

# Opioid Considerations in the Elderly

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## Objectives

- Describe the history of opioids
- Discuss the prevalence of opioid misuse among the general population, and how it compares to the elderly population
- Identify alternatives to opioids for pain relief and the available evidence for them
- Identify strategies to more safely prescribe opioids in an elderly population

## History of Opioids

**3400 B.C.**  
Opium poppy cultivated in lower Mesopotamia<sup>1</sup>

**333 B.C.**  
Alexander the Great introduced opium to India; used as a sedative<sup>2</sup>



**460 B.C.**  
Hippocrates acknowledged opium's usefulness as a narcotic<sup>2</sup>


<sup>1</sup>Brownstein, M.J. A brief history of opiates, opioid peptides, and opioid receptors. Proc Natl Acad Sci. 1993;90(12):5301-5303  
<sup>2</sup>Kritikos & Papdaki. The history of the poppy and of opium and their expansion in antiquity in the eastern Mediterranean area. United Nations Office on Drugs and Crime *Bulletin on Narcotics*. 1967; (3).

## History of Opioids

**1300 A.D.**  
Opium disappeared from European historical record for 200 years<sup>3</sup>

**1806**  
Morphine isolated from opium; became mainstay of medical treatment in the US, used to treat pain, anxiety, consumption and women's ailments<sup>1,5</sup>

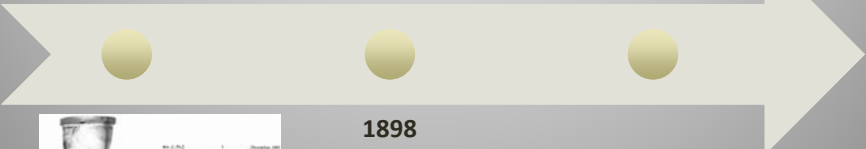
**1527**  
Opium introduced as an analgesic; called laudanum<sup>4</sup>




<sup>3</sup>A history of opium: From ancient use to present day. [www.thedruggspot.com/opiates/history-of-opium.html](http://www.thedruggspot.com/opiates/history-of-opium.html)  
<sup>4</sup>Drago, F. The European Pharmacology: Twenty years of success. Presented at ESPT 2013 Second Congress: Pharmacogenomics: From Cell to Clinic. Lisbon, Portugal. 2013; 1-44.  
<sup>5</sup>Renata Ferrari, et al. Risk Factors in Opioid Treatment of Chronic Non-Cancer Pain: A Multidisciplinary Assessment. *Pain Management - Current Issues and Opinions*. Jan 2012

## History of Opioids

**1853**  
Hypodermic needle was invented<sup>4,5</sup>



**Early 1900s**  
Saint James Society supplied free samples of heroin through the mail to morphine addicts<sup>7</sup>

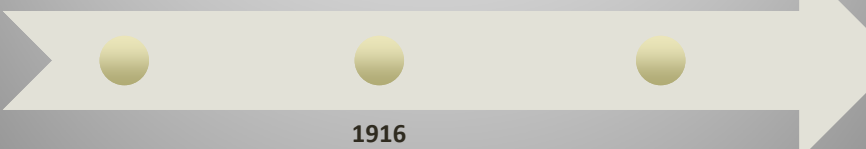


**1898**  
Heroin synthesized as derivative of morphine; Bayer offered as cough suppressant<sup>1,6</sup>

<sup>4</sup>Yes, Bayer promoted heroin-Here are the ads that prove it. Business Insider Website. <http://www.businessinsider.com/yes-bayer-promoted-heroin-for-children-here-are-the-ads-that-prove-it-2011-11?opml>, 2011.  
<sup>7</sup>Opium Throughout History. PBS Thirteen Web site.

