly due to increased risk of GI bleed and should be avoided in renal dysfunction or history of gastric or duodenal ulcers (BEERS CRITERIA)

Hydrocodone

- Hydrocodone/APAP produces additive analgesia as compared to the same doses of either agent alone
- Dosage escalation of this combination is limited by the maximum dose and 'ceiling effect' of acetaminophen
- The combination of acetaminophen and opioid analgesics may achieve a 'dose-sparing' effect such that lower doses of both agents produce pain relief with fewer side effects

Morphine

- 1803 first isolated from the un-ripened seed capsule of opium poppy
- Initially marketed before 1962 (prior to efficacy and safety studies)
- Prototypical Opioid
- Dosage forms
  - Tablet, capsule, liquid, sublingual, topical, parenteral, intrathecal, epidural, and rectal
- Available orally in both immediate and extended release formulations
  - Do not crush extended release tablets; tablet disruption may cause potentially fatal dose

Morphine

- Active metabolites
  - M6G – analgesic activity
  - M3G – causes neurotoxicity
- High dose may lead to myoclonus and hyperalgesia
- Morphine stimulates histamine release that may seem like an allergic response with symptoms such as lightheadedness, dizziness, tachycardia, facial flushing, sweating, and/or itching
- In some cases therapy can be continued with an antihistamine to treat these symptoms
- If symptoms are severe, an opioid not associated with histamine release may be substituted

Hydromorphone

- Initially marketed before 1962 (prior to efficacy and safety studies)
- Five (5) times more potent than morphine
- Semisynthetic analog of Morphine
  - Useful in elderly and renal impairment
    - no renally cleared metabolites
  - More rapid onset of analgesia
  - Shorter duration of action
- March 2010, the FDA approved Exalgo an extended-release tablet formulation
  - Do not crush extended release tablets; tablet disruption may cause potentially fatal dose

Oxycodone

- Initially marketed before 1962 (prior to efficacy and safety studies)
- Oxycodone equally effective to Morphine
  - Less nausea, vomiting, and hallucinations
  - Improved toxicity profile (renal and hepatic)
  - Alternative in patients who can not tolerate Morphine or Hydromorphone
- Only available in oral form in the U.S.
  - Immediate release (Roxicodone)
  - Extended release (Oxycontin)
    - Do not crush extended release tablets; tablet disruption may cause potentially fatal dose

Oxycodone

- Available as a single agent or in combination
  - Acetaminophen (Endocet, Percocet, Roxicet)
    - NTE 3-4gm/day of Acetaminophen from all sources
  - Aspirin (Endodan, Percodan)
  - Ibuprofen (Combunox)
    - Ibuprofen is considered potentially inappropriate in the elderly due to increased risk of GI bleed and should be avoided in the renal dysfunction or history of gastric or duodenal ulcers (BEERS CRITERIA)

Oxycodone

- Oxycontin - Extended release tablet reformulated
  - Previous tablet
    - Immediate release component 38%
      - Cause for euphoria often mistaken as superior pain control
    - Extended release component 62%
  - Reformulated tablet
    - Extended release component 100%
    - More difficult to crush or chew
    - Deterrent for abuse
    - Dissolve and becomes gel (difficult to inhale/inject)
    - Longer time to pain control, do not confuse with inadequate pain control

VICE NEWS

settlement deal and bankruptcy filing.

Methadone

- FDA approval 1947
- Structurally unrelated to Morphine
- Most frequently used agent in medically supervised opiate withdrawal and maintenance programs
  - Patients treated by outpatient methadone centers
    - Weekly heroin use decreased 69%
    - Cocaine use decreased by 48%
    - Illegal activity decreased by 52%
    - Full time work increased by 24%
    - Effective in reducing transmission of HIV and hepatitis B and C infections by reducing intravenous drug use and needle sharing

Methadone

- Benefits of Methadone in the treatment of chronic pain
  - Lack of active metabolites
  - High bioavailability following oral administration
  - Low cost
- Risks of Methadone in the treatment of chronic pain
  - Drug accumulation secondary to a long half-life
  - Increased potential for arrhythmias and cardiac death
  - Significant drug-drug interactions
    - Over the counter and herbal products should be avoided unless prescriber or pharmacist consulted

