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Pharmacological Approaches for the Management of Persistent Pain in Older Adults:

What Nurses Need to Know

Fabio Guerriero, MD, PhD, **Ruth Bolier, MD**, **Janet H. Van Cleave, PhD, MSN**, and **M. Carrington Reid, MD, PhD**

Dr. Guerriero is Assistant Professor of Medicine, Department of Internal Medicine and Medical Therapy, University of Pavia, Pavia, Italy; Dr. Bolier is Geriatrician, Academic Medical Center, University of Amsterdam, Amsterdam, The Netherlands; Dr. Van Cleave is Assistant Professor, Rory Meyers College of Nursing, New York University, and Dr. Reid is Irving Sherwood Wright Associate Professor of Medicine, Division of Geriatrics and Palliative Medicine, Department of Medicine, Weill Cornell Medical Center, New York, New York.

Abstract

The current article addresses pharmacological treatment issues regarding the management of persistent pain in later life, which is a worldwide problem associated with substantial disability. Recommendations from guidelines were reviewed and data are presented regarding the benefits and risks of commonly prescribed analgesic medications. The evidence base supports a stepwise approach with acetaminophen as first-line therapy for mild-to-moderate pain. Oral nonsteroidal anti-inflammatory drugs are not recommended for long-term use. In properly selected older patients, opioid drugs should be considered if pain is not adequately controlled. Careful surveillance to monitor for benefits and harms of therapy is critical, given that advancing age increases risk for adverse effects. Key aspects of the pain care process that nurses routinely engage in are covered, including conducting pain assessments prior to initiating therapy, addressing barriers to effective pain care, educating patients and family members about the importance of reducing pain, discussing treatment-related risks and benefits, and formulating strategies to monitor for treatment outcomes. Finally, a case is presented to illustrate issues that arise in the care of affected patients.

Later life pain is a worldwide problem that adversely affects older adults in developed and developing countries (Reid, Eccleston, & Pillemer, 2015). Prevalence estimates for chronic non-cancer pain (here-after referred to as persistent pain) range from 25% to 76% among community-dwelling older adults and up to 85% to 93% among older adults living in residential care settings (Gibson & Lussier, 2012). Although persistent pain affects individuals across the lifespan, older adults are at increased risk, particularly from musculoskeletal and neuropathic disorders. Other major causes are shown in the Table.

Address correspondence to M. Cary Reid, MD, PhD, Irving Sherwood Wright Associate Professor of Medicine, Division of Geriatrics & Palliative Medicine, Department of Medicine, Weill Cornell Medical Center, 525 E. 68th Street, # 39, New York, NY 10065; mcr2004@med.cornell.edu.

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Persistent pain is associated with substantial disability characterized by reduced mobility, activity avoidance, increased risk of falls, and psychosocial morbidity, including depression, anxiety, and social isolation (Abdulla et al., 2013; American Geriatrics Society [AGS] Panel on Pharmacological Management of Persistent Pain in Older Persons, 2009). Over time, it can threaten an older individual's ability to maintain independence.

Persistent pain is often untreated or undertreated in older adults due to multiple barriers that include age-related physiological changes resulting in altered drug absorption and decreased renal excretion, gait disorders, polypharmacy, and multimorbidity, all of which limit treatment options. Patient-level barriers include reluctance to seek help for pain by some older adults due to the idea that pain is a natural part of the aging process or because of financial issues, as some treatments can be expensive. Other older patients seek help for their pain but may report their pain using nonspecific terms or be reluctant to engage in treatment due to fears about possible deleterious effects of various pain medications. Cognitive decline and loss of communication skills, which occur commonly in older adults, can also complicate adequate assessment and intake of pain medications (Guerriero et al., 2016).

In the current article, recommendations from guidelines and consensus statements regarding the pharmacological management of persistent pain in older adults are reviewed and data regarding the benefits and risks of commonly prescribed analgesic medications are presented. Key aspects of the pain care process that nurses routinely engage in are highlighted, including conducting pain assessments, educating patients (and families) about pain and their role in pain management, addressing patients' questions about pain treatments to include their risks and benefits, and monitoring outcomes once therapy has been initiated. Finally, a case to illustrate issues that can arise in the care of affected patients and how this information is relevant to gerontological nursing practice are described.

GUIDELINE-RECOMMENDED APPROACHESTO PHARMACOLOGICAL MANAGEMENT

Various guidelines released by the AGS (AGS Panel on Pharmacological Management of Persistent Pain in Older Persons, 2009), British Pain Society/British Geriatrics Society (BGS) (Abdulla et al., 2013), and the Geriatric Pain webpage (Honor Society of Nursing Sigma Theta Tau International, 2015), as well as several consensus statements (Australian Pain Society, 2005; Kahan, Wilson, Mailis-Gagnon, & Srivastava, 2011; Pergolizzi et al., 2008), are available to support nurses providing care to older adults with persistent pain. The guidelines recommend using a collaborative interprofessional team approach (i.e., where team members might include representation from nursing, physical therapy, medicine, and social work) that takes into consideration the physical, psychological, social, and cultural factors of each patient's pain experience (Reid et al., 2015). Although the current article covers pharmacological treatment issues, there is broad consensus regarding the need to use a multimodal approach that includes pharmacological and nonpharmacological treatments when managing pain in older adults.

Prior to initiating any pain medication trial, the pain assessment is the essential first step in the process. Core principles of pain assessment include the following: pain is always

subjective and assessment approaches should be appropriate for each individual (Honor Society of Nursing Sigma Theta Tau International, 2015). The pain assessment includes: (a) conducting a concise medical history, focused physical examination, and biopsychosocial assessment; and (b) reviewing the patient's list of chronic conditions, concurrent medications (e.g., use of benzodiazepine drugs, antidepressant agents, over-the-counter [OTC] analgesics), and allergies and associated reactions. During the assessment, the nurse should also (a) identify salient pain features (e.g., frequency, intensity, exacerbating and relieving factors), (b) determine the impact of pain on function, and (c) ascertain relevant social factors (e.g., presence/absence of a caregiver in the home) (Reid et al., 2015).

