



Complete Summary

GUIDELINE TITLE

Persistent pain management.

BIBLIOGRAPHIC SOURCE(S)

McLennon SM. Persistent pain management. Iowa City (IA): University of Iowa Gerontological Nursing Interventions Research Center, Research Translation and Dissemination Core; 2005 Aug. 58 p. [174 references]

GUIDELINE STATUS

This is the current release of the guideline.

COMPLETE SUMMARY CONTENT

SCOPE
METHODOLOGY - including Rating Scheme and Cost Analysis
RECOMMENDATIONS
EVIDENCE SUPPORTING THE RECOMMENDATIONS
BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS
QUALIFYING STATEMENTS
IMPLEMENTATION OF THE GUIDELINE
INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES
IDENTIFYING INFORMATION AND AVAILABILITY
DISCLAIMER

SCOPE

DISEASE/CONDITION(S)

Persistent nociceptive pain due to chronic musculoskeletal conditions and neuropathic conditions of the peripheral or central nervous system

GUIDELINE CATEGORY

Evaluation
Management
Treatment

CLINICAL SPECIALTY

Geriatrics
Nursing

INTENDED USERS

Advanced Practice Nurses
Allied Health Personnel
Nurses
Physician Assistants
Physicians

GUIDELINE OBJECTIVE(S)

To assist nurses and other health care providers in the management of persistent pain in older adults through assessment and treatment strategies

TARGET POPULATION

Older adults with persistent nociceptive pain due to chronic musculoskeletal conditions and neuropathic conditions of the peripheral or central nervous system

INTERVENTIONS AND PRACTICES CONSIDERED

Evaluation

1. Ask about pain presence
2. Identify underlying cause through medical history, physical examination, and laboratory studies
3. Assess the impact of pain on physical and psychological functioning
4. Assess pain via self-reports, proxy-reports, and observational methods and by using pain assessment tools and intensity scales

Treatment/Management

1. Non-pharmacologic approaches
 - Physical, including acupuncture, transcutaneous electrical nerve stimulation (TENS), massage, and exercise
 - Cognitive-behavioral, including education, coping skills training, and relaxation
2. Pharmacologic approaches
 - Non-opioids
 - Opioids
 - Adjuvants (anticonvulsants, tricyclics, corticosteroids)
 - Topicals
3. Education

MAJOR OUTCOMES CONSIDERED

- Pain assessment and reduction
- Physical and psychosocial functioning

METHODOLOGY

METHODS USED TO COLLECT/SELECT EVIDENCE

Searches of Electronic Databases

DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE

Not stated

NUMBER OF SOURCE DOCUMENTS

Not stated

METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE

Weighting According to a Rating Scheme (Scheme Given)

RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE

The grading schema used to make recommendations in this evidence-based practice guideline is:

- A. Evidence from well-designed meta-analysis
- B. Evidence from well-designed controlled trials, both randomized and nonrandomized, with results that consistently support a specific action (e.g., assessment, intervention or treatment)
- C. Evidence from observational studies (e.g., correlational, descriptive studies) or controlled trials with inconsistent results
- D. Evidence from expert opinion or multiple case reports

METHODS USED TO ANALYZE THE EVIDENCE

Review of Published Meta-Analyses
Systematic Review

DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE

Not stated

METHODS USED TO FORMULATE THE RECOMMENDATIONS

Expert Consensus

DESCRIPTION OF METHODS USED TO FORMULATE THE RECOMMENDATIONS

Experts in the subject of the proposed guideline are selected by the Research Translation and Dissemination Core to examine available research and write the guideline. Authors are given guidelines for performance of the systematic review of the evidence and in critiquing and weighing the strength of evidence.

RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS

Not applicable

COST ANALYSIS

A formal cost analysis was not performed and published cost analyses were not reviewed.

METHOD OF GUIDELINE VALIDATION

Peer Review

DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

This guideline was reviewed by experts knowledgeable of research on persistent pain and development of guidelines. The reviewers suggested additional evidence for selected actions, inclusion of some additional practice recommendations, and changes in the guideline presentation to enhance its clinical utility.

RECOMMENDATIONS

MAJOR RECOMMENDATIONS

The grades of evidence (A-D) are defined at the end of the "Major Recommendations" field.

