

RISK MANAGEMENT ARTICLE

Safe medication prescribing for older adult patients

As the baby boomer generation continues to age, dentists will see an increasing number of geriatric patients. Experts have long acknowledged that children cannot be treated as “small adults” because they have unique needs. Similarly, older adults (age 65 and older) have unique needs because of physiologic and psychological changes related to aging.

The unique needs of geriatric patients are particularly important when it comes to prescribing medications. Dentists who fail to understand the nuances of safe medication practices for older adults may put their patients at risk for harm. They may also put themselves at risk for legal action prompted by situations such as adverse events from an inappropriate medication dosage or a patient's failure to take medications correctly because of inadequate education. Fortunately, dentists can take steps to help promote medication safety in geriatric patients.

Understand the issues

The aging population comes with dental challenges. According to the National Health and Nutrition Examination Survey, 18 percent of older adults have untreated tooth decay, with the percentage higher in Black Americans, Hispanics, and those with lower incomes.

Geriatric patients typically have multiple comorbidities and multiple medications (polypharmacy). Too often, patients unknowingly take medications that interact negatively because two different prescribers ordered the drugs.

In addition to polypharmacy, physiologic changes that occur with age, such as reduced liver and kidney function, need to be considered when prescribing medications for older adults. These changes may have negative effects on pharmacokinetics, which includes drug absorption, distribution, metabolism, and elimination. For example, the decreased glomerular filtration rate seen in the aging adult impairs drug elimination, which can lead to toxicity.

The physiologic changes of aging also affect pharmacodynamics. For example, older adults often have a more intense reaction to drugs affecting the central nervous system.

Take a thorough history

A thorough patient history is especially important for safe prescribing. In addition to asking about medical conditions such as cardiovascular disease and diabetes, and current medications, including dosages and reason for taking the medication, dentists should ask about allergies, over-the-counter medications, and herbs. Herbs can interfere with the effects of prescription medications; for instance, ginkgo can interfere with the effects of prescription anticoagulants.

Prescribe thoughtfully

Dentists should carefully consider the risks and benefits of medications prescribed to older adults. The 2015 American Geriatrics Society Beers Criteria is one resource. The list includes drugs that should be avoided or used with caution.

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Medication considerations for older adults

Here are some key points related to medication safety in older adults. Before prescribing any medication, the dentist should ask about allergies and check for possible interactions with the existing drugs the patient is taking.

Local anesthetics

- Limit the dose of epinephrine contained in anesthetics to a maximum of 0.04 mg.
- Minimize the use of epinephrine.

Analgesics

- Base prescribed doses on pain severity and medical history.
- Consider acetaminophen for the otherwise healthy older adult who has mild to moderate pain; use a dose of 500 to 1000 mg every 4 hours to a maximum of 4 g/day. Note: Acetaminophen may potentiate the action of warfarin and cause hepatic toxicity.
- Avoid nonsteroidal anti-inflammatory drugs (NSAIDs). If NSAIDs are needed, prescribe the lowest effective dose for the shortest possible time.
- Avoid opioid analgesics because they are associated with increased and more profound adverse drug reactions and prolonged durations of action. If an opioid analgesic is prescribed, the dose should be lower than that for younger patients.

Antimicrobials

- Reduce the dose of penicillins and cephalosporins for patients with renal disease.
- Know that clindamycin, broad-spectrum penicillins, and second- and third-generation cephalosporins are most often implicated in pseudomembranous colitis.
- Consider that older adults are more susceptible to adverse drug reactions and drug interactions related to antimicrobial therapy.

Source: Ouanounou A, Haas DA. Pharmacotherapy for the elderly dental patient. *J Can Dent Assoc.* 2015;80:f18.

Because cardiovascular disease is common among older adults, Ouanounou and Haas recommend limiting epinephrine use in all geriatric patients because of possible cardiac effects and restricting the dose of epinephrine in local anesthetics to a maximum of 0.04 mg.

Ouanounou and Haas note that the drug of choice for the control of mild to moderate pain is acetaminophen, but it should not be used long-term. On the other hand, nonsteroidal anti-inflammatory drugs should be avoided in patients with gastrointestinal disease and used with caution in patients with a history of renal disease, significant cardiovascular disease, or severe asthma.

For patients who require antibiotics, the dosage should be reduced when renal disease is present. In addition, dentists should keep in mind that older adults are more susceptible to antimicrobial-induced drug reactions such as *Clostridium difficile*-associated colitis.

Monitor closely

When administering medications such as local anesthetics, dentists should monitor the patient's pulse and blood pressure. Each patient's intake of pain medication should be monitored as well to check for possible misuse.

Consider patient limitations

Cognitive and sensory impairments can affect a patient's ability to understand instructions related to medications and the ability to take the drugs correctly. To better communicate with patients who have cognitive impairment, dentists should hold conversations in a quiet environment, where distractions are kept to a minimum. Sit facing the patient, at eye level. Use short sentences and keep the focus on key information.

If there is any question as to a patient's ability to understand the conversation, the dentist should ensure a family member or other responsible adult is present. The patient should have given written permission for the person to have access to his or her clinical information.

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Sensory limitations include hearing and vision loss. Be sure any hearing aids are turned on and minimize background noise in the room. Recommend patients fill prescriptions at pharmacies that use large-print labels and provide medication information in large type.

Document actions in the dental record

The patient's history and results of any physical examination, including blood pressure, should be kept in the dental record. Also include considerations related to medication prescribing or use, such as dosage adjustments. If unsure about any particular medication the patient is taking, the dentist should contact the patient's primary care provider and document the consultation results. A review of *all* medications that a patient is taking with the patient's primary care provider is critical for excellent care.

Patient education related to medications and post-procedure care should also be documented in the dental record. Dentists should provide education in the patient's preferred language and verify understanding of the material. If a spouse or another person was given the instructions because of a patient's cognitive impairment, it is important to note that.

Aging population

A 2016 report found that 8.5% of people worldwide (617 million) are age 65 and over, and this percentage is projected to be nearly 17% by 2050 (1.6 billion). Dentists need to be prepared to care for this aging population, including engaging in safe prescribing practices, to help avoid adverse effects and legal action related to inappropriate care.

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RESOURCES

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