Evidence-based assessment tools should be used to document pain and monitor responses to pain management interventions. Self-report assessment tools to identify pain intensity and severity include the Numerical Rating Scale and Faces Pain rating scale (Honor Society of Nursing Sigma Theta Tau International, 2015) and the Iowa Pain Thermometer (Herr, 2011). For patients who are cognitively impaired, providers may need to combine self-report tools with observational assessment tools. One such approach is the Pain Assessment Checklist for Seniors with Limited Ability to Communicate (Fuchs-Lacelle & Hadjistavropoulos, 2004), which screens for pain-related behaviors, such as grimacing, flinching, and aggression. If pain-related behaviors are identified, providers can use the Pain Assessment in Advanced Dementia tool (Warden, Hurley, & Volicer, 2003) for ongoing assessment. Another useful tool to measure the impact of pain on function is the PEG scale (Krebs et al., 2009). This 3-item self-report tool measures the average *pain* a patient has experienced in the past week, the interference of pain on their *enjoyment* of life, and the interference of pain on their *general* activity. A PEG score is calculated by summing the responses provided on all three questions then dividing by 3; scores range from a low of 0 (*best*) to 10 (*worst*). Collectively, the data from the pain assessment help guide the development and refinement of the pain treatment plan, including appropriate selection of a given pharmacotherapy (or pharmacotherapies). Persistent pain that negatively impacts older patients' physical or psychosocial function or diminishes their quality of life should be regarded as an important problem warranting intervention.

Establishing mutually agreed upon treatment goals that are measurable helps gauge whether a given intervention is effective. Nurses play critically important roles in helping address patient barriers to pain care. These roles often include addressing patients' beliefs about pain treatments and expectations regarding treatment outcomes. Older patients often maintain beliefs about certain pain treatments that have no basis in fact, whereas others are often unwilling to retry therapies that did not provide benefit in the past. Nurses should watch for and guard against therapeutic nihilism (i.e., the conviction that further treatments are not likely to yield benefit). Nurses also sometimes encounter older patients whose treatment expectations/goals are unrealistic (e.g., expecting the treatment to make the pain go away entirely). These patients are challenging because eradicating pain entirely is rarely possible to achieve.

AGS and BGS guidelines, both evidence-based and specifically focused on older adults, recommend acetaminophen as a first-line agent for patients with mild-to-moderate pain (Abdulla et al., 2013; AGS Panel on Pharmacological Management of Persistent Pain in

Older Persons, 2009). Compared to acetaminophen, non-steroidal anti-inflammatory drugs (NSAIDs) provide superior pain relief (Marcum & Hanlon, 2010) but are recommended for use only over short periods of time given the substantial risks posed by these medications (AGS 2015 Beers Criteria Update Expert Panel, 2015).

In properly selected older patients, the guidelines state that opioid medications should be considered for use if pain is not adequately controlled. Before starting an opioid drug trial, careful assessment of preexisting risk factors for developing opioid drug misuse or abuse is recommended and any signs of abuse and addiction should be reassessed at each follow up. Validated tools, including the Opioid Risk Tool (Webster & Webster, 2005) and Screener and Opioid Assessment for People with Pain (Akbik et al., 2006), can help nurses accomplish these tasks. Factors that increase risk of diversion (e.g., positive family history of drug abuse, personal history of criminal behavior, financial strain, misuse) should also be considered (Levi-Minzi, Surratt, Kurtz, & Buttram, 2013). Educating older patients (and their caregivers when appropriate) about the need for secure storage and safe medication management is also important. Nurses should be aware that symptoms of substance abuse/dependence may be less evident in older adults due to the decreased demands for functional role performance. Although nurses should remain vigilant about the possibility of misuse/abuse, older age is associated with significantly lower risk of either outcome (Reid et al., 2002).

High rates of opioid drug prescription use among older adults have been documented not only in the United States, but Canada, Australia, and several western European countries as well (Dowell, Haegerich, & Chou, 2016; Fredheim, Skurtveit, Breivik, & Borchgrevink, 2010; Leong, Murnion, & Haber, 2009). Among surgical patients, age older than 50 increases risk of chronic opioid drug use (Sun, Darnall, Baker, & Mackey, 2016). In the United States, the opioid drug epidemic has been associated with increases in fatal overdoses, drug diversion, and opioid misuse/abuse (Dowell et al., 2016). Efforts to mitigate these risks include development and implementation of prescription drug monitoring programs, educational initiatives delivered in school and community settings, implementation of overdose education and naloxone distribution programs, and the recent release of the Centers for Disease Control and Prevention (CDC; Dowell et al., 2016) guideline for prescribing opioid agents to patients with non-cancer pain. Readers are encouraged to review the 12 recommendations that are relevant to the care of older patients with persistent pain, including: (a) establishing treatment goals prior to initiating therapy and developing a plan to discontinue therapy if treatment goals are not achieved (Recommendation 2); and (b) counseling patients about the known benefits and risks of therapy prior to initiating treatment and revisiting risks and benefits (as more data become available) during the course of therapy (Recommendation 3).

DOSING AND MONITORING FOR ADVERSE EFFECTS AFTER INITIATING AN ANALGESIC TRIAL

Nurses are often the members of the care team who are directly responsible for monitoring treatment outcomes to include surveillance for adverse effects once a treatment plan has

been initiated. It is important to remember that older patients constitute a heterogeneous population, making optimum dosage and estimating the risk of side effects difficult to predict. The normal aging process leads to alterations in gastrointestinal drug absorption, distribution, liver metabolism, and renal excretion, which limit treatment options. Given these effects, the AGS and BGS guidelines (Abdulla et al., 2013; AGS Panel on Pharmacological Management of Persistent Pain in Older Persons, 2009) recommend that analgesic medications be initiated at a low dose followed by careful upward titration, with frequent reassessment for adverse effects. This approach can be summed up by the mantra: "start low, go slow and follow-up." However, this does not mean "starting low and staying low," which can contribute to undertreatment.