Assessment: Pain and Functioning

- Ask about pain presence

The initial step in assessing for persistent pain is to ask about the presence of pain. If pain presence is confirmed, then the nurse should further assess for criteria associated with the definition of persistent pain provided by Bonica (1990), that of lasting 1 month longer than expected, or associated with a chronic constant pain producing condition, or characterized by recurrent intervals over time. In addition, obtain information about the intensity and location of pain as well as any precipitating and relieving factors. The Brief Pain Inventory (BPI) contains a body map for indicating pain location(s), and an area for indicating treatments and medications, as well as factors that relieve the pain. Some older adults may identify with words other than pain, such as discomfort, hurt, or ache (American Geriatrics Society [AGS], 2002). When using this guideline, the nurse should consistently use the same word throughout the process.

- Identify the underlying cause and associated factors

It is important to identify the underlying cause of the pain because management is more successful if directed toward the specific causative condition (AGS, 2002; Ferrell, 2000. *Evidence Grade = C*). Thus, a thorough review of the medical history, physical examination, and any pertinent laboratory studies or diagnostic tests is important in determining the cause (AGS, 2002. *Evidence Grade = D*). In addition, assess for other factors such as attitudes and beliefs about pain and its treatment that could affect pain reporting and management. For example, patients may believe that pain is a normal part of aging, fear that pain means disease progression, and fear medication addiction or adverse side effects (AGS, 2002; Green, Wheeler, & LaPorte, 2003; Kovach et al., 2000. *Evidence Grade = C*).

- Assess the impact of pain on physical functioning

Older adults with persistent pain commonly experience an increase in pain intensity with movement and, as a result, will limit the activities or movements that exacerbate the pain (e.g., stair climbing or walking) (Davis, Hiemenz, & White, 2002; Duong et al., 2005. *Evidence Grade = C*). However, reducing the intensity of the pain by just 25% has been shown to achieve a 50% improvement in functional status (Flor, Fydrich, & Turk, 1992. *Evidence Grade = A*). Therefore, successfully treating or reducing pain intensity may improve not only physical functioning but also psychosocial functioning as well due to increased mobility that allows for greater social engagement.

- Assess the impact of pain on psychosocial functioning

In addition to pain intensity, the assessment of persistent pain should also include information about its interference with psychosocial functioning. Pain has been shown to be associated with depression, distress, and a decline in social activities (Baker, 2005; Haythornthwaite et al., 2003; Mossey & Gallagher, 2004; Tsai, 2005. *Evidence Grade = C*). Thus, a key outcome factor, other than reduced pain intensity, is improvement in physical and psychosocial functioning.

Assessment in Cognitively Impaired Older Adults

- Self-reports:

Cognitively impaired elders report less pain than elders who are cognitively intact (Kovach et al., 2000; Werner et al., 1998. *Evidence Grade = C*). However, there is no evidence that cognitive impairment reduces the ability to feel painful stimuli; instead it may reduce the ability to interpret and report pain depending upon the extent and location of neuron loss (Bachino et al., 2001; Huffman & Kunik, 2000; Young & Young, 1997. *Evidence Grade = C*). Therefore, assessing pain via self-report in this group is challenging.

Mild to moderately impaired older adults can self-report their pain intensity (Chibnall & Tait, 2001; Taylor et al., 2005). The recommended tool is The Verbal Descriptor Scale (VDS) because it is the most sensitive and reliable in

this group (Herr et al., 2004; Taylor et al., 2005; Taylor & Herr, 2003. *Evidence Grade = C*). However, in one study, although the VDS was sensitive and reliable, African Americans preferred the Faces Pain Scale (FPS) (Taylor & Herr, 2003. *Evidence Grade = C*).

- Proxy-reports:

Caregivers, nurses, and other health care providers commonly estimate pain ratings for those who are unable to communicate pain for themselves. However, this method can be problematic for the following reasons. Nursing staff and others may underestimate pain in cognitively impaired nursing home residents due to lack of recognition (Cohen-Mansfield, 2005; Cohen-Mansfield & Lipson, 2002. *Evidence Grade = C*). Also, there may be incongruence between staff and patient, and caregiver and patient ratings of pain due to family caregiver overestimation or staff underestimation of pain (Horgas & Dunn, 2001; Shega et al., 2004. *Evidence Grade = C*). In spite of these difficulties, caregivers and health care providers can be instrumental in assessing and managing persistent pain in this group. Recent developments in the area of observational methods may be helpful in the future.

