

PainWeek[®]

Go Ask Alice:

Pain Management in the Older Adult

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Disclosure

- Nothing to disclose

Learning Objectives

- Describe components of a thorough pain assessment
- Cite pain behaviors in cognitively impaired older adults
- Describe the principles underlying nonpharmacologic and pharmacologic management of persistent pain
- Discuss a novel way to view pain and memory

Topics Covered

- Assessment
- Assessing and Treating Pain in Cognitively Impaired Older Adults
- Treatment
 - Nonpharmacologic Therapy
 - Interventional Pain Management
 - Pharmacologic Therapy
 - Special Considerations for Using Opioid Therapy in Older Adults
 - Adverse Effects of Opioids
 - Non-Opioid Adjuvant Analgesics
 - Medications to Avoid in Older Adults

Overview Of Pain

- Relief of pain and suffering, and promotion of functional status and quality of life are primary tenets of geriatric medicine
- Pain is a distressing symptom that transcends the physical realm and impacts and influences the mood and even the personality of a person, thereby affecting behavior, social life, and interactions.

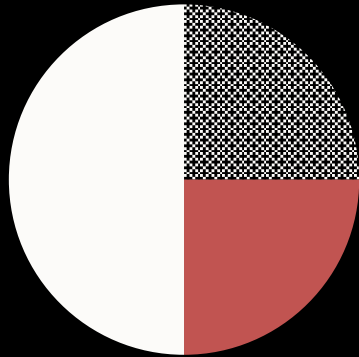
Overview Of Pain

- Pain is particularly common in adults ≥ 65 years old
- Studies show that the ability to tolerate severe pain decreases with age
- Common causes of pain in older adults include osteoarthritic pain, degenerative bone diseases, postsurgical pain, nocturnal leg pain, and pain associated with various chronic illnesses
- Shingles and resultant post-herpetic neuralgia are more common in older adults, with half the cases of shingles occurring in adults ≥ 60 years old

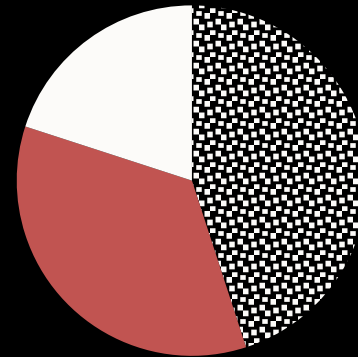
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Prevalence of Persistent Pain in Older People

- Substantial pain is experienced by:



25% to 50%
of community-dwelling older adults



45% to 80%
of nursing-home residents

Pain Is Commonly Undertreated

- Patients may:
 - Minimize their symptoms
 - Not report pain
 - Be unable to report pain because of limited health literacy, limited English proficiency or cognitive impairment
 - Erroneously perceive pain as part of the normal aging process
- Clinicians may:
 - Inadequately assess pain
 - Be reluctant to manage pain because of lack of adequate knowledge of pain management strategies and misperceptions about narcotic medications
 - Undertreat pain with ineffective therapies

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Definition Of Pain

- Pain: An unpleasant sensory and emotional experience associated with actual or potential tissue damage, or described in terms of such damage. It is subjective and idiosyncratic, beyond objective measure; its intensity and character are what the patient says they are.
- Acute pain: Sudden in onset and expected to last a short time and is clearly linked to a specific bodily insult or injury.
- Chronic or persistent pain: Pain without apparent biologic purpose that has persisted beyond the normal tissue healing time, variously defined as 3–6 months.
 - Persistent pain can become so debilitating that it affects basic and instrumental activities of daily living, causes psychological distress (depression or anxiety), disturbs sleep, and negatively impacts social and personal relationships

Assessment

- A thorough assessment is necessary to formulate a plan to successfully treat persistent pain. A major barrier to effective pain treatment is inadequate assessment.
- The International Association for the Study of Pain (IASP) has developed a helpful taxonomy for the classification of pain that identifies 5 axes:
 - Axis I: anatomic regions
 - Axis II: organ systems
 - Axis III: temporal characteristics, pattern of occurrence
 - Axis IV: intensity, time since onset of pain
 - Axis V: etiology

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Assesement (cont'd)