To help determine whether beneficial outcomes occur with therapy, nurses can encourage patients to keep a pain diary. Tracking pain scores over time can help reinforce continued use of a given therapy, particularly if reduced pain scores occur. Given the importance of knowing whether treatment impacts activity levels (e.g., physical, social, recreational), nurses should also encourage older adults to keep an activity record as another way of tracking treatment outcomes over time.

To minimize adverse effects after initiating a trial of any analgesic therapy, outcomes should be monitored frequently. Several tools are available to document patients' responses to treatment and serve to facilitate communication among team members. One documentation instrument is the Pain Management Communication Tool (Honor Society of Nursing Sigma Theta Tau International, 2015). All members of the interprofessional team can use this tool to document the pain assessment, symptoms, and treatment. Another tool is the Pain Flow Sheet. Nurses at the bedside or in the clinic can use this tool to document the pain rating, location of pain, medications for pain, nonpharmacological therapies for pain, and reevaluation of the pain rating (Honor Society of Nursing Sigma Theta Tau International, 2015). For documentation of pain in older patients with cognitive impairment, the Pain Flow Sheet includes an additional column to list pain behaviors.

In outpatients who undergo a trial of an opioid medication, treatment benefits and harms should be monitored closely. Some type of follow up (in person or by telephone) should occur within 1 to 2 weeks of initiating therapy and after any dose escalation. More frequent follow up is recommended for patients receiving a higher daily dose of opioid medications (>50 morphine milligram equivalents per day). Owing to potential changes in the risk-benefit ratio over time, all patients receiving long-term opioid drug therapy should be regularly reassessed at least every 3 months. At reassessment, determining whether treatment goals (i.e., pain reduction and functional improvement) have been met, if adverse events have occurred, or if signs of opioid drug misuse/abuse are present is important (Dowell et al., 2016). If the agreed upon treatment goals have not been met, switching to another opioid medication may be reasonable. Tapering the medication and trying a nonopioid drug therapy may also be appropriate.

In inpatients, a rational multi-modal analgesic plan to help minimize risk of adverse events is also needed. The interprofessional team, including nursing, plays a fundamental role in: (a) identifying patients at risk for unintended advancing sedation and respiratory depression

from opioid drug therapy (in particular in those with concomitant sedating medications and opioid medications); (b) implementing plans of care to assess and monitor patients; and (c) intervening to prevent the worsening of adverse events.

RELATIVE BENEFITS AND RISKS OF COMMONLY USED PHARMACOTHERAPIES

Table A (available in the online version of this article) summarizes the benefits and risks associated with commonly used classes of analgesic agents. An estimate of the strength of the analgesic effect of the various medications is provided along with other expected treatment benefits. Table A also provides information about different administration routes that may be relevant when caring for specific subgroups of older adults (e.g., those with swallowing difficulties). The relative and absolute contraindications of the various medication classes are also provided.

Acetaminophen remains the first-line analgesic treatment for older adults with mild-to-moderate persistent pain. It is considered to be a safe medication to use and moderately effective. Although accidental acetaminophen overdose used to be the leading cause for acute liver failure (Larson et al., 2005), the U.S. Food and Drug Administration–mandated reduction of the maximum dosage per unit (from 500 mg to 325 mg) and increased public awareness have led to more responsible use. Patients should be counseled to routinely read the labels of OTC products given that so many contain acetaminophen (especially cold and flu preparations) and to not exceed the maximum daily dose.

Older patients should be similarly educated about the appropriate use of NSAIDs. This class of medications should be considered when the expected duration of treatment is brief (e.g., days to a few weeks) for treatment of conditions such as muscle strains, gout, or musculoskeletal injuries due to a fall. Although the efficacy of NSAIDs is superior to acetaminophen, risk of side effects is substantial and increases in a dose-dependent fashion, especially in the first month of therapy (Table A) (Pérez Gutthann, García Rodríguez, Raiford, Duque Oliart, & Ris Romeu, 1996). Naproxen appears to be the agent with the best cardiovascular safety profile (Trelle et al., 2011). For those at increased risk of gastrointestinal complications, including gastritis and ulcers (and low cardiovascular risk), a selective NSAID such as celecoxib (Celebrex®) is preferable (Gargallo, Sostres, & Lanas, 2014). NSAIDs contribute to adverse renal effects in a dose-dependent fashion, including sodium and water retention, worsening heart failure and/or hypertension, and kidney failure. Of note, non-selective NSAIDs have been included in the updated 2015 AGS Beers Criteria for Potentially Inappropriate Medication Use in Older Adults, and should not be used in older patients who cannot take a proton pump inhibitor or misoprostol. NSAIDs should be administered at the lowest effective dose for the shortest duration possible with frequent monitoring (Table A). Topical NSAIDs have shown non-inferiority to oral NSAIDs and have superior safety profiles (Rannou, Pelletier, & Martel-Pelletier, 2016), which makes them attractive for the treatment of localized osteoarthritis pain, especially in patients 75 and older, as well as those at increased risk for systemic side effects.

Relative to the other analgesic classes, opioid agents provide the strongest analgesic effect (Papaleontiou et al., 2010). Efficacy of opioid agents for the treatment of persistent pain in older adults has been established in short-term studies (i.e., those lasting up to 12 weeks) (Papaleontiou et al., 2010). Another recently published meta-analysis of 19 randomized controlled trials ascertained the effects of opioid drug therapy in adults of any age with chronic low back pain (Abdel Shaheed, Maher, Williams, Day, & McLachlan, 2016). This study found there was moderate quality evidence that opioid agents reduce pain in the short term, but not to a level deemed clinically important. Both studies highlight that evidence regarding the long-term efficacy of opioid agents for treatment of persistent pain is lacking. However, it is important to remember that lack of evidence does not mean evidence of no effect.