Fentanyl

- Structurally similar to Meperidine and 100 times more potent than Morphine
- Dosage forms are **NOT** interchangeable
  - Buccal tablet, sublingual tablet, sublingual spray, lozenge, topical patch, nasal spray, parenteral, epidural
- Opioid naïve should not initially start on a Fentanyl patch due to inherent inaccuracies in dosing
  - Increased risk of death due to respiratory depression
  - Prompted Fentanyl 12mcg patches
  - Do NOT cut Fentanyl patches
- Absorption altered by temperature (increase release)
- Absorption improved with increased adipose tissue

Meperidine

- Approved by the FDA in 1942
- Second-line agent for the treatment of moderate to severe acute pain
- Unique ability to interrupt postoperative shivering **and** shaking chills induced by amphotericin B
- Metabolized to active metabolite normeperidine
  - Lowers seizure threshold
  - Increased risk for falls
  - Increased risk for confusion and sedation
  - SHOULD BE AVOIDED IN THE ELDERLY (BEERS CRITERIA)

Meperidine

- Meperidine stimulates histamine release that may seem like an allergic response with symptoms such as lightheadedness, dizziness, tachycardia, facial flushing, sweating, and/or itching
- In some cases therapy can be continued with an antihistamine to treat these symptoms
- If symptoms are severe, an opioid not associated with histamine release may be substituted

Equianalgesic Opioid Dosing

Drug	Equianalgesic Doses (mg)	
	Parenteral	Oral
Morphine	10	30
Buprenorphine	0.3	0.4 (sl)
Codeine	100	200
Fentanyl	0.1	NA
Hydrocodone	NA	30
Hydromorphone	1.5	7.5
Meperidine	100	300
Oxycodone	10*	20
Oxymorphone	1	10
Tramadol	100*	120

*Not available in the US

McPherson ML. *Demystifying Opioid Conversion Calculations: A Guide For Effective Dosing*. Amer Soc of Health-Systems Pharm, Bethesda, MD, 2010. Copyright ASHP, 2010. Used with permission. NOTE: Learner is STRONGLY encouraged to access original work to review all caveats and explanations pertaining to this chart.

Opioid Side Effects

- Constipation
  - The most common adverse effect of chronic opioid therapy
    - 40% experience constipation defined as < 3 bowel movements per week
  - A stimulant laxative is recommended as a component of the bowel regimen
- Nausea/vomiting
  - Usually occurs at the start of therapy or with increases in dose
- Drowsiness and sedation
  - May increase the risk of falls
- Respiratory depression
- Itching/Pruritus
  - Morphine and Meperidine

Blackbox Warning (oxycodone ER)

Appropriate Use
ER form should only be prescribed by healthcare professionals knowledgeable in use of potent opioids for chronic pain management; reserve extended-release and long-acting formulations for pts w/o tx alternatives; ER form not indicated for prn analgesic use; proper dosing and titration essential to decr. resp. depression risk

Medication Error Risk
ensure accuracy when prescribing, dispensing, and administering oxycodone oral solution; dosing errors due to confusion between mg and mL, and other oxycodone oral solution of different concentrations can result in accidental overdose and death

Addiction, Abuse, and Misuse
opioid agonist Schedule II controlled substance w/ risk of addiction, abuse, and misuse, which can lead to overdose and death; reserve opioid analgesics for pts w/ inadequate tx alternatives; assess opioid abuse or addiction risk prior to prescribing; regularly monitor all pts for misuse, abuse, and addiction

Opioid Analgesic REMS
FDA required risk evaluation and mitigation strategy (REMS) program to ensure benefits outweigh risks; REMS-compliant education program must be avail to healthcare providers; providers are strongly encouraged to complete REMS-compliant program, counsel pts and/or caregivers w/ each Rx on safe use, serious risks, storage, and disposal, emphasize importance of reading med guide, and consider other tools to improve pt, household, and community safety

