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ATMAN Approach: Management of Chronic Non-Cancer Pain in Older Adults without Opioids

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Learning Objectives

- Describe risks of opioids and tramadol in older adults.
- Discuss potential risks and benefits of various psychopharmacological agents commonly used to manage chronic non-cancer pain in older adults
- Discuss non-pharmacological interventions for management of chronic non-cancer pain in older adults

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NIDA director Nora Volkow M.D.

- During a brief hospital stay following a car accident, Dr. Volkow received Demerol (meperidine) for her pain. She stopped taking it when she came home and went into withdrawal (severe restlessness etc.). She knew that body becomes biologically dependent on opioids **quickly** but "I ignored all my knowledge about opioids and became ill."

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Chronic Pain – 3 Months or more

- Complex experience with physical, emotional, cognitive and spiritual/existential dimensions.
- Up to one in five adults (up to 50% older adults; up to 75% with advanced cancer) may have chronic pain.
  - Hobelmann and Clark. Management of chronic pain. Kaplan and Sadock's Comprehensive Textbook of Psychiatry 10th Edition, 2017.

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Pain Assessment

- Comprehensive assessment (ideally part of Comprehensive Geriatric Assessment [CGA]): Goal is to identify all specific pain sources.
- Pain scales (e.g., numeral rating scale and verbal descriptors [also okay in mild-moderate cognitively impaired individuals], Pain In Advanced Dementia [PAINAD] and Doloplus-2 recommended for severe cognitive impairment).
  - Desai and Grossberg 2017. Psychiatric consultation in long-term care: A guide for healthcare professionals. Cambridge University Press.
  - Hobelmann and Clark. Management of chronic pain. Kaplan and Sadock's Comprehensive Textbook of Psychiatry 10th Edition, 2017.

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Tracking – With Technology

- Pain
- Anxiety
- Depression
- Sleep
- Physical activity
- Breathing

– Sonnenreich and Geisler. Challenges and solutions in reducing opioid misuse and abuse. Pharmacy and Therapeutics 2017;42(1):47-48.

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Why should we avoid opioids?

- Lack of high-quality studies supporting effectiveness of opioids for chronic non-cancer pain in older adults
- High risks: respiratory suppression, overdose related death, intoxication delirium, dependence, tolerance, withdrawal effects (does not cause withdrawal delirium).

– Kurt Kroenke. Treatment of Chronic Pain. American Psychiatric Association Publishing Textbook of Psychopharmacology. 5th Edition 2017.
– Borisovskaya et al. Psychiatric problems in medically ill geriatric patients. Chapter in Textbook Kaplan and Sadock's Comprehensive Textbook of Psychiatry, 10th edition, 2017. pp: 4041-4052.

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Why should we avoid opioids?

- High risks: Addiction, abuse, diversion, falls and serious injuries (e.g., fractures, TBI), hypogonadism, hyperalgesia, allodynia, cognitive impairment, adverse drug interactions, and other adverse effects (e.g., constipation, pruritis, day-time somnolence, agitation in individuals with dementia, depression, dysphoria/irritability, hallucinations in individuals with dementia).

– Kurt Kroenke. Treatment of Chronic Pain. American Psychiatric Association Publishing Textbook of Psychopharmacology. 5th Edition 2017.
– Borisovskaya et al. Psychiatric problems in medically ill geriatric patients. Chapter in Textbook Kaplan and Sadock's Comprehensive Textbook of Psychiatry, 10th edition, 2017. pp: 4041-4052.

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Why should we avoid opioids?

- Prescription of opioids beyond 8 weeks for chronic pain has questionable benefits for individual patients and carries substantial public health risks (Dr. Nora Volkow, Director, National Institute on Drug Abuse: http://www.nejm.org/doi/pdf/10.1056/NEJMra1507771).

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Why should we avoid opioids?

- Use of opioids for management of chronic (more than three months) non-cancer pain should be restricted to intractable pain that is not adequately managed with conservative and interventional methods (American Society of Pain Medicine http://www.painmed.org/files/use-of-opioids-for-the-treatment-of-chronic-pain.pdf).