A growing number of studies have documented risk associated with prolonged use of opioid medications, especially among patients taking higher doses (i.e., a morphine-equivalent dose >120 mg per day) (Chou et al., 2015). The incidence of adverse events was determined in one large observational study of Medicare beneficiaries with osteoarthritis and prescribed either a selective (e.g., celecoxib) or nonselective (e.g., naproxen) NSAID or opioid medication. Adverse outcomes were significantly higher for patients receiving opioid medications (relative to nonselective NSAIDs) over a range of salient outcomes measures, including cardiovascular events and fractures (Solomon et al., 2010).

For older patients with neuropathic pain, adjuvant therapies should be considered (Table A). Choice of an adjuvant treatment is often influenced most by the patient's comorbidities. Although tramadol (Ultram®) and strong opioid medications are effective for neuropathic pain (number needed to treat [NNT] 4.7 and 4.3, respectively), tricyclic antidepressant agents (NNT 3.6) and serotonin norepinephrine reuptake inhibitors (NNT 6.4) can be considered for use, especially in older patients with comorbid depression. Other possibilities in this class include pregabalin (Lyrica®) (NNT 7.7) for older patients with anxiety and gabapentin (Neurontin®) (NNT 7.2) for patients with epilepsy. Botulinum toxin A injections have also shown significant efficacy (NNT 1.9). High-dose capsaicin patches may also help (NNT 10.6) (Finnerup, Sindrup, & Jensen, 2010). Finally, although patients may perceive analgesic effects from benzo-diazepine agents, there is no evidence to support their use as analgesic medications (AGS Panel on Pharmacological Management of Persistent Pain in Older Persons, 2009).

OTHER KEY STEPS WHEN CARING FOR OLDER PATIENTS WITH PERSISTENT PAIN

Active collaboration between providers and patients constitutes a cornerstone of the shared decision-making process. This type of collaboration should occur when making decisions about pain medication treatments. Discussing treatment-related risks and benefits, which is required when obtaining implied or informed consent, is a critically important element of the process. Nurses often play a key role in this process, helping educate patients (and families) about the risks and benefits of a given pain medication to include possible side effects they may experience and addressing patients' questions and concerns about various treatments.

Older patients and family members must be educated about monitoring for side effects and when to call providers if they believe they are experiencing a side effect from the treatment. It is important to remember when engaging in these educational activities that many older patients are reluctant to take pain medications because of fears of deleterious side effects. It is critical that nurses assess older patients' beliefs and attitudes about a given analgesic medication prior to initiating treatment. This assessment should also include determining the individual's past experiences with analgesic medications and ascertaining their values and preferences regarding treatment (AGS Expert Panel on Person-Centered Care, 2016). Assessing the extent to which patients understand the information presented is also important. The use of the teach-back method (i.e., asking patients to repeat back key pieces of information they have gleaned from the conversation) can be useful in patient education. Further, written information about the medications should be given to patients before they leave the inpatient or outpatient setting. This information includes the generic and trade name of the medication, dose, time of day for administration, and purpose of the medication.

Many older patients who experience persistent pain receive home services. Therefore, home health care nurses should be integrated within the interprofessional team and shared decision-making process. At each visit, the home health care nurse should perform a pain assessment using validated assessment tools. This assessment should include inquiring about medication adherence, adverse effects, medication effectiveness, and assessment of bowel function.

PUTTING IT ALL TOGETHER: A CASE PRESENTATION

An 87-year-old female patient (Mrs. L.) presents for evaluation on account of increasing right knee pain. The interprofessional team conducts a comprehensive pain assessment using evidence-based tools. Using the Numeric Rating Scale, Mrs. L. rates her pain intensity as a score of 7 (range = 0 to 10, with higher scores indicating greater pain). Using the PEG tool, Ms. L. reports the interference of pain on her enjoyment of life and performance of activities as a score of 6.5 (10 is the worst score possible). For the past 3 months, Mrs. L. reports having difficulty climbing (and descending) stairs because of her pain. Medical conditions include osteoarthritis, hypertension, obesity, and constipation. A knee radiograph obtained 6 months earlier showed severe degenerative changes, consistent with osteoarthritis. A course of acetaminophen 1,000 mg three times per day was administered 3 months earlier but proved ineffective. A biopsychosocial assessment is conducted at this time and reveals no evidence of depression or anxiety and excellent social support.

Mrs. L.'s provider recommended that she continue the acetaminophen and add an NSAID (i.e., diclofenac 75 mg twice per day). At 2-week follow up, using the Numeric Rating Scale, Mrs. L.'s pain had decreased (average score = 5), but her blood pressure, which is normally under control, was elevated and her renal function was decreased.

Treatment options were discussed at this visit to include possible joint replacement. Mrs. L. continued to express reluctance about joint replacement surgery. An orthopedist had recommended that she was a good candidate to undergo this surgery. The clinician asked the patient what she most wanted to achieve from treatment. At the end of this discussion,

mutually agreed upon treatment goals included getting her pain score below 5 and improving her mobility function. A specific mobility goal was also established at this visit (i.e., to be able to walk up and down a flight of stairs without stopping on account of the pain). At this visit, the team educated Mrs. L. that no medication was going to completely eliminate her pain. The team and Mrs. L. then discussed the risks and benefits of several pharmacological therapies. Based on this discussion, the team and Mrs. L. decided to discontinue the NSAID. A trial of a topical NSAID (i.e., diclofenac) was discussed. However, the cost of the medication was viewed as prohibitive by the patient. A decision was then made to initiate a course of hydrocodone, maintain the current dose of acetaminophen, and increase the standing laxative regimen due to the constipating effect of opioid drug therapy. The team also initiated and coordinated physical therapy visits for Mrs. L. to learn knee strengthening exercises.