## History of Opioids

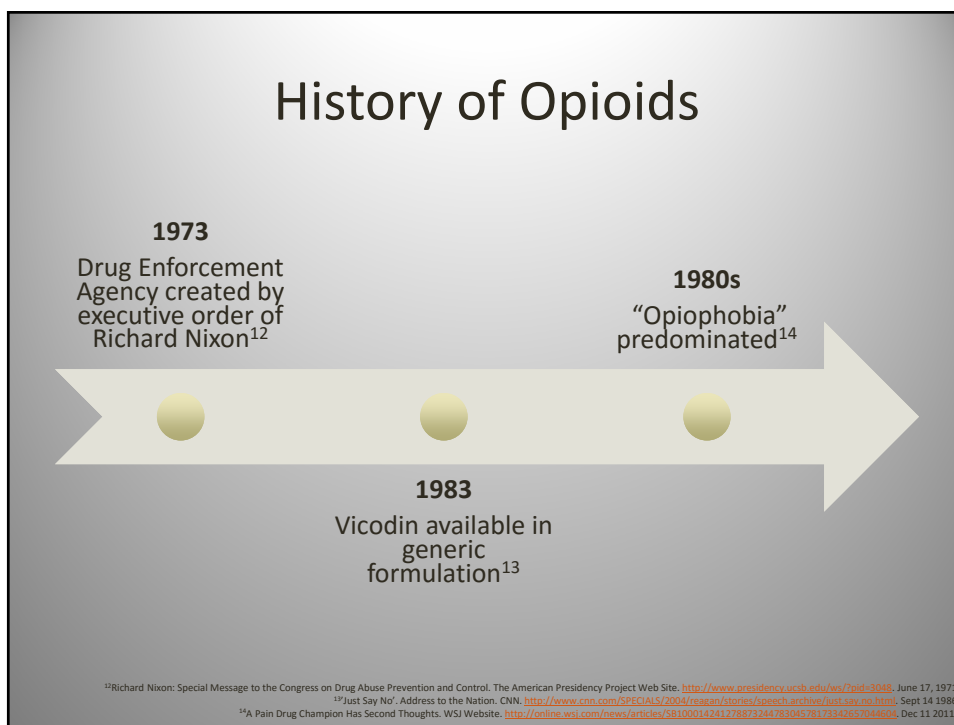
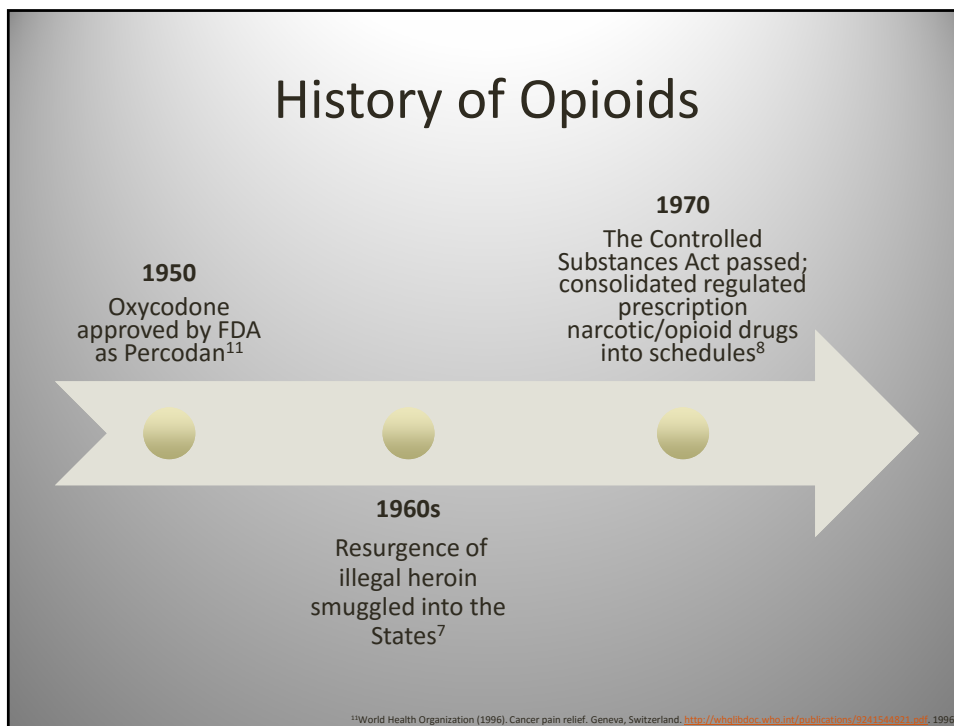
**1909**  
Opium Exclusion Act passed – beginning of US war on drugs<sup>8,9</sup>

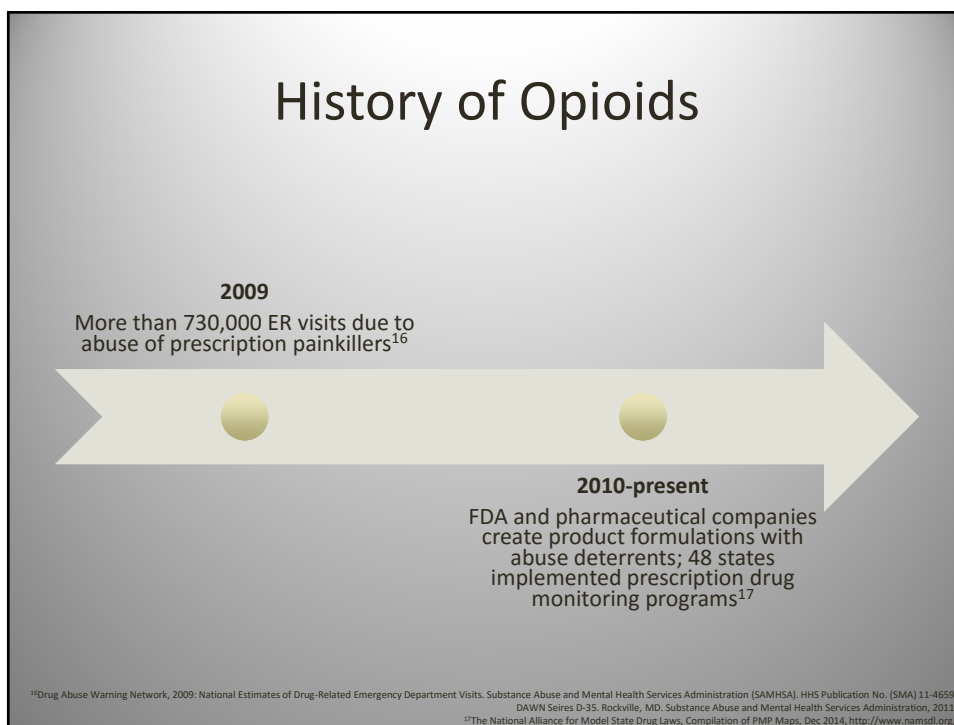
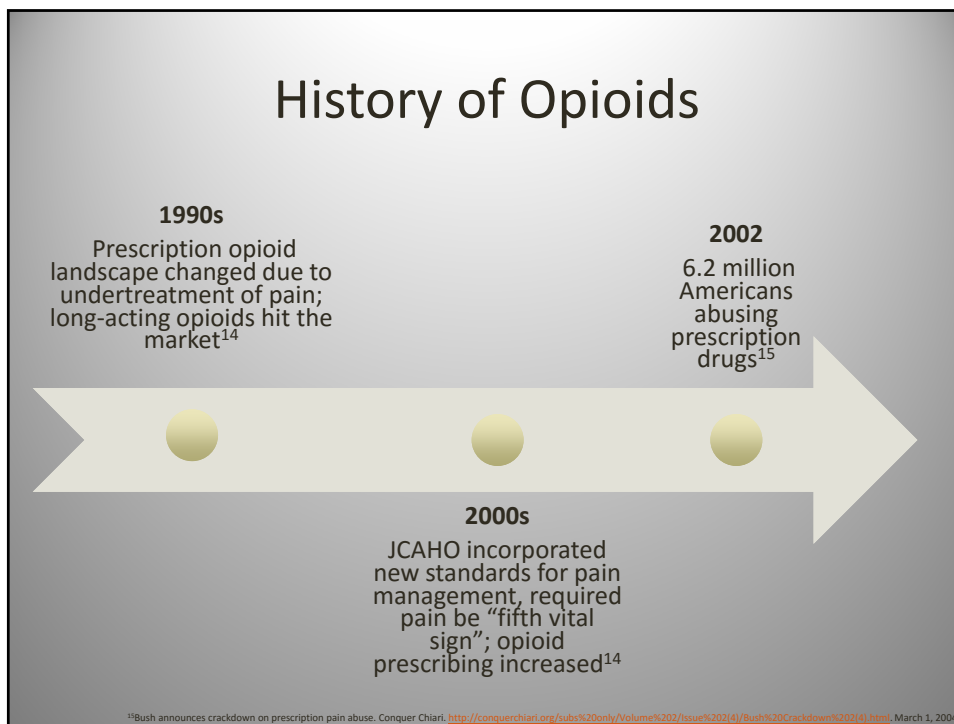