Respiratory Depression
serious, life-threatening, or fatal cases may occur even w/ recommended use; monitor for resp. depression esp. during tx start or after dose incr; instruct pts to swallow ER tabs whole; crushing, dissolving, or chewing ER tabs can cause rapid release and absorption of potentially fatal oxycodone dose

Accidental Ingestion
accidental ingestion of even one dose, esp. by children, can result in fatal oxycodone overdose

Neonatal Opioid Withdrawal Syndrome
prolonged maternal use of opioid tx during pregnancy can lead to potentially life-threatening neonatal opioid withdrawal syndrome; infants may require tx according to neonatology protocols; advise pregnant pts of risks and ensure appropriate tx avail. if prolonged opioid use required

CYP450 3A4 Interaction
concomitant use w/ CYP450 3A4 inhibitors or D/C of concomitant CYP450 3A4 inducers may incr. oxycodone conc. which may incr. or prolong adverse effects incl. potentially fatal resp. depression; monitor pts receiving any concomitant CYP450 3A4 inhibitor or inducer

Risks from Concomitant Use w/ Benzodiazepines, CNS Depressants
concomitant opioid use w/ benzodiazepines or other CNS depressants, incl. alcohol, may result in profound sedation, resp. depression, coma, and death; reserve concomitant use for pts w/ inadequate alternative tx options; limit to minimum required dosage and duration; monitor pts for s/sx of resp. depression and sedation

Breakthrough Pain While Receiving Opioid Therapy

- Rescue dose is 10-15% of the total daily dose
- Consistently using 3 or more rescue doses daily, consider increasing the scheduled dose
- Whenever the scheduled dose is increased, the rescue dose will need increased
- Consider using the same drug for both scheduled and breakthrough doses when possible

Adjuvant Therapy

- Neuropathic Pain
  - Duloxetine (Cymbalta)
  - Lidocaine Patch (Lidoderm Patch)
  - Anticonvulsants
    - Gabapentin (Neurontin), Pregabalin (Lyrica), Carbamazepine (Tegretol)
  - Tricyclic Antidepressants
    - Amitriptyline (Elavil), Nortriptyline (Pamelor)
- Spinal Cord Compression/ Bony Metastases:
  - Corticosteroids (Prednisone and Dexamethasone)

Cannabis

- Cannabis is a genus of flowering plants in the Cannabaceae family
  - Cannabis sativa
  - Cannabis indica

Hemp vs Marijuana

- Hemp: Cannabis sativa
  - Evidence of use recorded throughout history
    - Hemp may have been first crop cultivated by mankind over 10,000 years ago
    - Textiles, rope & twine, construction material, industrial composites, paper, paints & sealants, plastics & polymers, fuel & lubricants, food, medicine, and body care products
  - Agricultural Act of 2018
    - Contains a higher concentration of cannabidiol (CBD)
    - Contains < 0.3% of tetrahydrocannabinol (THC)

Hemp vs Marijuana

- Marijuana: Cannabis sativa, Cannabis indica
  - 1927 Anti-Marijuana Laws passed in 11 states
  - 1937 Marijuana Tax Act is enacted
  - 1942 US Pharmacoepia removes cannabis
  - 1944 LaGuardia Committee
    - First in-depth study into the effects of smoking cannabis
    - Contradicted claims made by the U.S. Treasury Department
      - Does not result in "insanity, deterioration of mental health, assist in criminal behavior, is physically addictive, and a gateway drug"
  - 1956 Narcotics Control Act
  - 1971 Controlled Substance Act (Schedule I)
  - 1973 DEA established

Hemp vs Marijuana

- Marijuana: Cannabis sativa, Cannabis indica
  - Contains higher concentration of THC, typically 1-5%
  - Hash or hashish (resin) 5-10% THC, hashish oil 20% THC

Cannabis Preparations

Preparations	Description
Marijuana	Dried plant product; typically smoked or vaporized
Hashish	Concentrated resin that can be ingested or smoked
Tincture	Cannabinoid liquid extracted from plant; consumed sublingually
Hashish Oil	Oil obtained from plant by solvent extraction; usually smoked or inhaled
Infusion	Plant material mixed with nonvolatile solvents such as butter or cooking oil; usually ingested