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Why should we avoid opioids?

- Current guidelines discourage use of opioids for chronic pain.
- No RCTs (except Krebs 2018 JAMA study) on effect of opioids on long-term pain, function or quality of life.
  - VA Guidelines on Opioids for Chronic Pain https://www.healthquality.va.gov/guidelines/Pain/cot/VADoDOTCPG022717.pdf
  - Busse et al. Canadian Medical Association Journal 2017;189:E659-E666.
  - Dowell et al. CDC guidelines. MMWR Recomm Rep 2016.

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Why should we avoid opioids?

- Opioids did no better (in terms of function) than non-opioid analgesics for chronic moderate to severe osteoarthritis pain (knee, hip) and back pain. Adverse effects were significantly more common in opioid group compared to nonopioid group. Pain intensity less in acetaminophen-NSAIDs group. Mean age: 58 years.
  - Krebs et al. JAMA 2018;319: 872-882.

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Why should we avoid opioids?

- Nonopioid group: Step 1: acetaminophen and NSAID. Step 2: adjuvant oral (nortriptyline, amitriptyline, gabapentin) and topical (capsaicin, lidocaine). Step 3: pregabalin, duloxetine, tramadol.
  - Krebs et al. JAMA 2018;319: 872-882.

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Why should we avoid opioids?

- The 2019 Beers criteria recommends to avoid use of opioids in older adults with history of falls or fractures except for pain management in setting of severe acute pain (e.g., recent fractures or joint replacement). Level of Evidence: Moderate. Strength of Recommendation: Strong.
  - American Geriatrics Society 2019 Beers Criteria for potentially inappropriate medication use in older adults. Journal of American Geriatrics Society 2019;1-21.

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Why should we avoid opioids?

- The 2019 Beers criteria recommends to avoid simultaneous use of opioids and gabapentinoids (gabapentin, pregabalin) in older adults because of severe sedation-related adverse effects including risk of respiratory suppression or death. Level of Evidence: Moderate. Strength of Recommendation: Strong.
- Exceptions: When transitioning from gabapentinoids to opioids or when using gabapentinoids to reduce opioid dose although caution is advised in all circumstances.

– American Geriatrics Society 2019 Beers Criteria for potentially inappropriate medication use in older adults. Journal of American Geriatrics Society 2019;1-21.

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Why should we avoid tramadol?

- Lack of high-quality studies supporting effectiveness of opioids and tramadol for chronic non-cancer pain in older adults
- Check out the podcase by pharmacist and internist Dr. David Juurlink: https://www.geripal.org/2018/06/Tramadont-dangers-of-tramadol.html

– Kurt Kroenke. Treatment of Chronic Pain. American Psychiatric Association Publishing Textbook of Psychopharmacology. 5th Edition 2017.

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Why should we avoid tramadol?

- High risks (although lower than opioids): risks similar to opioids as it is a partial mu receptor opioid agonist but risks lower than opioids; drug-drug interaction risks (especially with antidepressants); dizziness in more than 10% of cases. Higher risks in patients with chronic kidney disease.

– Kurt Kroenke. Treatment of Chronic Pain. American Psychiatric Association Publishing Textbook of Psychopharmacology. 5th Edition 2017.

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Why should we avoid tramadol?

- Tramadol use is associated with significant risk of adverse drug-drug interactions with many psychopharmacological medications through 2D6 and 3A4 liver enzyme system posing serious risks (e.g., serotonin syndrome, seizures) (https://www.accessdata.fda.gov/drugsatfda_docs/label/2009/020281s032s033lbl.pdf).
- There is little evidence for use of tramadol for management of pain for more than three months (http://www.who.int/medicines/areas/quality_safety/6_1_Update.pdf).

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Why should we avoid tramadol?

- Seizures reported within the recommended dose range.
- Seizure risk higher in individuals with history of seizure, with conditions that increase risk of seizure (e.g., stroke, TBI), and with medications that also increase risk of seizure (e.g., bupropion).
- Interaction with 2D6 inhibitors: diphenhydramine, haloperidol, cimetidine, sertraline, paroxetine, fluoxetine.
  - VA Opioid use for chronic pain guidelines. 2017.