**1924**  
Heroin Act of 1924 passed – made importation, manufacturing and possession of heroin illegal in the US<sup>8</sup>

**1916**  
Oxycodone first synthesized<sup>10</sup>

<sup>8</sup>The National Alliance of Advocate for Buprenorphine Treatment. Naabt.org. Update on Oct 29, 2013.  
<sup>9</sup>The Opium Exclusion Act of 1909. Counter Punch. [www.counterpunch.org/2009/02/06/the-opium-exclusion-act-of-1909/](http://www.counterpunch.org/2009/02/06/the-opium-exclusion-act-of-1909/), Feb 8 2009  
<sup>10</sup>Prescription Pain Killer Abuse Still Rising. Understanding Addictions Website. [www.understandingaddictions.com/2010/09/prescription-pain-killer-abuse-still-rising/](http://www.understandingaddictions.com/2010/09/prescription-pain-killer-abuse-still-rising/), June 20, 2010.





## How did we get here?

- Prescription opioid epidemic began in '90s
- American Pain Society advocates the “fifth vital sign”
- Professional/consumer groups pushed for increased use of opioids for pain
- Oxycontin marketing downplayed addictive potential

Maxwell JC. The prescription drug epidemic in the United States: A perfect storm. *Drug and Alcohol Review*. 2011;30:264-270  
Zee AV. The promotion and marketing of OxyContin: commercial triumph, public health tragedy. *Am J Public Health*. 2009;99:221-2217

## How did we get here?

- 1996-2012 – OxyContin sales increased from \$48 million to over \$2.4 billion globally
- In the US & Canada, the number of prescriptions written for opioids increased by 300% and 850% respectively
- In 2009, the US consumed:
  - 99% of the world’s hydrocodone
  - 60% of the world’s hydromorphone
  - 81% of the world’s oxycodone

Maxwell JC. The prescription drug epidemic in the United States: A perfect storm. *Drug and Alcohol Review*. 2011;30:264-270  
Dhalla, et al. Prescribing of opioid analgesics and related mortality before and after the introduction of long-acting oxycodone. *CMAJ* 2009;181:891-896  
Comments on the reported statistics on narcotic drugs. *International Narcotics Control Board*

## Why did prescribing rates increase?

- Lack of consensus regarding appropriate dose/use of narcotics
- Demand for the products among patients who have opioid dependency
- Rise of for-profit clinics: “pill mills”
- Prominent role of pharmaceutical companies in advertising opioid pain relievers
- Historic under-treatment of pain

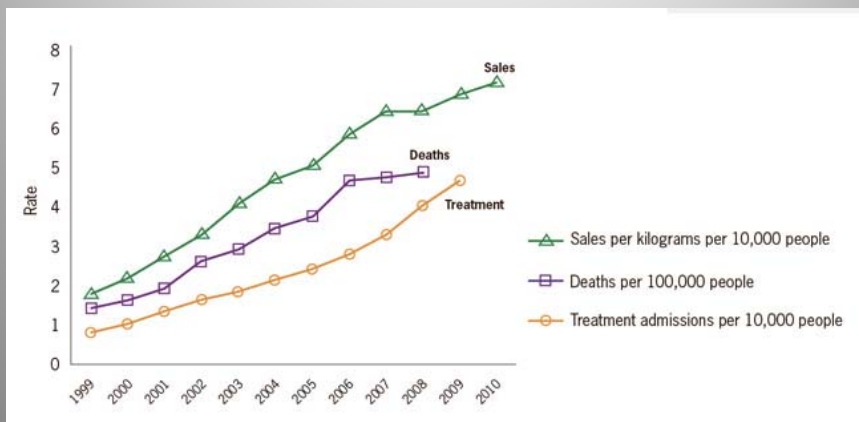
Opioid painkiller prescribing: where you live makes a difference. CDC Vital Signs. July 2014.

## Scope of the Problem

- 44 people/day die in the US from overdose of prescription painkillers
- 1999-2010: 48,000 women died of prescription painkiller overdose
  - Rate of overdose death increased by 400%
- 2010: > 10,000 men died of prescription painkiller overdose
  - Rate of overdose death increased by 265%
- Rate of heroin overdose deaths has tripled since 2010
- Direct health care costs: \$72.5 billion annually

