Received: 22 July 2022 | Accepted: 18 October 2022

DOI: 10.1002/agm2.12228

Aging Medicine Open Access WILEY

COMMENTARY

Prescription analgesic overuse in older adults: Can we mitigate this growing problem?

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Keywords: analgesics, overuse, prescriptions

1 | BACKGROUND

Chronic pain—characterized by aches, pains, and other afflictions that last for longer than 3 months or extend beyond the time needed for appropriate tissue healing—frequently mandates multiple medications such as nonopioid and opioid analgesics.[1] Long-term chronic pain in adults aged 65 years and above (hereafter referred to as older adults) is typically due to musculoskeletal disorders such as a degenerative spine, arthritis, neuropathic pain, ischemic pain, and pain due to cancer or cancer treatments.[2] Data from 2015–2018 showed that nearly 15.1% of adults over the age of 60 used one or more prescription pain medications, compared to just 5.4% of adults aged 20–39 in the United States (US).[3] This medication usage may present a number of health-related morbidities as a result of adverse drug reactions (ADRs), particularly due to kidney problems in older adults. Further, there exists a pressing concern regarding the potential for developing a substance use disorder (SUD).[4,5] This review will focus on strategies to address polypharmacy in older adults to minimize the risks of these two intersecting issues.

2 | CURRENT STRATEGIES

2.1 | Comprehensive assessments and meaningful communication

The first and most obvious approach to adequate management of patient pain is accurate diagnosis and effective communication about the patient's needs and goals in their care. Patients experiencing acute pain may not always need opioids and may only require nonopioid interventions in the form of physical or behavioral therapy. This may be coupled with patient and caregiver education.[6] Educating patients on their treatment options and the benefits, side effects, and addictive nature of opioid and nonopioid analgesics should be a standard practice to mitigate the risk of misuse.[7]

2.2 | Prescription drug monitoring programs

Older adults are prone to polypharmacy, i.e., taking multiple prescribed medications concurrently to treat comorbid health issues. Polypharmacy can partially be attributed to fragmented healthcare, or the fact that many older adult patients have multiple healthcare providers. This relationship is validated, as a minimum of 60%–70% of patients with more than one opioid prescriptions receive them from multiple providers.[8] Polypharmacy is associated with an increased risk of ADRs among older adults, such as renal failure, gastrointestinal bleeding, and falls.[9] Prescription drug monitoring programs (PDMPs; also referring to controlled substance reporting systems) are accessible to multiple healthcare practitioners and offer a potential solution to track and manage opioid misuse. These programs collect information about the physicians, pharmacies, patient, dose amount, prescription product name, and the number of prescriptions dispensed across healthcare encounters. Although physicians are not required to utilize the PDMP, pharmacists will be alerted if a threshold is met. A collaborative deprescribing program between pharmacists and providers is needed to mitigate issues associated with polypharmacy.[10]

These programs are highly effective but also have certain limitations. Limting access to prescription analgesics may lead to patients

pursuing alternative illicit or otherwise unsafe avenues for medication access—an issue that is a particular concern in rural areas.[11] Furthermore, the efficacy of PDMPs to prevent harmful drug prescribing and overuse have been controversial, as some studies have observed sharp declines in opioid-associated mortality following their implementation and others have not.[12] Finally, a lack of integration of PDMP information into patients' electronic health records (EHRs) has proven to be a challenge for physicians when trying to discuss with patients the risks and benefits of a particular treatment option. The extra time taken by physicians to search for PDMP information outside of EHRs can be a burden on physicians working to treat patients in situations where time may be limited, such as an emergency department.[13]

2.3 | Patient and physician education

This approach involves educating the patient as well as the physician on safe drug usage and prescription practices. Systems of universal precautionary pain medicine have been recommended to physicians to reduce the risks associated with analgesics misuse by older adults.[14] This mechanism is based on the evaluation and monitoring of the patient on opioids. The Substance Abuse and Mental Health Services Administration recommends physician education on screening and guidelines on Brief Intervention and Referral Services for patients suffering from opioid and SUD. This education may help the physicians further understand pain management, in the hopes that they can further inform other healthcare specialists as well as educate patients whenever necessary.