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Why should we avoid tramadol?

- 2D6 rapid metabolizers: 1-10% Caucasians, 3% African Americans, 1% Hispanics and Asians.
- Orthostatic hypotension may occur in older adults.
- Tramadol use is associated with SIADH / hyponatremia.
  - VA Opioid use for chronic pain guidelines. 2017.
  - American Geriatric Society Beers Criteria 2019 Expert Panel. Journal of the American Geriatrics Society; 1-21:2019.

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ATMAN approach

- A: Acetaminophen, Anti-depressants
- T: Topical analgesics
- M: Muscle relaxants
- A: Anti-convulsants, Anti-inflammatory agents
- N: Non-drug interventions

  – Desai and Grossberg: Geriatric Psychiatry. Chapter in Pathy Textbook of Principles and Practice of Geriatric Medicine. In Press

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ATMAN Stepped Approach

- Step 1: Acetaminophen, Topical analgesics, Non-pharmacological interventions
- Step 2: Duloxetine, Gabapentin, Pregabalin, Muscle Relaxants, Interventional pain management
- Step 3: Nortriptyline, Tramadol, NSAIDs
- Step 4: Opioids

  – Desai and Grossberg: Geriatric Psychiatry. Chapter in Pathy Textbook of Principles and Practice of Geriatric Medicine. In Press.

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Topical analgesics

- NSAIDs (OTC and prescription)
- Lidocaine (OTC and prescription)
- Capsaicin (OTC)
- Menthol (OTC)
- Cannabidiol (CBD) (OTC and prescription)

  – Kurt Kroenke. Treatment of Chronic Pain. American Psychiatric Association Publishing Textbook of Psychopharmacology. 5th Edition 2017.

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Idaho story

- Idaho Medicaid is concerned that besides opioids, benzodiazepines and carisoprodol (Soma) are also overused.
- Carisoprodol is approved only for acute short term treatment (3-weeks) and has addictive potential and can also increase the risk of overdose when mixed with other CNS depressants.

– Idaho State Board of Pharmacy September 2019 newsletter. https://nabp.pharmacy/wp-content/uploads/2016/06/Idaho-Newsletter-September-2019.pdf?utm_source=BenchmarkEmail&utm_campaign=Idaho_SNL_Alert_September_2019&utm_medium=email .

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Neuropathic pain

- First-line agents: gabapentin, pregabalin, duloxetine, lidocaine patch.
- Second-line agents: desipramine, nortriptyline (in younger adults, these could be first-line agents), capsaicin high concentration
- Third-line agents: carbamazepine

– AMDA – The Society for Post-Acute and Long-Term Care Medicine. Pain management in the long-term care settings Clinical Practice Guideline. 2012.

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Pain systems

- Evolutionary perspective: pain is a strong motivational signal (indicates threat) with negative affective connotations, while pain relief can be conceptualized as a form of relief and reward, and therefore represent potent factors directing behavior.

– Jon-Kar Zubieta. Pain systems: interface with affective and motivational mechanisms. Kaplan and Sadock's Comprehensive Textbook of Psychiatry 10th Edition. 2017.

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Pain systems

- Higher attention and perceiving/framing it as "high-grade threat": greater catastrophic reactions, pain sensitivity, and avoidance behaviors.
- Avoidance behaviors, once acquired, are notoriously persistent and maintain pain-related fears.
- Distraction and reframing it as "low-grade threat": reduced intensity of pain experienced.

– Jon-Kar Zubieta. Pain systems: interface with affective and motivational mechanisms. Kaplan and Sadock's Comprehensive Textbook of Psychiatry 10th Edition. 2017.

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Nonpharmacological Treatments

- Multimodal rehabilitation may be needed in many cases.
- Pain self-management.
- Cognitive Behavior Therapy – Pain (CBT-P) has the best evidence amongst all nonpharmacological interventions for treatment of chronic pain.