- In taking a pain history it is important to include an exploration of the effects of pain on functional status and sleep, as well as on emotional and social well-being
- Because of its subjective nature, clinicians must rely on the patient's description of the pain, in addition to the findings of a thorough physical examination.
- Caregiver reports of the patients pain may be helpful but are not always inaccurate.
- Assessment is complicated by several factors, including underreporting of symptoms by many older adults, the existence of multiple medical comorbidities exacerbating the pain and impairing function, and the increased prevalence of cognitive impairment with age

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Pain Intensity Scales

- Unidimensional scales:
 - Numeric Rating Scale—0 = no pain, 10 = worst pain imaginable
 - Faces Pain Scale—patient chooses a facial expression that corresponds to the pain
 - Wong-Baker FACES Pain Rating Scale with Foreign Translations is useful for non-English speaking patients
 - Verbal Descriptor Scale—“no pain” to “pain as bad as it could be”
 - Multidimensional scales:
 - McGill Pain Questionnaire
 - Pain Disability Scale
- The same scale should be used at follow-up examinations to evaluate how the pain has changed since the initial assessment

Pain Assessment in Advanced Dementia Scale (PAINAD)

Breathing (independent of vocalization)	Normal = 0 Occasionally labored breathing or short periods of hyperventilation +1 Noisy, labored breathing, long periods of hyperventilation or Cheyne-Stokes respirations +2
Negative Vocalization	None = 0 Occasional moan/groan or low level speech with negative quality +1 Repeated trouble calling out, loud moaning/groaning/crying +2
Facial Expression	Smiling or inexpressive = 0 Sad/frightened/frown +1 Facial Grimacing +2
Body Language	Relaxed= 0 Tense, distressed, pacing, fidgeting +1 Rigid, fists clenched, knees pulled up, pulling/pushing away, striking out+2
Ability to Console	No need to console =0 Distracted or reassured by voice/touch +1 Unable to console, distract or reassure +2

Paulson CM et al. Pain Assessment in Hospitalized Older Adults with Dementia and Delirium. J Gerontol Nurs. 2014 Jun;40(6):10-15

Pain Map

- Ask patient to indicate the locations of their pain on a drawing of a human figure
- Consider referral to a mental health specialist (to evaluate for an underlying disorder that is complicating or contributing to the complex pain presentation) if the patient's pain pattern:
 - Is erratic
 - Is diffuse
 - Does not conform to an anatomic distribution

Physical Examination

- Carefully examine the reported site of pain and locations that may be a source of referred pain
- Perform complete musculoskeletal exam
 - Fibromyalgia, osteoarthritis, or myofascial pain is commonly either the primary source of pain or an exacerbating process
 - Accurate diagnosis is critical to formulating the correct therapeutic plan

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3 Types Of Pain Syndromes

- Nociceptive: pain due to activation of nociceptive sensory receptors; often adequately treated with common analgesics
 - Somatic—well localized in skin, soft tissue, bone
 - Visceral—due to cardiac, GI, or lung injury
- Neuropathic: from irritation of components of the central or peripheral nervous system; may respond well to nonopioid therapies; responds unpredictably to opioids
- Mixed or unspecified: has characteristics of both nociceptive and neuropathic pain; common in older adults; treatment with trials of different medications or with combinations of medications along with interprofessional collaboration is often beneficial

Pain in Cognitively Impaired People

- Observe for possible pain-related behaviors (see next slides) and ask caregivers for their observations
 - Consider trial of analgesics for patients exhibiting pain-related behaviors
- Validated scales (eg, Hurley Discomfort Scale, Checklist of Nonverbal Pain Indicators) require trained evaluators to complete properly
- Pre-medicate with analgesics for procedures and conditions known to be painful.
- It is important to remember that oral pain medications take 30 to 60 minutes to act and so give these medications an hour before the procedure. IV medications can be given 5 to 10 minutes before the procedure.