- Observational Methods:

Several observational methods have been developed and tested to assess pain in non-communicative older adults with severe dementia but have not been adequately tested for practical, clinical use. Two particularly promising measures are the Checklist for Nonverbal Pain Behaviors (CNPB) (Feldt, 2000b) and the Non-Communicative Patient's Pain Assessment Instrument (NOPPAIN) (Snow et al., 2004).

The CNPB was modified from the Pain Behavior Scale developed by the University of Alabama at Birmingham (Richards et al., 1982). The checklist incorporates assessment of six pain behaviors such as non-verbal vocalizations, facial grimacing, bracing, rubbing, restlessness, and vocalizations. However, it was tested in a group of hospitalized older adults with dementia and acute pain. It has not been evaluated adequately for use in persistent pain. Another observational method, NOPPAIN (Snow et al., 2004), was developed for nursing assistants in long-term care to rate pain presence, response, and intensity during activities. However, it does not contain scoring information and research indicates that proxy assessments of pain may not be valid (Cohen-Mansfield, 2005; Weiner, Peterson, & Keefe, 1999).

Although a specific tool is not recommended in this guideline, the literature supports the following as indicators of inadequately treated pain. These clues may also indicate that other processes may be occurring such as constipation, hunger, thirst, depression, and infection. Therefore, a thorough assessment for all potential causes should be undertaken and assistance sought when needed.

- Changes in typical behavior (Davis & Srivastava, 2003; Kovach et al., 2000; Mentes, Teer, & Cadogan, 2004; Soscia, 2003. *Evidence Grade = C*)

- Inactivity or lying down (Weiner et al., 1999. *Evidence Grade = C*)
- Facial grimacing or wincing (Kovach et al., 2000; Mentes, Teer, & Cadogan, 2004; Manfredi et al., 2003; *Evidence Grade = C*)
- Limping, gait changes, shifting in body weight, holding on to supports (Birrell et al., 2000; Kovach et al., 2000; Walker et al., 2001. *Evidence Grade = C*)
- Bracing, rubbing, rocking (Feldt, "The checklist," 2000; Hanks-Bell, Halvey, & Paice, 2004; Kovach et al., 2000. *Evidence Grade = C*)
- Disruptive behaviors, e.g., agitation, restlessness, verbalizations, aggression, wandering (Buffum et al., 2001; Kiely, Morris, & Algase, 2000; Manfredi et al., 2003; Opie, Doyle, & O'Connor, 2002. *Evidence Grade = C*).
- Resistance to care (Zieber et al., 2005. *Evidence Grade = C*).
- Decreased appetite, insomnia, apathy (Herr & Garand, 2001; Kovach et al., 2000. *Evidence Grade = C*).
- Algorithm for Assessing Pain in Severe Dementia:

In addition, to self-reports, proxy reports, and observational methods, the algorithm in Appendix B in the original guideline document (Weiner, Herr, & Rudy, 2002) may be used as a guide to pain assessment in this group. The algorithm begins with assessing for pain behaviors during movement. If noted, consider pre-medicating the patient prior to movement, strategies to reduce pain, and reassurance while continuing to watch for pain-indicating behaviors. If no pain behaviors are noted during movement, but the patient exhibits other behaviors that suggest pain, then assess for basic comfort measures such as toileting, thirst, and hunger or underlying pathologies such as infection or constipation. The final step is to treat the identified cause or consider an empiric analgesic trial.

A few trials that initiated analgesic therapy with acetaminophen 500 to 1,000 mg three times a day reported preliminary results that associated it with reduced pain behaviors (Baker et al., 1996; Kovach et al., 2002. *Evidence Grade = B*). Pain should be assessed at the peak of medication effectiveness, however, because pain intensity cannot be quantified in severe dementia, a stronger dose or medication may be needed to relieve more severe pain and see changes in behaviors (Buffum et al., 2004. *Evidence Grade = B*). Recommendations have not been clearly established for analgesia trials and the evidence is not conclusive.