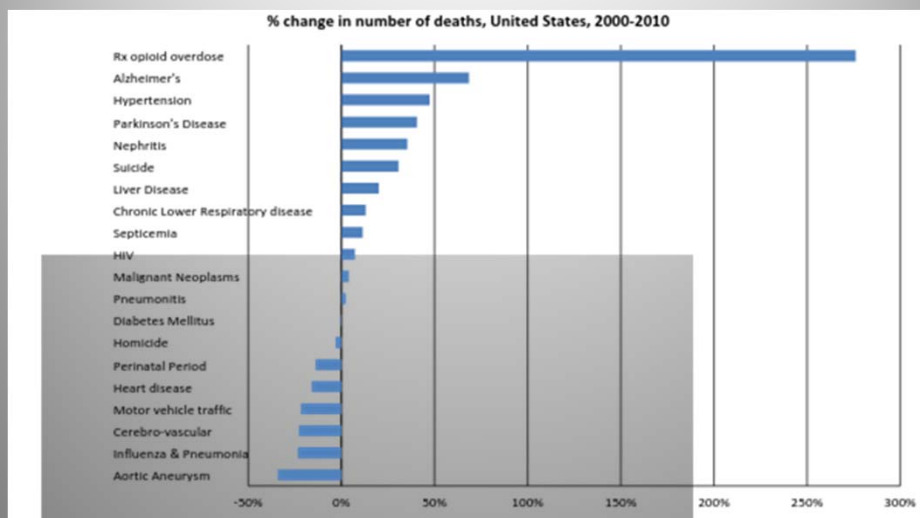
www.CDC.gov

## Rates of prescription painkiller sales, deaths and substance abuse treatment admissions (1999-2010)



<http://www.cdc.gov/vitalsigns/PainkillerOverdoses/index.html>

## % Change in Number of Deaths, 2000-2010



WISQARS, 2000 and 2010; CDC/NCHS, National Vital Statistics System



## What about our population?

- Older adults are fastest growing segment of the global population
  - 2050: adults > 65yo expected to increase to 1.53 billion
- In 2006, 1 in 4 older adults used psychoactive medications with abuse potential
  - Baby boomers are more likely to report use of these medications than earlier cohorts

Blazer, et al. Substance use disorders and psychiatric comorbidity in mid and later life: a review. *Intern Joun of Epidem* 2014;43:304-317  
West, et al. Trends in abuse and misuse of prescription opioids among older adults. *Drug and Alcohol Dependence*. 2015;149:117-121

## What about our population?

- From 1995-2010, 9-fold increase in opioid prescriptions for older adults
- # of Americans aged 50+ with a substance abuse disorder will double to 5.7 million in 2020
- Few studies have examined illicit drug use problems in older adults

West, et al. Trends in abuse and misuse of prescription opioids among older adults. *Drug and Alcohol Dependence*. 2015;149:117-121

## National Epidemiologic Survey on Alcohol and Related Conditions

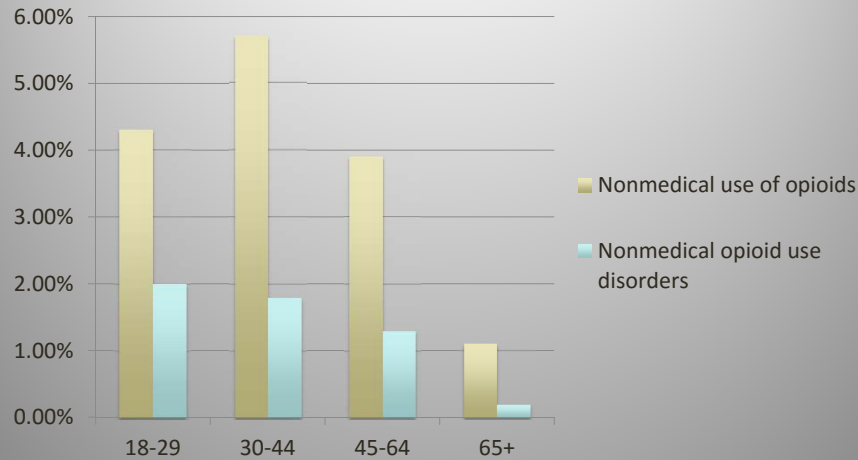
- Face to face survey conducted by the National Institute on Alcohol Abuse and Alcoholism from 2001-2002 (43,093 subjects)
- 18 years and older
- Survey addressed alcohol use and treatment but also prevalence of opioid use and abuse

## Huang, et al.

- Objective: Present national data on prevalence, correlates and comorbidity of nonmedical prescription drug use and drug use disorders
- Method: Derived data from the NESARC

*J Clin Psychiatry 2006;67:1062-1073*

## Huang, et al. - Results



*J Clin Psychiatry 2006;67:1062-1073*

## Moore, et al.

- Objective: Examine prevalence and sociodemographic correlates of substance use in adults aged 65 years and older
- Methods: Derived from data from NESARC
  - N= 8,205 US adults age 65+
  - Measured both lifetime and past 12-month nonmedical drug use

*J Am Geriatr Soc 2009;57:2275-2281*

## Moore, et al.

- Results:
  - Lifetime nonmedical use of opioids 1.1%
  - Previous-12-month nonmedical use of opioids 0.5%
  - Adults age 75+, women less likely to use each substance
  - Whites had higher lifetime use than non-whites (except American Indians and Alaskan Natives)

*J Am Geriatr Soc 2009;57:2275-2281*

## National Survey on Drug Use and Health

- Sponsored by the Substance Abuse and Mental Health Services Administration (SAMHSA)
- Annual nationwide survey involving interviews with ~ 70,000 randomly selected individuals aged 12 and older

## Blazer and Wu

- Objective: Estimate frequency, distribution and correlates of nonprescription use of pain relievers by middle-aged and elderly people
- Methods: Derived from data from 2005/2006 NSDUH
  - N=6,717 (age 50-64); N=4,236 (age >65)
- Results:
  - Nonmedical use of prescription opioids had past year prevalence of **0.6% in 65+ age group**
  - Compared to other prescription drugs: tranquilizers (0.46%), stimulants (0.16%), sedatives (0.14%)

*J Am Geriatr Soc 2009; 57:1252-1257*

## NSDUH – Most recent results, adults 50 or older (2013)

*“How long has it been since you last used any prescription pain reliever that was not prescribed for you or that you took only for the experience or feeling it caused?”*

Never used pain relievers	92%
Within the past 30 days	0.8%
More than 30 days ago but within the past 12 months	0.9%
More than 12 months ago	6.3%

United States Department of Health and Human Services. Substance Abuse and Mental Health Services Administration. Center for Behavioral Health Statistics and Quality. National Survey on Drug Use and Health, 2013. ICPSR35509-v3. Ann Arbor, MI: Inter-university Consortium for Political and Social Research [distributor], 2015-11-23. <http://doi.org/10.3886/ICPSR35509.v3>

## Rathrauff, et al.

- In 2000/2001, an estimated 1.7 million older adults were in need of substance abuse treatment
  - Estimated 4.4 million by 2020
- Opioids were the most frequently reported primary illicit drug in treatment-seeking adults aged 50+

Substance Abuse and Mental Health Services Administration, Office of Applied Studies. The DASIS Report: Older Adults in Substance Abuse Treatment: 2005. Substance Abuse and Mental Health Services Administration. 2007.