3 | NONPHARMACOLOGICAL STRATEGIES TAILORED TO OLDER ADULTS

Due to the development of tolerance and ADRs in older adults associated with opioid overuse, clinicians could perhaps consider nonpharmacologic therapies and/or nonopioid pharmacologic treatments, whenever appropriate. In a study conducted on elderly male patients engaged in opioid treatments, 28% experienced one or more adverse events, with the most common being gastrointestinal and central nervous systemissues.[15] Nonpharmaceutical therapies are frequently referred to as complementary and alternative medicine (CAM) approaches—health-related treatment that is practiced outside of established medical practice. Such CAM therapies can include local heat applications, physical therapy, massages, acupuncture, meditation, vitamin supplements, and electrical nerve stimulation. One particularly attractive alternative to older adults is physical therapy. One of the most prominent changes during a normal aging process is the loss of muscle mass through sarcopenia.[16] This process results in substantial reductions in muscle protein synthesis and muscle power after the age of 60, along with a decline in mitochondria and motor neuron excitability.[17] For these reasons, older adult patients are at much higher risk of degenerative joint diseases, osteoarthritis, and fragility and, thus, chronic pain.[18]

Physical therapy aims to improve many of the symptoms of sarcopenia, including improved mobility and the prevention of a variety of health problems through movement and exercise. Strength-training programs have been effective in improving mobility, balance, and physical function in older adults. Specifically for older adults with knee or hip osteoarthritis, strengthening therapies significantly improved patient pain outcomes. Low-impact training such as T'ai Chi and aqua-aerobic programs may also improve musculoskeletal function when performed on a regular basis.[19]

Several studies have shown that hypnosis may be used to treat lower back pain, fibromyalgia, and cancer-related pain. Its implementation resulted in significant reductions in pain intensity and opioid use, highlighting the fact that additional, perhaps nonpharmaceutical treatment strategies for treating chronic pain and other comorbidities may be suitable options rather than opioids.[20]

Transcutaneous electrical nerve stimulation (TENS) is another promising treatment for various types of pain in older adults. In post–total hip arthroplasty patients, the trial group that received TENS on acupoints had a lower fentanyl consumption at 24 h after the operation in comparison to the sham group. Opioid-related side effects and the use of rescue medication were also higher in the sham group. Complementary to a limited analgesic treatment, TENS is an effective approach in managing postoperative pain in older adults.[21] The aforementioned therapies should be taught in training pathways for providers as well as offered as continuing medical education. There are multiple system-level approaches that may be utilized to address this ongoing issue—a particularly effective lever for change may be found in community pharmacies.

The issues with polypharmacy amidst a fragmented healthcare system can be partially addressed by utilizing pharmacists who can offer preventive care and chronic disease management. Pharmacists, in collaboration with primary care physicians, can play a crucial role in preventing opioid overuse in older adults. Studies have shown that patients have the highest frequency of healthcare encounters with community pharmacists.[22] Community pharmacists have frequent opportunities to monitor prescription drug usage and deliver patient counseling and education as they are the most accessible healthcare professionals. By serving the liaison between physicians, patients, and caregivers, pharmacists can provide medical counseling and be cognizant that special considerations are needed with older adult patients when meeting treatment goals.[23]

4 | CONCLUSION

Older adults are at much higher risk of developing serious consequences with prolonged analgesics use, particularly opioids. These risks include behavioral and psychological disorders and reduced mobility that can dramatically reduce daily activity and cause physical injuries. These risks indicate the need for alternative strategies to decrease opioid misuse and effectively treat these patients in a

safer way. Hence, exploring deprescribing plans and alternative pain management approaches in this population is extremely important. While existing solutions have been put in place to reduce opioid overuse over the last decade or two, a multifaceted approach involving an effective collaboration between pharmacists, patients, and providers is necessary in order to avail additional beneficial treatment strategies among older adults.

AUTHOR CONTRIBUTIONS

Ms. Kakatkar and Dr. Balkrishnan conceptualized the manuscript. Ms. Kakatkar and Mr. Narayan did the literature search and wrote the manuscript draft. Dr. Balkrishnan critically revised the manuscript draft.

ACKNOWLEDGMENTS

None.

FUNDING INFORMATION

This work was not supported by any source.

CONFLICT OF INTEREST

This work was not supported by any source. Dr. Balkrishnan is a consultant for Otsuka Pharmaceuticals. None of the other authors have any conflicts of interest to disclose.

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How to cite this article: Kakatkar S, Narayan A, Balkrishnan R. Prescription analgesic overuse in older adults: Can we mitigate this growing problem? *Aging Med*. 2022;5:294-296. doi:10.1002/agm2.12228