For more information on pain treatment guidelines in cognitively impaired older adults, see these additional resources (AGS, 2002; Davis & Srivastava, 2003; Horgas, McLennon, & Floetke, 2003; Weiner & Hanlon, 2001).

Pain Intensity Scales

Self-reports of pain provide the most accurate and reliable evidence of pain presence and intensity (AGS, 2002). The most commonly assessed aspect of pain in daily clinical practice is the intensity or severity (McCaffery & Pasero, "Assessment," 1999). The Joint Commission on Accreditation of Healthcare Organizations (JCAHO, 2001) requires that nurses and other health care providers in hospitals, long-term care, and other health care facilities assess pain intensity routinely. Although the JCAHO regulations do not apply to primary care settings

such as physicians' offices, clinics, and adult day care, older adults in these settings would benefit from routine assessment for the presence and severity of persistent pain.

There may not be one optimal pain intensity instrument that is appropriate for all older adults. Instead, an individualized approach has been recommended (AGS, 2002; Weiner, Herr, & Rudy, 2002. *Evidence Grade = D*). This approach begins with the nurse assessing the older adults' ability to use the selected pain intensity scale. The nurse should consider whether altered cognitive, sensory, perceptual, and motor functions are present that may hamper the older persons' ability to effectively and accurately complete the pain tool assessment. Strategies such as improved lighting, simple language, enlarged and bold print, avoiding glare and background noise may be helpful (Burris, 2004; Hanks-Bell, Halvey, & Paice, 2004). In cognitively impaired older adults, it may be necessary to repeat instructions and questions and to allow extra time for answers (AGS, 2002. *Evidence Grade = D*).

Unique and inherent differences between elders may influence tool selection. For example, some may understand and respond better to audible stimuli and would prefer to hear the pain question read to them (e.g., Verbal Numeric Rating Scale [VNS]). Other people may be more visual, preferring to read the VDS, or look at the Numeric Rating Scale (NRS) or the facial pictures of the FPS. In addition, educational level may impact a person's ability to use some scales (Herr et al., 2004). Therefore, an individualized approach using a variety of assessment tools may be the most accurate and comprehensive method to assess persistent pain intensity (Herr et al., 2004). The nurse should continue to use the same tool(s) at each assessment interval to ensure consistency over time (AGS, 2002; Weiner & Herr, 2002).

- NRS (Included in Appendix A.1 in the BPI in the original guideline document)

The BPI (Appendix A.1 in the original guideline document) includes a version of the NRS. Participants are asked to look at the scale and rate their pain by choosing the one number from 0 to 10 or 0 to 20 that, for example, best describes their pain ranging from "none" to "pain as bad as you can imagine." Individuals with mild to moderate cognitive impairment may have difficulty with the NRS and the BPI. If that occurs, the VDS (Appendix A.2 in the original guideline document) is recommended because it is the most valid and reliable. However, the NRS has been identified as the most preferred by participants when compared with the other scales such as the VDS, VNS, and FPS (Herr et al., 2004; Rodriguez, McMillan, & Yarandi, 2004).

- VDS (Appendix A.2 in the original guideline document)

The VDS is generally regarded as the most reliable and valid pain measure in older adults, including those with mild to moderate cognitive impairment (Closs et al., 2004; Feldt, "Improving assessment and treatment," 2000; Herr et al., 2004; Taylor et al., 2005. *Evidence Grade = B*). With the VDS the participants choose words that best describe their pain intensity ranging from, for example, "no pain" to "worst pain imaginable."

- VNS (Appendix A.3 in the original guideline document)

The VNS is commonly used in clinical settings, however, some elders may have difficulty comprehending and responding to this interactive verbal rating scale (Weiner, Peterson, & Keefe, 1999). Use of the VNS has been associated with higher levels of pain ratings than other scales (Herr et al., 2004). When using the VNS, patients are asked to rate their pain with numbers on a scale of zero to ten, with zero being "no pain" and 10 being the "worst pain imaginable."

- FPS (Appendix A.4 in the original guideline document)

The FPS (Herr, 2002) was originally developed to assess pain intensity in children and consists of cartoon drawings of facial expressions progressing from least to most pain (Bieri et al., 1990). The FPS is not recommended in cognitively impaired older adults because of lower validity and reliability scores when compared with the VDS and NRS (Taylor et al., 2005). In one study it was the tool chosen as most preferred by African Americans (Taylor & Herr, 2003).