## Pain in the elderly

- Persistent pain highly prevalent, costly and disabling
- Multiple sites, multiple comorbidities
- Mixed pain syndromes exist
  - Combination of musculoskeletal and neuropathic pain
- Diagnostic workups frequently fail to contribute useful information

Makris, et al. Management of persistent pain in the older patient: a clinical review. JAMA. 2014;312(8):825-836

## Pain in the Elderly

- Persistent pain can be associated with –
  - Functional decline
  - Diminished appetite
  - Sleep disruption
  - Agitation
  - Cognitive decline
  - Falls
  - Immobility
  - Depression and anxiety
  - Delirium

Makris, et al. Management of persistent pain in the older patient: a clinical review. JAMA. 2014;312(8):825-836

## Why is pain so difficult to treat in the elderly?

- Age-related physiologic changes resulting in altered drug absorption, decreased renal excretion
- Sensory/cognitive impairments
- Polypharmacy
- Multi-morbidity
- Limited evidence base to guide management in elderly patients
- Physician concern regarding treatment-related harm

Makris, et al. Management of persistent pain in the older patient: a clinical review. JAMA. 2014;312(8):825-836

## Nonpharmacologic Management

- Cognitive behavioral therapy
  - Reduces pain (effect size 0.47;  $P < 0.01$ ) and improves physical functioning (effect size, 0.15,  $P < 0.05$ )
  - Did not report on safety issues
  - Recommended for use by patients if delivered by a professional
  - Level of evidence (LOE): IIb

Lunde, et al. The effectiveness of cognitive and behavioral treatment of chronic pain in the elderly: a quantitative review. J Clin Psychol Med Settings. 2009;16(3):254-262

## Nonpharmacologic Management

- Acupuncture
  - Reduces pain (standard mean difference, -0.35, 95% CI -0.14 to -0.55) and functional disability (SMD, -0.35, 95% CI -0.15 to -0.56) relative to sham controls
  - Minimal adverse effects (local reaction at needle insertion sites)
  - Consider use in older adults as adjunctive therapy
  - LOE: 1a

Manheimer, et al. Meta-analysis: acupuncture for osteoarthritis of the knee. Ann Intern Med. 2007;146(12):868-877



## Nonpharmacologic Management

- Mindfulness meditation
  - Reduces pain/disability and improves psychological function in patients with chronic back pain
    - But not relative to attention control group
  - No adverse events reported
  - Limited/weak evidence supporting use
  - LOE: Ib

Morone, et al. A mind-body program for older adults with chronic low back pain: results of a pilot study. Pain Med. 2009;10(8):1395-1407

## Nonpharmacologic Management

- Massage
  - Reduces pain (effect size 0.96) and stiffness (effect size 0.31) and improves functioning (effect size 0.74) relative to attention control
  - No serious adverse events reported
  - Consider use as adjunctive therapy
  - LOE: Ib

Periman, et al. Massage therapy for osteoarthritis of the knee: a randomized controlled trial. Arch Intern Med. 2006;166(22):2533-2538

## Nonpharmacologic Management

- Self-management education programs
  - Reduces pain (effect size -0.06, CI -0.02 to -0.1) and improves functioning (-0.06, CI -0.06 to -0.10) relative to controls
  - No adverse events reported
  - Recommended by US organizations
  - LOE: 1a

Chodosh, et al. Meta-analysis: chronic disease self-management programs for older adults. *Ann Intern Med.* 2005;143(6):427-438

## Nonpharmacologic Management

- Exercise
  - Reduces pain relative to usual care/control (effect size range 0.25 to 2.75); improves physical functioning and self efficacy
  - Did not report on safety issues
  - Strong recommendation that physical activity program be considered
    - Focus on strengthening, flexibility, endurance, balance
  - LOE: 1b

Focht BC. Effectiveness of exercise interventions in reducing pain symptoms among older adults with knee osteoarthritis: a review. *J Aging Phys Act.* 2006;14(2):212-235  
Levy, et al. Evaluation of a multi-component group exercise program for adults with arthritis: Fitness and Exercise for People with Arthritis (FEPA). *Disabil Health J.* 2012;5(4):305-311

## Nonpharmacologic Management

- Tai Chi
  - Reduces pain (SMD -0.86, CI -1.19 to -0.39), physical disability (SMD -0.86, CI -1.20 to -0.53) and joint stiffness (SMD -0.53, CI -0.99 to -0.08)
  - Minor adverse events: muscle soreness, joint pain
  - Consider for use in older patients if delivered appropriately
  - LOE: IIb

Kang, et al. Tai chi for the treatment of osteoarthritis: a systematic review and meta-analysis. *BMJ Open*. 2013;1(1):e000035

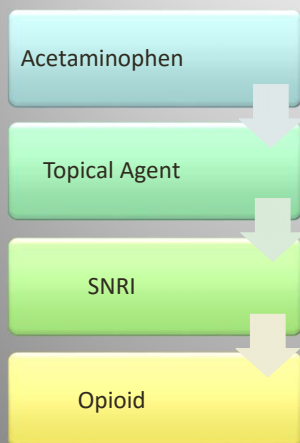
## Nonpharmacologic Management

- Yoga
  - Reduces pain and improved physical function in pretest vs posttest comparisons
  - No adverse events reported
  - Consider for use in older adults if delivered appropriately
  - LOE: III