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Common Pain Behaviors in Cognitively Impaired Older Adults

Behavior	Examples
Facial expressions	<ul style="list-style-type: none">• Slight frown; sad, frightened face• Grimacing, wrinkled forehead, closed/tightened eyes• Any distorted expression• Rapid blinking
Verbalizations, vocalizations	<ul style="list-style-type: none">• Sighing, moaning, groaning• Grunting, chanting, calling out• Noisy breathing• Asking for help• Verbal abusiveness
Body movements	<ul style="list-style-type: none">• Rigid, tense body posture, guarding• Fidgeting• Increased pacing, rocking• Restricted movement• Gait or mobility changes

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Common Pain Behaviors in Cognitively Impaired Older Adults

Behavior	Examples
Changes in interpersonal interactions	<ul style="list-style-type: none">• Aggressive, combative, resists care• Decreased social interactions• Socially inappropriate, disruptive• Withdrawn
Changes in activity patterns or routines	<ul style="list-style-type: none">• Refusing food, appetite change• Increase in rest periods• Sleep, rest pattern changes• Sudden cessation of common routines• Increased wandering
Mental status changes	<ul style="list-style-type: none">• Crying or tears• Increased confusion• Irritability or distress

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Nonpharmacologic Therapies

- Patient education and involvement in decisions
 - Teach patients to take medications properly and how to use assessment instruments
 - Give partner-guided pain management training to caregivers which can decrease discomfort and improve psychological and social functioning
- Cognitive-behavioral therapy
- Regular physical activity
 - Or supervised rehabilitation for frail patients, or regular repositioning, passive range-of-motion exercises, and gentle massage for bed-bound patients
- Referral to an interprofessional pain clinic

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Principles of Pharmacologic Therapy

- Besides pain relief, the goals are improved function and enhanced adherence with rehabilitation
- Risks and benefits of treatment should be considered and individualized to the patient
- Try nonsystemic or nonpharmacologic therapies first
- Individualize the initial dose and rate of titration
- Monitor closely for adverse effects
- In general, start opioids at lowest dose and titrate slowly, but if patient is in pain crisis, do not withhold medications

WHO Pain Ladder

- Step 1: Start nonopioid medications with or without adjuvants
- Step 2: If pain persists or increases, start a weak opioid (eg, hydrocodone with acetaminophen) and adjuvants
- Step 3: If pain still persists or increases, start strong opioids (eg, morphine, hydromorphone, or others) with or without nonopioid analgesics and adjuvants
- Choice of initial dose and rate of titration depends on the individual patient's physiology

Treatment Of Mild to Moderate Pain: Acetaminophen

- Particularly for musculoskeletal pain from osteoarthritis
- Recommended as first-line therapy for persistent pain
- Preferred maximal dose in older adults is approximately 3 grams every 24 hours
- Lower the dose by 50%, or avoid entirely, in patients at risk of liver dysfunction, especially with history of heavy alcohol intake
- Administer every 6 hours for patients with a creatinine clearance of 10–50 mL/min, and every 8 hours for patients with a creatinine clearance of <10 mL/min
- Know all medications the patient is taking, as acetaminophen is a common ingredient in prescription and OTC drugs to avoid toxicity

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Treatment of Mild To Moderate Pain: NSAIDS

- Many significant adverse effects including renal dysfunction, GI bleeding, platelet dysfunction, fluid retention, exacerbation of HTN or heart failure, and precipitation of delirium
- Use judiciously, if at all, only after acetaminophen has been tried and only in highly select individuals
- FDA cautions against using ibuprofen with aspirin due to an interaction that blocks the antiplatelet effect of aspirin
- Use COX-2 inhibitors with great caution in older adults due to class effect of increased cardiovascular risk. Short-term use of topical NSAIDs appears to be safe and effective, longer-term studies are needed

Treatment of Moderate to Severe Pain

- Start opioid therapy at the lowest dosage possible and titrate up slowly
- Titrate progressively to achieve the level of analgesia needed and for patients in pain crisis, rapid titration with frequent monitoring is required

Treatment of Moderate to Severe Pain

- To estimate opioid requirements, conduct a trial of a short-acting opioid (start low and go slow)
- Treat continuous pain with 24-hour opioids in long-acting or sustained-release formulations
 - To cover breakthrough pain, combine with fast-onset medications that have short half-lives
 - Breakthrough pain typically requires 5%–15% of the daily dose, offered q2 to q4h orally
- In general, different opioids are similarly efficacious- choice of opioid is based on cost and side effect profile.