– Kurt Kroenke. Treatment of Chronic Pain. American Psychiatric Association Publishing Textbook of Psychopharmacology. 5th Edition 2017.

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Nonpharmacological Treatments for Chronic Pain

- Exercise and meditation have the next best evidence.
- Support groups, posture training, music therapy, hot-cold remedies, massage, acupuncture, and mindfulness / mind-body-based approaches (e.g., gentle movements, Tai Chi, yoga), weight-loss strategies, balneotherapy (spas; hydrotherapy), green light(?) may provide additional benefits.

– Kurt Kroenke. Treatment of Chronic Pain. American Psychiatric Association Publishing Textbook of Psychopharmacology. 5th Edition 2017.
– Garland et al. Mind-body therapies for opioid-treated pain. A systematic review and meta-analysis. JAMA Internal Med 2020;180(1):90-105.

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CBT-P

- Cognitive Therapy (to address unhelpful / counterproductive ABCs [attitudes, beliefs, coping styles] and automatic negative thoughts [ANTs ☺], catastrophizing ["I will never get better," "This pain will never go away," Excessive fear that movement or activity will worsen pain]).
  - Kurt Kroenke. Treatment of Chronic Pain. American Psychiatric Association Publishing Textbook of Psychopharmacology. 5th Edition 2017.

CBT-P

- Relaxation training (e.g., deep breathing exercises, progressive muscle relaxation, relaxation response, guided imagery).
- Reinforcing positive health behaviors and positive activities.
  - Kurt Kroenke. Treatment of Chronic Pain. American Psychiatric Association Publishing Textbook of Psychopharmacology. 5th Edition 2017.

Interventional pain management

- Nerve blocks
- Trigger point injections
- Ultrasound or fluoroscopy guided interventions.
  - Kurt Kroenke. Treatment of Chronic Pain. American Psychiatric Association Publishing Textbook of Psychopharmacology. 5th Edition 2017.

IPAS and Comorbidity

- Individualized Pain-relieving Activities Schedule (IPAS) that takes into account patient preferences, attitudes, views and beliefs.
- Address comorbidity (e.g., Major depression).

– Kurt Kroenke. Treatment of Chronic Pain. American Psychiatric Association Publishing Textbook of Psychopharmacology. 5th Edition 2017.

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Role of Consultant Pharmacist

- Referral to consultant pharmacist for medication review to discontinue medications that are inappropriate in older adults (using Beers criteria, STOPP-START criteria) and other medications that may cause or contribute to pain and adverse drug interactions should be done routinely (especially for frail older adults and older adults with dementia).

– Chapter 12: Psychiatric Aspects of Rational Deprescribing. In *Psychiatric Consultation in Long-Term Care: A Guide for Healthcare Professionals*. Abhilash K. Desai MD and George T. Grossberg MD. 2017. Cambridge University Press.

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Resources

- The American Chronic Pain Association https://www.theacpa.org .
- Cleveland Clinic Wellness app (Free): mindful moments by ccw for Guided meditation
- CBTi Coach app (Free): Cognitive Behavioral Therapy for insomnia by Veterans Administration. Free. It has excellent relaxation exercises.
- UCLA Mindful app (Free)
- PTSD Coach app (Free)

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In summary

- Use of opioids and tramadol for chronic non-cancer pain is appropriate only after all safer options have been optimally tried (except during end-of-life care where opioids are preferred over tramadol).

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In summary

- Robust use of non-pharmacological interventions and topical agents for management of chronic non-cancer pain in older adults (starting with CBT-P) should be first line therapy for all patients.

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Three Do's

- Routinely refer patient's with chronic pain for individual counseling.
- Routinely consider a trial of duloxetine to manage moderate to severe chronic non-cancer pain.
- Routinely request consultant pharmacist to review medications to improve management of chronic non-cancer pain.

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Three Don’ts

- Don’t prescribe opioids or tramadol for chronic non-cancer pain until safer and possibly more effective options have been tried.
- Don’t prescribe gabapentin or pregabalin for low back pain or radiculopathy.
- Don’t ignore drug-drug interactions.

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