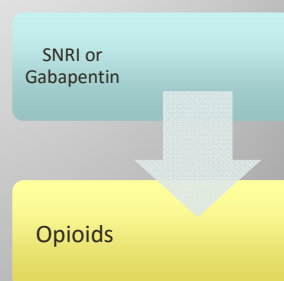
Park, et al. Managing osteoarthritis: comparisons of chair yoga, Reiki and education (pilot study). *Holist Nurs Pract*. 2011;25(6):316-326

## Treatment Algorithms

### Nociceptive Pain



### Neuropathic pain



*Makris, et al. JAMA 2014;312(8):825-836*

## Pharmacologic Management

- Acetaminophen
  - Reduces pain relative to placebo (effect size 0.21, CI 0.02 to 0.41)
  - Inferior when compared with oral NSAIDs for pain reduction, stiffness, and physical functioning
  - Concern for unintentional overdose
  - Recommended as first line therapy
  - LOE: 1a

Zhang, et al. Does paracetamol reduce the pain of osteoarthritis? A meta-analysis of randomized controlled trials. Ann Rheum Dis. 2004;63(8):901-907  
Towheed, et al. Acetaminophen for osteoarthritis. Cochrane Database Syst Rev. 2006;1(1):CD004257

## Pharmacologic Management

- Oral NSAIDs
  - Reduce pain (effect size 0.32, CI 0.24-0.39) and functional disability (effect size 0.29, CI 0.18-0.40) relative to placebo
  - Concern for GI, renal, CV toxicity
  - Use with caution for shortest time possible and only when other safer therapies have failed
  - LOE: 1a

Bjordal, et al. Non-steroidal anti-inflammatory drugs, including cyclo-oxygenase-2 inhibitors, in osteoarthritis knee pain: meta-analysis of randomised placebo-controlled trials. *BMJ*. 2004;329(7478):1317

## Pharmacologic Management

- Topical NSAIDs
  - Reduce pain (effect size 0.41, CI 0.14-0.68), improve physical function (effect size 0.44, CI 0.16-0.71) and stiffness (effect size, 0.43, CI 0.15-0.70) relative to placebo
  - Equivalent to oral NSAIDs in terms of pain reduction at 1 year
  - Well tolerated; safety in renal impairment/concomitant anticoagulation use unknown
  - Consider if pain is localized
  - Expensive – difficult to get covered by most insurances
  - LOE: 1b

Baer, et al. Treatment of osteoarthritis of the knee with a topical diclofenac solution: a randomised controlled, 6 week trial. *BMC Musculoskeletal Disord*. 2005;6(1):44.  
Underwood, et al. Advice to use topical or oral ibuprofen for chronic knee pain in older people: randomised controlled trial and patient preference study. *BMJ*. 2008;336(7636):138-142

## Pharmacologic Management

- Tramadol
  - Reduces pain relative to placebo (visual analog score at day 7,  $P=0.002$ ; day 14  $P=0.01$ ); no difference between groups for functional index score
  - Adverse effects: constipation, nausea, vomiting, dizziness, headache, somnolence
  - Potential drug/drug interactions; caution with serotonergic medications; avoid if at risk for sz
  - LOE: 1b

Malonne, et al. Efficacy and tolerability of sustained-release tramadol in the treatment of symptomatic osteoarthritis of the hip or knee: a multicenter, randomized, double-blind, placebo-controlled study. Clin Ther. 2004;26(11):1774-1782

## Pharmacologic Management

- Opioids
  - Reduce pain (effect size 0.56,  $P < 0.001$ ) and functional disability (effect size 0.43,  $P < 0.002$ ) relative to placebo
  - Risk of falls, hospitalization (compared to nonselective NSAIDs), constipation, nausea, vomiting
  - Consider for mod/severe pain, failed other treatments
  - LOE: 1a

Papaleontiou, et al. Outcomes associated with opioid use in the treatment of chronic noncancer pain in older adults: a systematic review and meta-analysis. J Am Geriatr Soc. 2010;58(7):1353-1369

## Pharmacologic Management

- Tricyclic antidepressants
  - Amitriptyline reduces pain relative to placebo in patients with diabetic neuropathy
  - Significant adverse effects: anticholinergic, QTc prolongation, toxicity at higher doses
  - Tertiary tricyclics (amitriptyline, doxepin) should be avoided d/t adverse effects
    - Nortriptyline with somewhat less anticholinergic side effects
  - LOE: Ib

Morello, et al. Randomized double-blind study comparing the efficacy of gabapentin with amitriptyline on diabetic peripheral neuropathy pain. Arch Intern Med. 1999;159(16):1931-1937

## Pharmacologic Management

- Anticonvulsants – gabapentin and pregabalin
  - Both reduce pain relative to placebo among patients with diabetic neuropathy
  - Adverse effects: sedation, dizziness, peripheral edema
  - Recommended for older adults with diabetic neuropathy
  - LOE: 1b

Boyle, et al. Randomized, placebo-controlled comparison of amitriptyline, duloxetine, and pregabalin in patients with chronic diabetic peripheral neuropathic pain: impact on pain, polysomnographic sleep, daytime functioning and quality of life. Diabetes Care. 2012;35(12):2451-2458

## Pharmacologic Management

- SNRIs
  - Duloxetine reduces diabetic neuropathic pain
  - Duloxetine superior to placebo for pain reduction/improved physical functioning in patients with knee OA
  - Generally well tolerated; adverse effects hyponatremia, dizziness, abdominal pain, nausea
  - LOE: 1b

Goldstein, et al. Duloxetine vs placebo in patients with painful diabetic neuropathy. *Pain*. 2005;116(1-2):109-118  
Chappell, et al. Duloxetine, a centrally acting analgesic, in the treatment of patients with osteoarthritis knee pain: a 13-week, randomized, placebo-controlled trial. *Pain*. 2009;146(3):253-260

## Pharmacologic Management

- SSRIs
  - No studies available with regard to chronic pain in older adults
  - Not recommended for use as analgesic



## Pharmacologic Management

- Topical lidocaine
  - Pts with knee OA: 50% improvement in symptom severity reported by 40% for pain, 40% stiffness, 38% increased functioning
  - Generally well tolerated; headache is most common adverse effect
  - Consider for localized pain
  - LOE: IIb

Burch, et al. Lidocaine patch 5% improves pain, stiffness, and physical function in osteoarthritis pain patients: a prospective, multicenter, open-label effectiveness trial. *Osteoarthritis Cartilage*. 2004;12(3):253-255

## Opioids

- Hydrocodone
  - Metabolized by CYP2D6 to hydromorphone, by CYP3A4 to norhydrocodone
  - Consider dose adjustment for moderate/severe renal impairment

Garcia-Castillo, et al. Treatment of persistent pain in older adults. *UpToDate*. 2016.