Cannabinoids

Effects	THC	CBD
Anticonvulsant	+	++
Muscle Relaxant	++	+
Psychoactive	++	--
Anxiolytic/Antipsychotic	--	++
Sedation	+	--
Tachycardia/Hypertension	+	--
Appetite Stimulant	+	--
Antioxidant	+	++

Adverse Effects of Cannabis

Acute	Chronic
Cardiovascular: Hypertension, Palpitations, Tachycardia	**Bone Health:** Reduced Bone Mineral Density
Respiratory: Coughing, Increased Sputum Production, Wheezing	**Respiratory:** Symptoms of Chronic Bronchitis
Central Nervous System: Anxiety, Disorientation, Dizziness, Dry Mouth, Euphoria, Impaired Coordination, Psychosis	**Central Nervous System:** Depression, Impaired Attention, Impaired Decision-Making, Impaired Memory
	Reproduction: Decreases Testosterone

Cannabis Delivery Methods

CANNABIS DELIVERY METHODS

METHODS	ON SET	DURATION
Inhalation	1-5 Minutes	1-6 Hours
Topical (External Use)	Varies	Varies
Liquid Extracts	10-45 Minutes	2-8 Hours
Ingestion	1-2 Hours	4-12 Hours

TRILOGY

Marijuana Use in the United States

- Most common conditions accepted by states that allow medicinal cannabis relate to relief of the following:
  - Cancer Symptoms
  - Glaucoma
  - HIV/AIDS
  - Multiple Sclerosis

Cannabinoid Medications

	Dronabinol (Marinol)	Nabilone (Cesamet)	Nabiximols (Sativex)
FDA Approved	Yes	Yes	No
Medical Use	N/V Cancer Appetite for AIDS Neuropathic Pain in MS	N/V Cancer	Neuropathic Pain in MS Spasticity in MS Mod-Sev Pain in Cancer
Cannabis Properties	Synthetic THC	Synthetic THC	CBD:THC (1:1)
Doses	2.5-20mg/day	1-6mg/day	2-12 sprays/day

Chronic Pain: Review of Evidence

- 28 studies with 2454 participants
  - Indications
    - Fibromyalgia
    - Cancer-related pain
    - Neuropathic pain
    - Musculoskeletal problems
    - Refractory pain due to multiple sclerosis
    - Rheumatoid arthritis
  - Reduction in pain (> 30%) was greater with cannabinoids than placebo

Chronic Pain: Survey Data

- 2897 medical cannabis patients in California with 828 using cannabis for pain
  - 15% (> 60 years of age)

Results from 828 Patients
97% reported decrease in opioid use
88% experienced side effects from opioids
92% reported cannabis side effects are more tolerable
80% reported cannabis more effective than opioids for pain
93% prefer cannabis to opioids

Chronic Pain: Elderly

- Prospective study of patients 65 years and older receiving medical cannabis
  - 2736 patients
  - Average age = 75yoa (12% > 85yoa)
  - 1822 patients using cannabis for pain
  - Routes: oil (37%), smoking (24%), vaporization (6%)
  - Follow-up at 1 and 6 months
    - Assess adverse events, treatment satisfaction, change in symptoms and drug regimens

Chronic Pain: Elderly

- Pain reduced from a median of 8 to 4 at 6 months
  - Prior to treatment: 573 (66.8%) reported pain 8-10/10
  - 6 months: 65 (7.6%) reported pain 8-10/10
- 286 reported adverse events
  - Dizziness (9.7%)
  - Dry mouth (7.1%)
- 275 patients reported 1 or more falls 6 months prior to treatment
  - 113 reported falling within the 6 months of treatment
- 143 patients (18.1%) stopped or reduced opioid use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Friday, July 17

Update on COVID-19 - Learnings to Date

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  - Each participant will then be emailed a link to the evaluation
  - Each person must complete an evaluation to receive CE credit
- Certificates should be emailed in about 30 days

THANK YOU!