Mrs. L. expressed fears about trying an opioid drug therapy because she had watched several television programs that focused on the problems associated with opioid drug use, including overdose and addiction. Team members reassured the patient that her risks for addiction to the medication were assessed and found to be low, and that she would be started on a low enough dose to ensure minimal overdose risk. Mrs. L. was also informed that team members would monitor her closely for any evidence of unwanted side effects and behaviors that would suggest abuse or misuse of the medication. The team also assured her that the medication would be discontinued if her treatment goals were not met. The treatment plan also included educating the patient about possible side effects and what to do if she felt she was experiencing a side effect or adverse event (e.g., contact the office, call clinician). The patient was also instructed to return to the office in 2 weeks to evaluate the outcomes of therapy. Mrs. L. found the monitoring plan to be reassuring. The pain assessment, shared decisions, patient education, and physical therapy assessment were recorded on the Pain Management Tool. The Numeric Rating Scale, PEG scale, and Pain Management Tool were located in Ms. L.’s medical record to enhance communication among the interprofessional team members.

Two weeks later, Mrs. L. returned for follow up. Using the Numeric Rating Scale, she reported a pain score of 3, which was a decrease from her previous score of 5. Using the PEG tool, she rated the interference of pain as 5 (decreased from a previous score of 6.5). She also reported no deleterious effects from scheduled use of hydrocodone/acetaminophen and her blood pressure returned to normal as did her renal function (the increases observed earlier were likely NSAID-related). She reported that her bowel function was somewhat worse but manageable with the use of her daily laxative regimen. A review of the patient’s physical therapy notes in the electronic health record indicated that Mrs. L. was attending physical therapy sessions three times per week and her ability to walk up and down a flight of stairs without stopping on account of pain had improved. Based on documentation in the Pain Management Tool, Mrs. L.’s function was improving. Moreover, during her visit, Mrs. L. expressed optimism that this approach could help her regain lost function over time.

Key Case Points

The interprofessional team did many things right in the care of this patient to include: (a) trialing the patient on acetaminophen first; (b) working in collaboration with the patient to establish a multimodal treatment plan that was acceptable by all; (c) educating the patient about what kind of pain relief could be realistically achieved with therapy; (d) addressing the patient's concerns about taking an opioid medication; (e) prophylactically increasing her bowel regimen at the time of initiating the opioid trial; and (f) developing a monitoring and treatment evaluation plan that reassured the patient. Areas for improvement include: (a) prescribing an oral NSAID for treatment of persistent pain, particularly in patients with a condition (e.g., hypertension) that would likely be negatively impacted by the therapy; (b) not exploring Mrs. L.'s concerns/issues about joint replacement surgery; (c) not educating Mrs. L. about the importance of using nonpharmacological approaches (e.g., distraction, relaxation, visualization) that constitute well-established methods for treating pain and can complement pharmacological and rehabilitative approaches; and (d) not addressing Mrs. L.'s weight status. Weight loss represents a critically important target to help reduce pain and improve function in patients with pain due to osteoarthritis (Riddle & Stratford, 2013).

IMPLICATIONS FOR GERONTOLOGICAL NURSING PRACTICE

The current article has several implications for gerontological nursing practice by highlighting the importance of (a) conducting an in-depth pain assessment that includes a concise medical history, focused physical examination, and biopsychosocial assessment. The assessment should also include identification of chronic conditions, concurrent medications, and allergies including reactions, as well as identification of social and pain-relevant factors; (b) educating patients about the impact of undertreated pain and its affect on quality of life and function; (c) addressing barriers to effective pain care (e.g., patient attitudes and beliefs about pain and pain treatments, health literacy issues, insurance issues); (d) creating a tailored, person-centered care plan appropriate for each older patient that involves caregivers/family members when appropriate; (e) helping patients monitor treatment outcomes (e.g., keeping a pain diary and/or activity log) to determine whether benefits accrue over time, which can reinforce adherence with a given therapy; (f) educating patients about anticipated outcomes of treatment to include describing the range of side effects they may experience and what to do in the event that an unwanted side effect or adverse event occurs; and (g) informing patients of the need for secure medication storage if undergoing a trial of an opioid medication or receiving long-term opioid drug therapy.

CONCLUSION

Enhancing pain care and associated outcomes across the lifespan requires that all health care professionals develop core competencies in understanding the multidimensional nature of pain, assessing the multiple aspects of the pain experience (not just measuring intensity), managing pain effectively using a multimodal approach, and effectively translating knowledge in each of the key domains described above when delivering care to individual patients (Fishman et al., 2013). The current article sought to enhance nurses' knowledge of core issues in the pharmacological management of later life pain and important roles that

patient (and caregiver) education, assessment of patient beliefs about pain treatments, and development of treatment and corresponding monitoring plans tailored to each older patient's unique characteristics can play when delivering pain care to this population.

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

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References

Abdel Shaheed C, Maher CG, Williams KA, Day R, McLachlan AJ. Efficacy, tolerability, and dose-dependent effects of opioid analgesics for low back pain: A systematic review and meta-analysis. JAMA Internal Medicine. 2016; 176:958–968. DOI: 10.1001/jamainternmed.2016.1251 [PubMed: 27213267]

Abdulla A, Adams N, Bone M, Elliott AM, Gaffin J, Jones D, Schofield P. Guidance on the management of pain in older people. Age and Ageing. 2013; 42(Suppl 1):i1–i57. DOI: 10.1093/ageing/afs200 [PubMed: 23420266]

Akbik H, Butler SF, Budman SH, Fernandez K, Katz NP, Jamison RN. Validation and clinical application of the Screener and Opioid Assessment for Patients with Pain (SOAPP). Journal of Pain and Symptom Management. 2006; 32:287–293. DOI: 10.1016/j.jpainsymman.2006.03.010 [PubMed: 16939853]

American Geriatrics Society 2015 Beers Criteria Update Expert Panel. American Geriatrics Society 2015 Updated Beers Criteria for Potentially Inappropriate Medication Use in Older Adults. Journal of the American Geriatrics Society. 2015; 63:2227–2246. DOI: 10.1111/jgs.13702 [PubMed: 26446832]