## Opioids

- Oxycodone
  - Metabolized by CYP2D6 and CYP3A4 to active metabolites
    - No toxic metabolites
  - Blood levels increased ~50% in renal insufficiency (CrCl < 60)

Garcia-Castillo, et al. Treatment of persistent pain in older adults. UpToDate. 2016.

## Opioids

- Morphine
  - Clearance of active/neurotoxic metabolites decreased in renal impairment; consider avoiding if CrCl < 30

Garcia-Castillo, et al. Treatment of persistent pain in older adults. UpToDate. 2016.

## Opioids

- Hydromorphone
  - Metabolized to inactive metabolites; consider in mild renal/hepatic impairment
  - In severe CKD or ESRD, could have accumulation of neurotoxic metabolites

Garcia-Castillo, et al. Treatment of persistent pain in older adults. UpToDate. 2016.

## Opioids

- Oxymorphone
  - Similar to hydromorphone
  - Relatively new – not a lot of data for older adults

Garcia-Castillo, et al. Treatment of persistent pain in older adults. UpToDate. 2016.

## Opioids

- Transdermal fentanyl
  - Metabolized by CYP3A4 to inactive metabolites
  - Full effect after application of 1<sup>st</sup> patch 18-24 hrs
  - Steady state may not be reached in elderly until 6-9 days
  - Avoid in opiate-naïve, cognitive impairment

Galicia-Castillo, et al. Treatment of persistent pain in older adults. UpToDate. 2016.

## Opioids

- Transdermal buprenorphine
  - Partial mu agonist, weak kappa agonist; analgesic dose-ceiling
  - Metabolized by CYP3A4 and glucuronidation to active metabolites
  - Delayed effect – 72 hours
  - Limited data on renal impairment dosing
  - Unclear role in older adults

Galicia-Castillo, et al. Treatment of persistent pain in older adults. UpToDate. 2016.

## Opioids

- Methadone
  - Not first line
  - Significant QTc prolongation
  - Variable pharmacokinetic/pharmacodynamic profile
  - Higher risk of overdose

Garcia-Castillo, et al. Treatment of persistent pain in older adults. UpToDate. 2016.

## Safe Opioid Prescribing in the Elderly

- Screen for substance abuse potential
- Ensure that patients with cognitive impairment will have help managing their opioid medications
- Prescription drug monitoring programs
- Frequent monitoring
  - Opioid contract
  - Urine tox screens
  - Pill counts
- Harm reduction – Concurrent naloxone prescribing

## Screening and Opioid Assessment for Patients with Pain (SOAPP) Version 1.0-14Q

- Designed to help providers evaluate the patients' relative risk for developing problems when placed on long-term opioid therapy
- Developed based on expert consensus regarding concepts likely to predict which patients will require more/less monitoring on opioid therapy
- 14 items, 5 point scale

## Screening and Opioid Assessment for Patients with Pain (SOAPP) Version 1.0-14Q

SOAPP® Version 1.0-14Q

Name: \_\_\_\_\_ Date: \_\_\_\_\_

*The following are some questions given to all patients at the Pain Management Center who are on or being considered for opioids for their pain. Please answer each question as honestly as possible. This information is for our records and will remain confidential. Your answers alone will not determine your treatment. Thank you.*

Please answer the questions below using the following scale:

**0 = Never, 1 = Seldom, 2 = Sometimes, 3 = Often, 4 = Very Often**

1. How often do you have mood swings?	0 1 2 3 4
2. How often do you smoke a cigarette within an hour after you wake up?	0 1 2 3 4
3. How often have any of your family members, including parents and grandparents, had a problem with alcohol or drugs?	0 1 2 3 4
4. How often have any of your close friends had a problem with alcohol or drugs?	0 1 2 3 4

## Screener and Opioid Assessment for Patients with Pain (SOAPP) Version 1.0- 14Q

5. How often have others suggested that you have a drug or alcohol problem?	0	1	2	3	4
6. How often have you attended an AA or NA meeting?	0	1	2	3	4
7. How often have you taken medication other than the way that it was prescribed?	0	1	2	3	4
8. How often have you been treated for an alcohol or drug problem?	0	1	2	3	4
9. How often have your medications been lost or stolen?	0	1	2	3	4
10. How often have others expressed concern over your use of medication?	0	1	2	3	4

## Screener and Opioid Assessment for Patients with Pain (SOAPP) Version 1.0- 14Q

11. How often have you felt a craving for medication?	0	1	2	3	4
12. How often have you been asked to give a urine screen for substance abuse?	0	1	2	3	4
13. How often have you used illegal drugs (for example, marijuana, cocaine, etc.) in the past five years?	0	1	2	3	4
14. How often, in your lifetime, have you had legal problems or been arrested?	0	1	2	3	4

## Screening and Opioid Assessment for Patients with Pain (SOAPP) Version 1.0-14Q

To score the SOAPP® V.1- 14Q, simply add the ratings of all the questions:

A score of 7 or higher is considered positive.