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Using Opioids in Renal Failure

- Avoid morphine, as its metabolites accumulate; if it must be used, increase the dosing interval and reduce the dose
- Safety of oxycodone in older adults has not been studied well but clinical practice shows that it is safer than morphine in patients with renal dysfunction.
- Hydromorphone is an acceptable choice for older adults, but start slow and go slow

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Barriers to Using Opioids in Older Adults

- Older adults may have concerns about long-term opioid use that keep them from accepting adequate treatment for their pain
 - Fear that taking opioid therapy for their current level of pain will result in the medication losing its effectiveness in the future when pain becomes more severe
 - Fear of addiction is another major obstacle to prescribing medications for older adults
- Having a frank discussion with patients may help to alleviate fears

Barriers to Using Opioids in Older Adults

- Pharmacies in urban neighborhoods may have difficulty accessing opioids, because many urban pharmacies do not routinely keep these medications in stock
- Providers should become familiar with the patient's cultural and religious context for pain, how pain is expressed, and expectations for treatment
- Opioid treatment disparities are noted in black Americans and in patients who do not speak English

Addressing Fear of Tolerance & Addiction to Opioids

- Avoid withdrawal symptoms by tapering carefully over days to weeks
- If rapid upward titration is required to reduce pain, evaluate the cause of pain:
 - Search for new pathologies, exacerbation of known sources
 - Consider nonphysical causes of pain
- There is partial cross-tolerance between opioids
 - When from one opioid to another, reduce the dose of the new drug by 50%–65% of the equianalgesic dose
- Patient and caregiver education is vital in successful opioid management

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Managing the Adverse Effects Of Opioids

- Constipation
 - Educate patient about probable need for long-term laxative treatment
 - In most cases, start with a stimulant laxative
 - Encourage exercise and hydration
 - Consider methylnaltrexone for patients with severe opioid-induced constipation despite maximal laxative therapy
 - Tolerance to this does not occur
- Nausea and vomiting—evaluate for reversible causes such as constipation; short-acting opioids are more likely to cause nausea

Managing the Adverse Effects Of Opioids

- **Sedation, fatigue, mild cognitive impairment**
 - Educate the patient and caregiver that these changes generally subside days to weeks after dose adjustment
 - Warn against driving or operating heavy equipment when medication is initiated
 - Warn of the risk of falls
 - Severe sedation or fatigue: try a stimulant such as low-dose methylphenidate or rotation to a different opioid
- **Respiratory depression**—use naloxone sparingly, at the lowest dose, and titrate carefully

NSAIDs for Persistent Pain in Older Adults

- If acetaminophen is ineffective, **consider opioids before NSAIDs**
- Use NSAIDs rarely and with extreme caution only if:
 - Other, safer therapies have failed
 - Risk-based patient and drug selection
 - Baseline and ongoing monitoring of risk/complications
 - GI, renal, blood counts, B/P, skin, cognition
 - Interactions with meds, comorbidities, herbs
 - Watch for drowsiness, confusion, and dizziness
- Do not use more than 1 NSAID at a time
- Do not use ibuprofen with prophylactic aspirin
- Naproxen may have less CV toxicity
- Do not use indomethacin or ketoprofen

AGS Panel on Persistent Pain in Older Persons. *J Am Geriatr Soc.* 2002;50(6 Suppl):S205-S224.

AGS Panel on Pharmacological Management of Persistent Pain in Older Persons. *J Am Geriatr Soc.* 2009;57(8):1331-1346.

Abdulla A, et al. *Age Ageing.* 2013;42 Suppl 1:i1-i57.

