OPIOID USE AND ABUSE IN THE OLDER ADULT POPULATION

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OBJECTIVES

- Characterize opioid use and abuse in the older adult population
- Describe the risk factors related to opioid use in older adults
- Explore strategies for the safe and rational use of opioid in older adults

EPIDEMIOLOGY OF OPIOID USE IN ELDERLY

6-9% of community-dwelling older adults use opioids chronically

9% of clinic visits for older adults involve prescription of an opioid

Women (8.6%) and individuals with arthritis and depression are more likely to use opioids

Up to 70% of NH residents receive regularly scheduled opioids

Naples, et al. Clin Geriatr Med 2016;32:725-35.
Steinman, et al. Pain Med 2015;16:319-27.
Lapane et al. J Pain Symptom Manage 2013;45:33-42.
Tilly, et al. OUD Issue Brief, Administration for Community Living, 2017.

AGE-RELATED RISKS OF OPIOID USE

CHANGES IN OPIOID METABOLISM WITH AGING

Decrease in first-pass metabolism of may increase oral bioavailability (F)

e.g. morphine

Decrease in phase I metabolism may decrease systemic clearance and increase elimination half-life (t1/2)

e.g. oxycodone, ?buprenorphine

Effects on fentanyl unclear

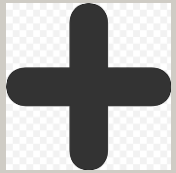
Levorphanol, methadone not studied

Baille, et al. Age Aging 1989;18:258-262.
Liukas, et al. Clin Pharmacol Ther 2008;84:462-7.
Al-Tawil, et al. Eur J Clin Pharmacol 2013;69:143-9.

PHARMACODYNAMIC CHANGES WITH AGING

Increased level and duration of pain relief with opioids

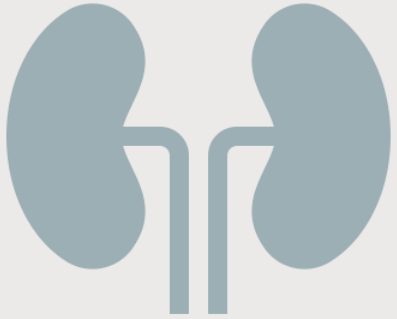
Dose-response relationship between exposure and risk of adverse drug effects



Coadministration with other CNS agents increases risk

McLachlan, et al. Br J Pharmacol 2011;71:351-364.
Huang, et al. Maturitas 2013;74:123-9
AGS. J Am Geriatr Soc 2019;67-674-94.

CHANGES IN RENAL ELIMINATION OF OPIOIDS WITH AGING



Renal function is decreased with age, independent of renal disease

Accumulation of renally-eliminated active metabolites may may lead to toxicity

e.g. oxycodone, hydromorphone, codeine, meperidine, tramadol

Hanlon, et al. Progress in Pain Research and Management. IIASP Press 2005;P205-22.
McLachlan, et al. Br J Clin Pharmacol 2011:71:351-364.
Smith HS. Mayo Clin Proc 2009;84:613-24.

RISKS OF OPIOID USE IN OLDER ADULTS

- Increased risk of fractures
- Established link between opioids and cognitive decline
- Increased risk of delirium
- Increased risk of hospitalization and ER visits
- Risk of abuse and misuse
- Other ADEs in older adults:
  - Motor vehicle accidents
  - CV events
  - Pneumonia
  - Death

Takkouche, et al. Drug Saf 2007;30:171-84.
Puustinen, et al. BMC Geriatr 2011;11:70.
Clegg, et al. Age Aging 2011:40:23-9.
Tilly, et al. OUD Issue Brief, Administration for Community Living, 2017.

ABUSE & MISUSE OF OPIOIDS AMONG ELDERLY

Rates of opioid abuse lower in elderly population, but increasing

2.2% of adults 65+ report non-medical use of prescription opioids in past 12 months

Rates of inadvertent opioid misuse are higher in older adults

Rates of serious medical outcomes are higher in older adults

West, et al. Drug and Alcohol Dep 2015;149:117-21.
Reib, et al. Canadian Geriatr J 2020;23(1):123-134.
Tilley, et al. OUD Issue Brief, Administration for Community Living, 2017.
National Epidemiologic Survey on Alcohol and Related Conditions II (2012-2013):