Sum of Questions	SOAPP® Indication
> or = 7	+
< 7	-

SOAPP® Cutoff Score	Sensitivity	Specificity	Positive Predictive Value	Negative Predictive Value	Positive Likelihood Ratio	Negative Likelihood Ratio
Score 7 or above	.91	.69	.71	.90	2.94	.13
Score 8 or above	.86	.73	.75	.86	3.19	.19
Score 9 or above	.77	.80	.77	.80	3.90	.28

## Opioid Risk Tool

- Purpose: Assesses the risk of aberrant behaviors when patients are prescribed opioid medication for chronic pain
- High degree of sensitivity and specificity for differentiating high vs low risk for opioid abuse



OPIOID RISK TOOL				
		Mark each box that applies	Item Score If Female	Item Score If Male
1. Family History of Substance Abuse	Alcohol	[ ]	1	3
	Illegal Drugs	[ ]	2	3
	Prescription Drugs	[ ]	4	4
2. Personal History of Substance Abuse	Alcohol	[ ]	3	3
	Illegal Drugs	[ ]	4	4
	Prescription Drugs	[ ]	5	5
3. Age (Mark box if 16 – 45)		[ ]	1	1
4. History of Preadolescent Sexual Abuse		[ ]	3	0
5. Psychological Disease	Attention Deficit Disorder, Obsessive Compulsive Disorder, Bipolar, Schizophrenia	[ ]	2	2
	Depression	[ ]	1	1
<b>TOTAL</b>			_____	_____

**Total Score Risk Category**  
 Low Risk 0 – 3  
 Moderate Risk 4 – 7  
 High Risk  $\geq 8$

## Naloxone

- Highly specific, high-affinity opioid antagonist used to reverse the effects of opioids
- Can be safely administered by laypersons via IM or IN routes
  - No major side effects – lower lay-administered doses produce only mild withdrawal symptomatology
  - No effect in the absence of opioids
- Effects last 30-90 minutes

## PrescribeToPrevent.org

- Who gets naloxone?
  - High dose (>50mg morphine equivalent/day)
  - Receiving any opioid prescription for pain plus:
    - Smoking, COPD, emphysema, asthma, OSA, respiratory infection, other respiratory illness
    - Renal dysfunction, hepatic disease, cardiac illness
    - Concurrent alcohol abuse
    - Concurrent benzo use
    - Concurrent antidepressant prescription
    - Patients who have difficulty accessing care

## Naloxone

- **Colo. Rev. Stat. § 12-36-117 Unprofessional conduct:**
  - (1.7) The prescribing, dispensing, or distribution of an opiate antagonist by a licensed health care practitioner shall not constitute unprofessional conduct if he or she prescribed, dispensed, or distributed the opiate antagonist in a good faith effort to assist:
    - (a) A person who is at increased risk of experiencing or likely to experience an opiate-related drug overdose event, as defined in section 18-1-712(5)(e), C.R.S.; or
    - (b) A family member, friend, or other person who is in a position to assist a person who is at increased risk of experiencing or likely to experience an opiate-related drug overdose event, as defined in section 18-1-712(5)(e), C.R.S

<http://lawatlas.org/query?dataset=laws-regulating-administration-of-naloxone>

## Naloxone Stats – 1996-2010

- # of program participants from beginning of program through June 2010: 53,032
- Reported # opioid overdose reversals: 10,171

MMWR Weekly Report 2012;61(6);<http://www.cdc.gov/mmwr/pdf/wk/mm6106.pdf>

## Naloxone – Medicare Coverage

2016 Medicare Part-D Plans (PDP)														
Plan Name	Premium	Deductible	ICL	Tier Level	Amount Limit	Days Limit	Prior Authorization Y/N	Step Therapy Y/N	Cost Preferred	Max	Cost Non Preferred	Max	Cost Amt Mail	Max
Symphonix Value Rx (PDP) (S0522-028)	\$27.60	\$360	\$3310	3			N	N	20%	None	20%	None	20%	None
Symphonix PrimeSaver Rx (PDP)(S0522-062)	\$43.30	\$200	\$3310	3			N	N	20%	None	25%	None	20%	None
Magellan Rx Medicare Basic (PDP)(S4607-022)	\$34.00	\$360	\$3310	2			N	N	\$3	None	\$8	None	\$3	None
Anthem Blue MedicareRx Standard (PDP)(S5596-059)	\$46.70	\$360	\$3310	3			N	N	\$29	None	\$44	None	\$29	None
Anthem Blue MedicareRx Plus (PDP) (S5596-060)	\$85.70	\$0	\$3310	3			N	N	\$40	None	\$45	None	\$40	None
Anthem Blue MedicareRx Premier (PDP) (S5596-061)	\$140.20	\$0	\$3310	3			N	N	\$25	None	\$45	None	\$25	None

## Naloxone – Cost Effective?

- Coffin & Sullivan, *Ann Intern Med* 2013:
  - Estimated cost-effectiveness of distributing naloxone to heroin users
  - Used analytic models to determine overdose deaths prevented and incremental cost-effectiveness ratio

## Naloxone – Cost Effective?

- Coffin & Sullivan, *Ann Intern Med* 2013:
  - Results:
    - 1 death prevented for every 227 naloxone kits distributed
    - Distribution increased costs by \$53 and quality-adjusted life years by 0.119
      - » Incremental cost effectiveness ratio = \$438.00
  - Conclusion: Naloxone distribution to heroin users is likely to reduce overdose deaths and is cost-effective

## Resources for Patients and Physicians

- Prescription Drug Monitoring Program:
  - <https://www.colorado.gov/pacific/dora/PDMP>
- [www.PrescribeToPrevent.org](http://www.PrescribeToPrevent.org)

## Conclusions

- Prescription opioid abuse remains a major public health concern among the general population
- Prevalence of opioid misuse among elderly patients is less than the general population, but is suspected to rise in the coming years
- Chronic pain remains an important cause of morbidity among elderly patients
- Treatment options remain limited, and opioids are still among the mainstays of treatment for elderly patients with chronic pain
- Efforts should be made to safely prescribe opioids, which includes screening for possible substance abuse, considering opioid contracts and prescribing concurrent naloxone when appropriate

Questions?