Recommended Opioids for Older Persons

Drug	Recommended Starting Dose	Comments
Hydrocodone	2.5–5 mg q4–6h	Dose limited by non-opioid in combination—dose varies by product
Hydromorphone	1–2 mg q3–4h	For breakthrough pain or ATC dosing
Morphine <ul style="list-style-type: none"> • Immediate release • Sustained release 	<ul style="list-style-type: none"> • 2.5–10 mg q4h • 15 mg q8–24h 	SR scheduling is product-specific. Usually started after initial dose determined by IR. Toxic metabolites may limit usefulness with high dose.
Methadone		Use ONLY by experienced clinicians.
Oxycodone <ul style="list-style-type: none"> • Immediate release • Controlled release 	<ul style="list-style-type: none"> • 2.5-5 mg q4–6h • 10 mg q12h 	CR usually used after initial dose determined by IR or opioid rotation. May need q8h dosing or q24h.
Oxymorphone <ul style="list-style-type: none"> • Immediate release • Extended release 	<ul style="list-style-type: none"> • 5 mg q6h • 5 mg q12h 	Significant interactions with food & alcohol
Tapentadol	50 mg po q4–6h	Dual action; may have lower risk of GI side effects vs comparator opioids
Tramadol	12.5–25 mg q4–6h	Dual action
Transdermal buprenorphine	• 5 mcg/h patch q7days	Good option for older adults with dementia
Transdermal fentanyl	• 12–25 mcg/h patch q72h	After dose determined by IR. Peak is 18–24 h. Duration 48-96 h.

Nonopioid Adjuvant Analgesics

- **Tricyclic antidepressants** (off-label) are the best-studied drugs for neuropathic pain
- Avoid amitriptyline in older adults
- Use imipramine, desipramine, or nortryptamine
- Optimal analgesia requires **treatment of depression**
 - **SSRIs** are less well studied than TCAs as analgesics, but they are better tolerated in antidepressant doses
 - **Duloxetine** an SNRI is approved as both an antidepressant and for treatment of pain from diabetic neuropathy
 - **Venlafaxine** also an SNRI, can be used off label for the treatment of pain and depression

Nonopioid Adjuvant Analgesics

- **Anticonvulsants** such as carbamazepine, gabapentin, pregabalin, and clonazepam are commonly used for neuropathic pain
- **Corticosteroids** are useful adjuvants for neuropathic pain and pain associated with swelling, inflammation, and tissue infiltration
- **Intravenous bisphosphonates** can substantially reduce pain from malignant bone metastases

Pain Medications to Avoid In Older People

- Important to “Start Low and Go Slow”
- In older adults who live alone, it is important to regularly assess cognitive status as this may influence their ability to take analgesics as prescribed
- Drugs to avoid in older adults:
 - Meperidine
 - Mixed agonist-antagonists such as nalbuphine and butorphanol
 - COX-2 inhibitors
 - Other NSAIDs — use rarely, if ever

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Interventional Pain Management

- Plays a complementary role to traditional pharmacologic and nonpharmacologic approaches to managing pain
- Trigger Point Injections
- Peripheral Nerve Blocks
- Spinal Injections
- Pulsed Radiofrequency (PRF)
- Neuromodulation
- Botulinum Toxin

And Now For Something Different: Pain and Memory Mechanisms: Can They Help Us To Understand Chronic Pain?

- Pain sensing neurons both in the peripheral and central nervous system demonstrate significant neuroplasticity following injury
- Molecular mechanisms underlying pain plasticity have been recently demonstrated to bear notable resemblance to those involved in learning and memory processes
- The concept of pain memory was first described by Ronald Melzack over 40 years ago
- Two major potential mechanisms for pain memory are changes in gene expression in peripheral nociceptors that may permanently alter the phenotype and changes in synaptic strength at key locations that can play an important role in maintaining chronic pain
- Can this be harnessed for future treatments?

Price TJ, Inyang KE. Commonalities between pain and memory mechanisms and their meaning for understanding chronic pain. *Prog Mol Biol Trans Sci* 2015;131:409-434

SUMMARY (1 of 2)

- Evaluation and management of pain requires a thorough assessment to determine its source, severity, and impact on the patient's well-being
- Cognitively impaired patients who cannot communicate about pain should receive empiric analgesia during procedures and conditions known to be painful
- A stepped approach to pain treatment is advised, starting with local and nonpharmacologic approaches
- Systemic analgesics should not be withheld if needed initially

SUMMARY (2 of 2)

- In general, different opioids have similar efficacy and limited cross-tolerance
- Patients being treated with opioids usually develop tolerance to the respiratory depression, fatigue, and sedation, but not to the constipating effect
- Optimal analgesia requires treatment of any associated clinical depression
- COX-2 inhibitors should be avoided in older patients, and nonselective NSAIDs should be used cautiously