American Geriatrics Society Expert Panel on Person-Centered Care. Person-centered care: A definition and essential elements. Journal of the American Geriatrics Society. 2016; 64:15–18. DOI: 10.1111/jgs.13866 [PubMed: 26626262]

American Geriatrics Society Panel on Pharmacological Management of Persistent Pain in Older Persons. Pharmacological management of persistent pain in older persons. Journal of the American Geriatrics Society. 2009; 57:1331–1346. DOI: 10.1111/j.1532-5415.2009.02376.x [PubMed: 19573219]

Argoff CE, Galer BS, Jensen MP, Oleka N, Gammaitoni AR. Effectiveness of the lidocaine patch 5% on pain qualities in three chronic pain states: Assessment with the Neuropathic Pain Scale. Current Medical Research and Opinion. 2004; 20(Suppl 2):S21–S28. DOI: 10.1185/030079904X12960 [PubMed: 15563743]

Australian Pain Society. Pain in residential aged care facilities: Management strategies. 2005. Retrieved from http://www.apsoc.org.au/publications

Bjordal JM, Ljunggren AE, Klovning A, Slordal L. Non-steroidal anti-inflammatory drugs, including cyclooxygenase-2 inhibitors, in osteoarthritic knee pain: Meta-analysis of randomised placebo controlled trials. BMJ. 2004; 329:1317.doi: 10.1136/bmj.38273.626655.63 [PubMed: 15561731]

Butler SF, Fernandez K, Benoit C, Budman SH, Jamison RN. Validation of the revised Screener and Opioid Assessment for Patients with Pain (SOAPP-R). Journal of Pain. 2008; 9:360–372. DOI: 10.1016/j.jpain.2007.11.014 [PubMed: 18203666]

Cepeda MS, Camargo F, Zea C, Valencia L. Tramadol for osteoarthritis: A systematic review and metaanalysis. Journal of Rheumatology. 2007; 34:543–555. [PubMed: 17343302]

Chappell AS, Ossanna MJ, Liu-Seifert H, Iyengar S, Skljarevski V, Li LC, Collins H. Duloxetine, a centrally acting analgesic, in the treatment of patients with osteoarthritis knee pain: A 13-week,

randomized, placebo-controlled trial. Pain. 2009; 146:253–260. DOI: 10.1016/j.pain.2009.06.024 [PubMed: 19625125]

Chou R, Turner JA, Devine EB, Hansen RN, Sullivan SD, Blazina I, Deyo RA. The effectiveness and risks of long-term opioid therapy for chronic pain: A systematic review for a National Institutes of Health Pathways to Prevention Workshop. Annals of Internal Medicine. 2015; 162:276–286. DOI: 10.7326/M14-2559 [PubMed: 25581257]

Daniell HW. Hypogonadism in men consuming sustained-action oral opioids. Journal of Pain. 2002; 3:377–384. [PubMed: 14622741]

Derry S, Sven-Rice A, Cole P, Tan T, Moore RA. Topical capsaicin (high concentration) for chronic neuropathic pain in adults. Cochrane Database of Systematic Reviews. 2013; 2:CD007393.doi: 10.1002/14651858.CD007393.pub3

De Silva V, El-Metwally A, Ernst E, Lewith G, Macfarlane GJ. Evidence for the efficacy of complementary and alternative medicines in the management of osteoarthritis: A systematic review. Rheumatology (Oxford). 2011; 50:911–920. DOI: 10.1093/rheumatology/keq379 [PubMed: 21169345]

Dowell D, Haegerich TM, Chou R. CDC guideline for prescribing opioids for chronic pain-United States, 2016. MMWR Recommendations and Reports. 2016; 65:1–49. DOI: 10.15585/mmwr.rr6501e1

Finnerup NB, Attal N, Haroutounian S, Mc-Nicol E, Baron R, Dworkin RH, Wallace M. Pharmacotherapy for neuropathic pain in adults: A systematic review and meta-analysis. Lancet Neurology. 2015; 14:162–173. DOI: 10.1016/S1474-4422(14)70251-0 [PubMed: 25575710]

Finnerup NB, Sindrup SH, Jensen TS. The evidence for pharmacological treatment of neuropathic pain. Pain. 2010; 150:573–581. DOI: 10.1016/j.pain.2010.06.019 [PubMed: 20705215]

Fishman SM, Young HM, Lucas Arwood E, Chou R, Herr K, Murinson BB, Stras-sels SA. Core competencies for pain management: Results of an interprofessional consensus summit. Pain Medicine. 2013; 14:971–981. DOI: 10.1111/pme.12107 [PubMed: 23577878]

Fredheim OM, Skurtveit S, Breivik H, Borchgrevink PC. Increasing use of opioids from 2004 to 2007: Pharmacoepi-demiological data from a complete national prescription database in Norway. European Journal of Pain. 2010; 14:289–294. DOI: 10.1016/j.ejpain.2009.05.006 [PubMed: 19505834]

Fuchs-Lacelle S, Hadjistavropoulos T. Development and preliminary validation of the pain assessment checklist for seniors with limited ability to communicate (PACSLAC). Pain Management Nursing. 2004; 5:37–49. [PubMed: 14999652]

Gargallo CJ, Sostres C, Lanas A. Prevention and treatment of NSAID gastropathy. Current Treatment Options in Gastroenterology. 2014; 12:398–413. DOI: 10.1007/s11938-014-0029-4 [PubMed: 25209136]

Gibson SJ, Lussier D. Prevalence and relevance of pain in older persons. Pain Medicine. 2012; 13(Suppl 2):S23–S26. DOI: 10.1111/j.1526-4637.2012.01349.x [PubMed: 22497744]

Goldstein DJ, Lu Y, Detke MJ, Lee TC, Iyengar S. Duloxetine vs. placebo in patients with painful diabetic neuropathy. Pain. 2005; 116:109–118. DOI: 10.1016/j.pain.2005.03.029 [PubMed: 15927394]

Guerriero F, Sgarlatpa C, Maurizi N, Francis M, Rollin M, Carbone M, Ricevuti G. Pain management in dementia: So far not so good. Journal of Gerontology and Geriatrics. 2016; 64:31–39.