Pain Management Strategies

An individualized approach to pain management strategies that combines both non-pharmacologic and pharmacological approaches may reduce side effects from medications by allowing reduced dosing and may be more effective in reducing pain in older adults (AGS, 2002; Leong & Helme, 2003; Turk, 2003; Weiner & Herr, 2002. *Evidence Grade = D*).

Non-pharmacologic Approaches

The term non-pharmacologic has been used interchangeably with the terms alternative, complementary, unconventional, and noninvasive (McCaffery & Pasero, "Practical nondrug," 1999). Because older adults are at an increased risk for side effects from pain medications and at risk for polypharmacy, non-pharmacologic therapies should be initiated whenever possible or combined with pharmacologic measures (Weiner & Hanlon, 2001. *Evidence Grade = D*). According to McCaffery and Pasero, "Practical nondrug," (1999), however, non-pharmacologic strategies should not be used as a substitute for analgesics (*Evidence Grade = D*). Non-pharmacologic treatments may not reduce pain intensity; instead they may enhance coping or reduce the threat associated with pain (McCaffery & Pasero, "Practical nondrug," 1999. *Evidence Grade = D*). In general, older adults are receptive to using alternative methods of pain control (Herr, 2002). However, the nurse should assess for personal preferences, prior experiences, and individual beliefs prior to instituting non-pharmacologic measures (Horgas & McLennon, 2003. *Evidence Grade = D*).

Non-pharmacologic pain treatment generally falls into two categories: *physical* and *cognitive-behavioral* strategies (Herr, 2002). Physical strategies include such modalities as acupuncture, transcutaneous electrical nerve stimulation, heat and cold applications, and massage. These modes of therapy are based on the underlying belief that physical energy acts to modulate pain both peripherally and centrally and can be added to or removed from the patient (Rakel & Barr, 2003). Cognitive-behavioral strategies are thought to intervene in the individual response to pain by altering perceptions and improving pain coping (Dalton & Coyne, 2003;

Rudy, Hanlon, & Markham, 2002). For example, distraction methods (imagery, counting) seek to divert attention away from the pain while meditation methods teach acceptance (AGS, 2002). The following non-pharmacologic treatments have been used successfully for persistent pain in older adults.

Physical Pain Relief Strategies

- Acupuncture may be helpful for reducing persistent pain and disability (Cherkin et al., 2001; Ezzo et al., 2000; Ezzo et al., 2001; Meng et al., 2003; "Acupuncture," 1997. *Evidence Grade = C*).
- Percutaneous electrical nerve stimulation (acupuncture with electrical current) improved pain and functioning in chronic low back pain (Weiner et al., 2003. *Evidence Grade = C*).
- Transcutaneous electrical nerve stimulation (TENS) reduced pain in knee osteoarthritis and in chronic back pain (Grant et al., 1999; Orisi et al., 2002; Philadelphia Panel, 2001. *Evidence Grade = B*).
- Massage decreased pain in cancer patients and nursing home residents (Cassileth & Vickers, 2004; Sansone & Schmitt, 2000. *Evidence Grade = B*).
- Thermotherapy (heat/cold treatments) has anecdotally been reported to be helpful (Jakobsson, Rahm Hallberg, & Westergren, 2004. *Evidence Grade = D*).
 - Cold may be more effective than heat in osteoarthritis (Brosseau et al., 2003. *Evidence Grade = D*).
 - Paraffin wax baths reduce pain in rheumatoid arthritis (Robinson et al., 2002; Ayling & Marks, 2000. *Evidence Grade = C*).
 - Precautions for thermal modalities in older adults include an increased risk for injury to skin from heat, increase in blood pressure from cold therapy, and deep heat in osteoarthritis may contribute to lysis of cartilage (Michlovitz, 1996. *Evidence Grade = D*).
- Electromagnetic therapy reduced pain in musculoskeletal and neuropathic conditions (Eccles, 2005; Gerdner, Nisly, & Glick, 2002; Weintraub et al., 2003; Wolsko et al., 2004. *Evidence Grade = C*).
- Light to moderate intensity exercise such as strength and aerobic training may reduce pain in knee osteoarthritis and low back pain (Iverson, Fossel, & Katz, 2003; Morey & Zhu, 2003; Philadelphia Panel, 2001; Thomas et al., 2005. *Evidence Grade = B*).
- Shoe orthotics may reduce pain and increase functioning in knee and foot osteoarthritis (Buckwalter et al., 2001; Hodge, Bach, & Carter, 1999; Maillefert et al., 2001. *Evidence Grade = C*).

