FAST FACTS AND CONCEPTS #357
SAFETY CONSIDERATIONS WHEN USING OPIOIDS FOR OLDER ADULTS
Jennifer Pruskowski PharmD, Rollin Wright MD, Neal Sprissler PharmD, Mamta Bhatnagar MD

Background This Fast Fact discusses opioid therapy in older adults. Fast Fact #356 discussed physiologic changes that affect non-opioid pain management in older adults (age ≥ 65 years).

Rational Use of Opioids in the Older Adult When to use opioids is a complex, individualized decision that often involves consideration of prognosis and care goals, and is beyond the scope of this Fast Fact. Key principles for opioid prescribing in older adults include the following:

• Meperidine and codeine should be avoided in older patients as they both have dangerous metabolites that lead to more adverse effects than other opioids.
• Tapentadol and tramadol should be used with caution due to unique safety profiles and concern for serotonin syndrome for patients on multiple medications.
• Combination products that include acetaminophen (APAP) or non-steroidal anti-inflammatory drugs (NSAIDs) should be used with caution because of the increased susceptibility to NSAID side effects and the potential to exceed the maximum recommended daily dose of these non-opioid agents.
• Older adults are at higher risk of medication-induced adverse reactions (see section below). Therefore, when prescribing opioids for older patients start at the lowest dose and titrate no faster than 4 times the selected opioid’s terminal half-life (2). For example: short acting oxycodone immediate release is titrated no faster than every 2 days.
• For opioid-naïve patients, start with the lowest practical dose (half of a commercially available pill, e.g. 7.5 mg morphine or 2.5 mg oxycodone). For even lower doses, opioid elixirs can be used.
• Long-acting opioids should be initiated only after the patient has developed some opioid tolerance with the use of immediate release agents.

Opioid-Induced Adverse Reactions Common opioid-induced events (median frequency listed where available) in older adults are: constipation (30%), nausea (28%) dizziness (22%), and urinary retention, although many other side effects are possible (3). Adverse events prompt opioid discontinuation in 25% of cases of older adults (3). Key differences in these adverse reactions among older adults include:

• Older adults are at higher risk for adverse reactions due to the physiologic changes of aging, comorbidities such as cognitive impairment, kidney and/or liver dysfunction, and/or concomitant medications. For example, the risk of constipation with opioids is compounded by the concomitant use of medications such as iron and calcium supplementation, calcium-channel blockers, and some Parkinson’s medications. Increased scrutiny for opioid-induced reactions is necessary when managing an older patient.
• Adverse reactions may present atypically. For example, opioid-induced urinary retention can present as delirium and/or agitation (4) in cognitively frail adults. A broader differential diagnosis must be considered in older adults presenting with debilitating symptoms or syndromes.
• Falls and Fractures. Older adults are at higher risk of falls and fractures when taking opioids. In a meta-analysis of pooled data from 6 observational studies, older adults exposed to opioids had a 38% increased likelihood of fractures compared to older patients not on opioids (7).
• Delirium. While opioids have been shown to increase the risk of delirium, one prospective study of 541 patients with a hip fracture suggested that severe pain itself was strongly associated with developing delirium, and, in fact, patients who received less than 10 mg of parenteral morphine sulfate equivalents per day were more likely to develop delirium than patients who received higher daily opioid doses. Fundamentally, risk factors for delirium are complex, while opioids increase delirium risk, so can untreated severe pain especially if it disturbs the natural sleep-wake cycle (8).
• Risk of Opioid Misuse & Overdose. While rates of opioid misuse vary widely depending on the context, older age has been consistently associated with a decreased risk of aberrant opioid behaviors (9). In one retrospective cohort study of older patients who had recently been started on an opioid medication for chronic pain, only 3% showed evidence of opioid abuse or misuse behaviors (10). Furthermore, death from opioid overdose is less prevalent in older adults compared to younger adults (11). Still, older patients can be vulnerable to exploitation such as theft or involuntary diversion of their opioids by family or caregivers. Clinicians should educate older patients about their role in keeping opioids safe in their homes and community by storing opioids in a locked-box and minimizing the number of people who are aware of their opioid prescription.
• Without proper opioid counseling, education, and anticipatory management of side effects, older adults are more likely to miss doses, discontinue treatment, or refuse to take opioids in the future (5).

Authors’ Affiliations: University of Pittsburgh, Pittsburgh, PA (JP, RW, MB); CVS Pharmacy, Pittsburgh, PA (NS).

References:

Fast Facts and Concepts are edited by Sean Marks MD (Medical College of Wisconsin) and associate editor Drew A Rosielle MD (University of Minnesota Medical School), with the generous support of a volunteer peer-review editorial board, and are made available online by the Palliative Care Network of Wisconsin (PCNOW); the authors of each individual Fast Fact are solely responsible for that Fast Fact's content. The full set of Fast Facts are available at Palliative Care Network of Wisconsin with contact information, and how to reference Fast Facts.

Copyright: All Fast Facts and Concepts are published under a Creative Commons Attribution-NonCommercial 4.0 International Copyright (http://creativecommons.org/licenses/by-nc/4.0/). Fast Facts can only be copied and distributed for non-commercial, educational purposes. If you adapt or distribute a Fast Fact, let us know!

Disclaimer: Fast Facts and Concepts provide educational information for health care professionals. This information is not medical advice. Fast Facts are not continually updated, and new safety information may emerge after a Fast Fact is published. Health care providers should always exercise their own independent clinical judgment and consult other relevant and up-to-date experts and resources. Some Fast Facts cite the use of a product in a dosage, for an indication, or in a manner other than that recommended in the product labeling. Accordingly, the official prescribing information should be consulted before any such product is used.