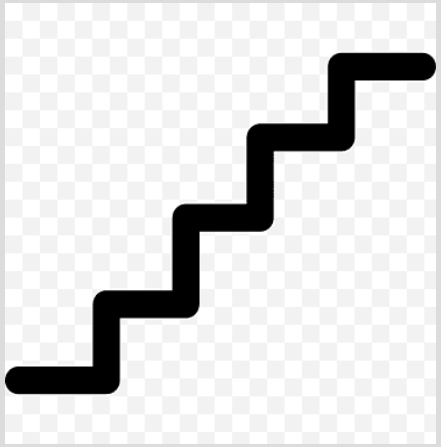
Tools for OUD Screening & Assessment

WHO Assist Tool (Part A) Clinician (8Q)	NIDA-Modified (NM) Assist Clinician (1+8Q)
Opioid Risk Tool Patient (10Q)	SOAPP Clinician (14Q)
COMM Patient (17Q)	PDMP

https://www.who.int/substance_abuse/activities/assist_v3_english.pdf?ua=1
https://www.drugabuse.gov/nidamed-medical-health-professionals/screening-tools-resources/chart-screening-tools
Webster et al. Pain Med 2005;6(6):432.
https://www.nhms.org/sites/default/files/Pdfs/SOAPP-14.pdf
http://nationalpaincentre.mcmaster.ca/documents/comm_sample_watermarked.pdf

OPIOID RISK MITIGATION

PRINCIPLES FOR CHRONIC PAIN MANAGEMENT



Use multi-modal, patient-centered, stepped approach

Incorporate non-pharmacologic and non-traditional approaches

e.g. CBT, PT, rehab, weight loss, exercise, meditation, massage, patient education, biofeedback

Tilly, et al. OUD Issue Brief, Administration for Community Living, 2017.
Reid, et al. BMJ 2015;350:h532.
AGS. J Am Geriatr Soc 2009;57:1331-46.

EFFICACY OF OPIOIDS FOR CNCP

- Limited to short-term studies
- Functional and QOL outcomes often not reported
- Pooled data = small to modest improvement in pain intensity and physical function compared to placebo
- No rigorous long-term trials (>1yr) comparing opioids to non-opioid analgesics
- Concern that benefit may not outweigh risk

Papaleontiou, et al. J Am Geriatr Soc 2010;58:1358-69.
Chou, et al. Ann Intern Med 2015;162:276.
Ericksen, et al. Pain 2006;125:172-9.
Naliboff, et al. J Am Pain Soc 2011; 12(2):288-96.

ALTERNATIVES TO OPIOIDS FOR CNCP

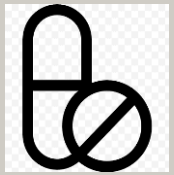
APAP is first-line for OA and LBP

Need 3-4g/d on routine schedule

PO NSAIDS (with caution) in carefully selected patients

Topicals: NSAIDs, lidocaine, capsaicin, menthol/methylsalicylate

INJ: steroids, hyaluronic acid (OA)



Neuropathic pain: SNRIs, SSRIs, gabapentin, pregabalin, TCAs (with caution)

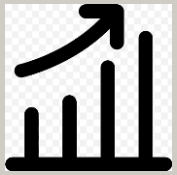
Tilly, et al. OUD Issue Brief, Administration for Community Living, 2017.
AGS. J Am Geriatr Soc 2009;57:1331-46.
Reid, et al. BMJ 2015;350:h532.

PRINCIPLES OF OPIOID USE

- Use as adjunct to non-pharmacologic modalities and non-opioid analgesics for CNCP
- Limit acute use to ≤ 7 days
- Continue non-opioid analgesics to facilitate "opioid-sparing" dosing
- Consider tramadol, oxycodone, morphine
- Initiate with lower doses and titrate more slowly
- Consider tapering and decreased use of opioids
- Monitor for OUD
- Offer treatment, when indicated

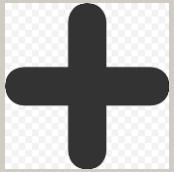
Naples, et al. Clin Geriatr Med:2016:32:725-735.
AGS. J Am Geriatr Soc 2009;57:1331-46.

KEY POINTS



Elderly often use prescription opioids to manage chronic pain conditions

Elderly have increased risk of opioid toxicity due to alterations in PK and PD



Opioids have limited efficacy and utility for the long-term treatment of chronic pain

Elderly are at risk for opioid abuse and misuse and should be screened with monitoring and intervention, where indicated

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QUESTIONS