Herr K. Pain assessment strategies in older patients. Journal of Pain. 2011; 12(Suppl 1):S3–S13. DOI: 10.1016/j.jpain.2010.11.011 [PubMed: 21396599]

The Honor Society of Nursing Sigma Theta Tau International. Geriatric pain. 2015. Retrieved from http://www.geriatricpain.org/Pages/home.aspx

Kahan M, Wilson L, Mailis-Gagnon A, Srivastava A. Canadian guideline for safe and effective use of opioids for chronic noncancer pain: Clinical summary for family physicians. Part 2: Special populations. Canadian Family Physician. 2011; 57:1269–1276. e1419–e1228. [PubMed: 22084456]

Kanzaki N, Ono Y, Shibata H, Moritani T. Glucosamine-containing supplement improves locomotor functions in subjects with knee pain: A randomized, double-blind, placebo-controlled study.

Clinical Interventions in Aging. 2015; 10:1743–1753. DOI: 10.2147/CIA.S93077 [PubMed: 26604721]

Krebs EE, Lorenz KA, Bair MJ, Damush TM, Wu J, Sutherland JM, Kroenke K. Development and initial validation of the PEG, a three-item scale assessing pain intensity and interference. Journal of General Internal Medicine. 2009; 24:733–738. DOI: 10.1007/s11606-009-0981-1 [PubMed: 19418100]

Larson AM, Polson J, Fontana RJ, Davern TJ, Lalani E, Hynan LS, Lee WM. Acetaminophen-induced acute liver failure: Results of a United States multi-center, prospective study. Hepatology. 2005; 42:1364–1372. DOI: 10.1002/hep.20948 [PubMed: 16317692]

Leong M, Murnion B, Haber PS. Examination of opioid prescribing in Australia from 1992 to 2007. Internal Medicine Journal. 2009; 39:676–681. DOI: 10.1111/j.1445-5994.2009.01982.x [PubMed: 19460051]

Levi-Minzi MA, Surratt HL, Kurtz SP, Buttram ME. Under treatment of pain: A prescription for opioid misuse among the elderly? Pain Medicine. 2013; 14:1719–1729. DOI: 10.1111/pme.12189 [PubMed: 23841571]

Maizels M, McCarberg B. Antide-pressants and antiepileptic drugs for chronic non-cancer pain. American Family Physician. 2005; 71:483–490. [PubMed: 15712623]

Makris UE, Kohler MJ, Fraenkel L. Adverse effects of topical nonsteroidal antiinflammatory drugs in older adults with osteoarthritis: A systematic literature review. Journal of Rheumatology. 2010; 37:1236–1243. DOI: 10.3899/jrheum.090935 [PubMed: 20360183]

Malonne H, Coffiner M, Sonet B, Sereno A, Vanderbist F. 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. Clinical Therapeutics. 2004; 26:1774–1782. DOI: 10.1016/j.clinthera.2004.11.005 [PubMed: 15639689]

Marcum ZA, Hanlon JT. Recognizing the risks of chronic nonsteroidal antiinflammatory drug use in older adults. Annals of Longterm Care. 2010; 18(9):24–27.

Papaleontiou M, Henderson CR Jr, Turner BJ, Moore AA, Olkhovskaya Y, Amanfo L, Reid MC. Outcomes associated with opioid use in the treatment of chronic noncancer pain in older adults: A systematic review and meta-analysis. Journal of the American Geriatrics Society. 2010; 58:1353–1369. DOI: 10.1111/j.1532-5415.2010.02920.x [PubMed: 20533971]

Pérez Gutthann S, García Rodríguez LA, Raiford DS, Duque Oliart A, Ris Romeu J. Nonsteroidal anti-inflammatory drugs and the risk of hospitalization for acute renal failure. Archives of Internal Medicine. 1996; 156:2433–2439. [PubMed: 8944736]

Pergolizzi J, Böger RH, Budd K, Dahan A, Erdine S, Hans G, Sacerdote P. Opioids and the management of chronic severe pain in the elderly: Consensus statement of an International Expert Panel with focus on the six clinically most often used World Health Organization Step III opioids (buprenorphine, fentanyl, hydromorphone, methadone, morphine, oxycodone). Pain Practice. 2008; 8:287–313. DOI: 10.1111/j.1533-2500.2008.00204.x [PubMed: 18503626]

Rannou F, Pelletier JP, Martel-Pelletier J. Efficacy and safety of topical NSAIDs in the management of osteoarthritis: Evidence from real-life setting trials and surveys. Seminars in Arthritis and Rheumatism. 2016; 45(4 Suppl):S18–S21. DOI: 10.1016/j.semarthrit.2015.11.007 [PubMed: 26806189]

Reid MC, Eccleston C, Pillemer K. Management of chronic pain in older adults. BMJ. 2015; 350:h532. [PubMed: 25680884]

Reid MC, Engles-Horton LL, Weber MB, Kerns RD, Rogers EL, O'Connor PG. Use of opioid medications for chronic noncancer pain syndromes in primary care. Journal of General Internal Medicine. 2002; 17:173–179. [PubMed: 11929502]

Riddle DL, Stratford PW. Body weight changes and corresponding changes in pain and function in persons with symptomatic knee osteoarthritis: A cohort study. Arthritis Care & Research. 2013; 65:15–22. DOI: 10.1002/acr.21692 [PubMed: 22505346]

Risser A, Donovan D, Heintzman J, Page T. NSAID prescribing precautions. American Family Physician. 2009; 80:1371–1378. [PubMed: 20000300]

Salerno SM, Browning R, Jackson JL. The effect of antidepressant treatment on chronic back pain: A meta-analysis. Archives of Internal Medicine. 2002; 162:19–24. [PubMed: 11784215]