Recommendation

There is good evidence for the following physical modalities to be used in persistent pain in older adults: transcutaneous electrical nerve stimulation, acupuncture, exercise, and massage. Other therapies have been found useful but the evidence is still preliminary or inconclusive. Referral to trained specialists is recommended for all physical modalities. Physical modalities may be used alone or in conjunction with cognitive-behavioral strategies and/or pharmacotherapy. For risks, contraindications, mechanism of action, and other information about physical modalities for pain reduction refer to Rakel and Barr (2003).

Cognitive-Behavioral Strategies

- Cognitive behavioral strategies were effective in managing persistent pain in adults (Morely, Eccleston, & Williams, 1999. *Evidence Grade = A*).
- Chronic low back pain was reduced (Astin, 2004; Reid et al., 2003. *Evidence Grade = C*).
- Cognitive behavior treatment for insomnia in older adults reduced daytime pain and improved functioning and mood (Rybarczyk et al., 2005; Rybarczyk et al., 2001. *Evidence Grade = B*).
- Meditation has been found to reduce persistent pain ("Integration of behavioral," 1996. *Evidence Grade = D*).
- Coping skills training is helpful in managing persistent pain in older adults (Haythornthwaite et al., 2003; Keefe et al., 2004. *Evidence Grade = B*).
- Prayer reduced patient-reported pain (Matthews, Marlowe, & MacNutt, 2000; Keefe et al., 2001. *Evidence Grade = B*).
- Relaxation techniques such as imagery, music, and humor may be helpful in reducing pain intensity and pain perception (Baird & Sands, 2004; Johnson & Petrie, 1997; McCaffrey & Freeman, 2003. *Evidence Grade = B*).
- Combined education and cognitive-behavioral treatment may be more effective than when used alone (Arnstein, 2004; Astin 2004. *Evidence Grade = D*).

Recommendation

There is good evidence that cognitive behavioral strategies such as education, coping skills training and relaxation are helpful in reducing pain perception. Older people expressed willingness to try exercise and relaxation to help manage pain but identify barriers such as time, transportation, and fears related to the treatment (Austrian, Kerns, & Reid, 2005. *Evidence Grade = C*). Therefore, assessing willingness and addressing potential barriers to treatment may be helpful in implementing cognitive behavioral strategies, particularly exercise and relaxation. Combined therapies may be more effective than one treatment alone (Leong & Helme, 2003; Turk, 2003. *Evidence Grade = D*). More training and research into mind-body approaches is needed (Gallagher, 2004). Referral to trained practitioners in the specific modality is recommended.

Pharmacologic Approaches

Pain treatment with medications is a complex decision-making process based upon multiple considerations. Personal decision making regarding the types of treatments to be used has been cited by older adults as a central theme that may influence successful pain management (Davis, Hiemenz, & White, 2002; Ross et al., 2001. *Evidence Grade = C*). Therefore, including the person and significant others in the treatment plan discussion and allowing for choices and individual preferences is an important aspect of the treatment plan.

In addition, the discussion should include risks versus benefits and the establishment of clear goals of therapy. Part of the discussion should include helping people realize that their condition may not have a cure, and that a realistic goal might be pain that is tolerable and that allows them to function and participate in activities (Vallerand, 2003). Often the process is that of trial and error, with the goal of balancing medication effectiveness against side effects and ensuring optimal level of functioning. Other considerations to be included in the process are frequency of use, etiology of the pain, intended duration of treatment,

and cost. See Table 1 in the original guideline document for indications, medications, and dosing guidelines for commonly used pain medications in older adults. For further information about dosing, adjuvant drugs, titration, side effects, efficacy, and more see Vallerand (2003), Gordon (2003), Hanks-Bell, Halvey, & Paice (2004); Weiner & Hanlon (2001).