Saragiotto BT, Machado GC, Ferreira ML, Pinheiro MB, Abdel Shaheed C, Maher CG. Paracetamol for low back pain. Cochrane Database of Systematic Reviews. 2016; 6:CD012230.doi: 10.1002/14651858.CD012230

Solomon DH, Rassen JA, Glynn RJ, Lee J, Levin R, Schneeweiss S. The comparative safety of analgesics in older adults with arthritis. Archives of Internal Medicine. 2010; 170:1968–1976. DOI: 10.1001/archinternmed.2010.391 [PubMed: 21149752]

Sun EC, Darnall BD, Baker LC, Mackey S. Incidence of and risk factors for chronic opioid use among opioid-naive patients in the postoperative period. JAMA Internal Medicine. 2016; 176:1286–1293. DOI: 10.1001/jamainternmed.2016.3298 [PubMed: 27400458]

Topp R, Brosky JA Jr, Pieschel D. The effect of either topical menthol or a placebo on functioning and knee pain among patients with knee OA. Journal of Geriatric Physical Therapy. 2013; 36:92–99. DOI: 10.1519/JPT.0b013e318268dde1 [PubMed: 22976810]

Towheed TE, Anastassiades TP, Shea B, Houpt J, Welch V, Hochberg MC. Glucosamine therapy for treating osteoarthritis. Cochrane Database of Systematic Reviews. 2001; 1:CD002946.doi: 10.1002/14651858.CD002946

Towheed TE, Maxwell L, Judd MG, Catton M, Hochberg MC, Wells G. Acetaminophen for osteoarthritis. Cochrane Database of Systematic Reviews. 2006; 1:CD004257.doi: 10.1002/14651858.CD004257.pub2

Trelle S, Reichenbach S, Wandel S, Hildebrand P, Tschannen B, Villiger PM, Jüni P. Cardiovascular safety of non-steroidal anti-inflammatory drugs: Network meta-analysis. BMJ. 2011; 342:c7086.doi: 10.1136/bmj.c7086 [PubMed: 21224324]

Underwood M, Ashby D, Cross P, Hennessy E, Letley L, Martin J, Whyte K. Advice to use topical or oral ibuprofen for chronic knee pain in older people: Randomised controlled trial and patient preference study. BMJ. 2008; :336, 138–142. DOI: 10.1136/bmj.39399.656331.25

Warden V, Hurley AC, Volicer L. Development and psychometric evaluation of the Pain Assessment in Advanced Dementia (PAINAD) scale. Journal of the American Medical Directors Association. 2003; 4:9–15. DOI: 10.1097/01.JAM.0000043422.31640.F7 [PubMed: 12807591]

Webster LR, Webster RM. Predicting aberrant behaviors in opioid-treated patients: Preliminary validation of the Opioid Risk Tool. Pain Medicine. 2005; 6:432–442. DOI: 10.1111/j.1526-4637.2005.00072.x [PubMed: 16336480]

Wolfe MM, Lichtenstein DR, Singh G. Gastrointestinal toxicity of nonsteroidal antiinflammatory drugs. New England Journal of Medicine. 1999; 340:1888–1899. DOI: 10.1056/NEJM199906173402407 [PubMed: 10369853]

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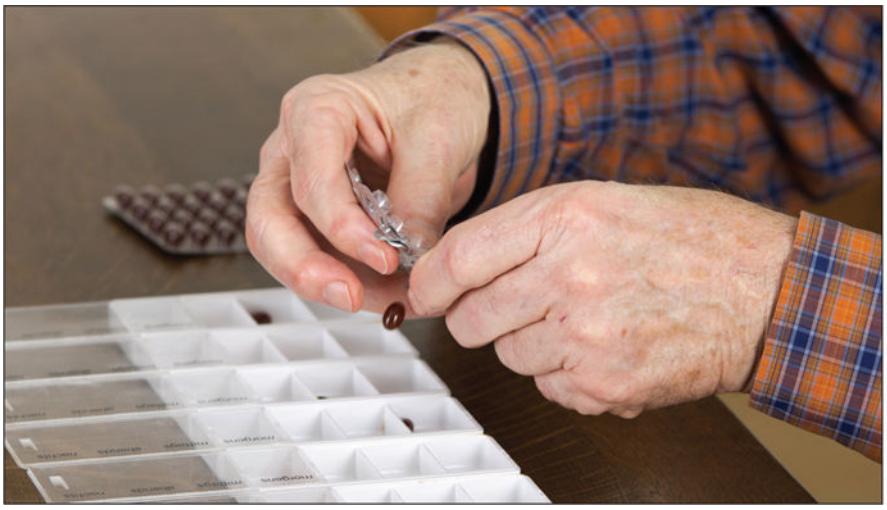
Activity Objectives

1. Describe age-related barriers to pain assessment and key aspects of the assessment process.
2. Identify benefits and risks associated with commonly prescribed analgesic medications for the treatment of later life pain.

Disclosure Statement

Neither the planners nor the authors have any conflicts of interest to disclose.



Older patients often maintain beliefs about certain pain treatments that have no basis in fact, whereas others are often unwilling to retry therapies that did not provide benefit in the past.

TABLE

OVERVIEW OF FREQUENT CAUSES OF PERSISTENT NON-CANCER PAIN IN OLDER ADULTS

Nociceptive Pain	Peripheral Neuropathic Pain	Central Neuropathic Pain
• Osteoarthritis • Vertebral compression • Chronic low-back pain • Fractures • Fibromyalgia • End-stage chronic disease (heart/ kidney/liver failure)	• Post-herpetic neuralgia • Metabolic disorders (e.g., alcohol, diabetic neuropathy, nutritional deficiency) • Nerve compression or entrapment • Phantom limb pain • Trigeminal neuralgia	• Parkinson's disease • Post-stroke pain myelopathies (e.g., spinal cord injuries, spinal stenosis, multiple sclerosis) • Fibromyalgia

Adapted from Maizels and McCarberg (2005).