Pharmacological Approaches

- Persistent pain in the elderly should be treated with a combination of pharmacologic and non-pharmacologic strategies which may allow for more effective pain management and less negative effects (AGS, 2002; Gordon, 2003; Herr, 2002. *Evidence Grade = C*).
- Older adults are at increased risk for negative effects from medications due to age-related declines in drug metabolism and elimination, and therefore should be monitored closely (Gloth, 2001; Horgas & McLennon, 2003; Pasero, Reed, & McCaffery, 1999. *Evidence Grade = C*).
- Initially choose a shorter acting analgesic with the fewest side effects such as acetaminophen for mild to moderate pain. It may be combined with an opioid for moderate to severe pain (AGS, 2002; Gloth, 2001; Gordon, 2003; Nikles et al., 2005; Pasero, Reed, & McCaffery, 1999. *Evidence Grade = B*).
- Use the least invasive route for dosing such as topical or oral (Agency for Health Care Policy and Research [AHCPR], 1994; Burris, 2004; Coyle, Cherny, & Portenoy, 1994. *Evidence Grade = D*).
- Avoid intramuscular injections because of trauma, pain, and risk of delayed effect (AHCPR, 1994; American Pain Society [APS], 2005; Burris, 2004; Pasero, Reed, & McCaffery, 1999. *Evidence Grade = D*).
- Scheduled dosing, as opposed to as-needed dosing, may improve pain management by preventing pain reoccurrence. It may also reduce the risk of side effects from high doses of medications taken to reduce pain escalations (AGS, 2002; APS, 2003; Popp & Portenoy, 1996. *Evidence Grade = C*).
- Short acting analgesics begin to reduce pain in thirty minutes after dosing and last up to 4 hours. For continuous pain relief, this requires frequent administration. Therefore, longer acting medications are recommended for persistent pain (AGS, 2002. *Evidence Grade = C*).
- Opioid dosing should begin with a 25 to 50% reduction and gradually be titrated upward to avoid negative effects from over sedation (AGS, 2002; AHCPR, 1994; Gloth, 2001; Pasero, Reed, & McCaffery, 1999. *Evidence Grade = C*).
- Combinations of medications may be required for moderate to severe pain (e.g., opioids such as codeine with nonopioids such as acetaminophen) (Weiner & Hanlon, 2001. *Evidence Grade = C*).
- Adjuvant agents may be helpful in treating persistent pain, particularly neuropathic conditions, and may be co-administered with other analgesics to enhance effects or administered alone (AGS, 2002; Pasero, Reed, & McCaffery, 1999; Weiner & Hanlon, 2001. *Evidence Grade = C*).
- Analgesics to avoid in the elderly due to the increased risk for negative consequences include (Pasero, Reed, & McCaffery, 1999. *Evidence Grade = C*):
 - Meperidine (renal, central nervous system toxicity)
 - Propoxyphene (central nervous system, cardiac, renal toxicity)
 - Pentazocine (delirium, agitation)

- Indomethacin (central nervous system toxicity-may be indicated for short term use in specific conditions)
- Amitriptyline (anticholinergic effects)

Tolerance, Dependence, and Addiction

Many older adults are fearful of taking analgesic medications due to concerns about drug addiction. Therefore, education about the differences between tolerance, dependence, and addiction is important. Drug tolerance may develop in older adults who are prescribed and use opioids regularly for a period of time for control of persistent pain. Tolerance is described as reduced effectiveness over time due to adaptation (APS 2003; Panda & Desbiens, 2001) but this may be reduced in older adults (Buntin-Mushock et al., 2005). Dependence refers to uncomfortable symptoms that result from abrupt withdrawal of opioid medications. When changing to a different opioid or discontinuing use, a gradual taper can alleviate the uncomfortable symptoms and ease the process. Concerns about dependence should not interfere with using opioids (Weiner & Hanlon, 2001). Addiction is a psychological condition characterized by uncontrollable cravings for the effects of the drug other than pain relief (APS, 2003). Data indicate that 3 to 16% of the American population has addictive disorders; however these rarely occur in the elderly (APS, 2003; Savage, 1996).

Universal Precautions

Use of the term "universal precautions" has been recommended for pain medicine (Gourley, Heit, & Almahrezi, 2005). In clinical medicine it is not possible to always know which patient is potentially infectious, thus all patients are treated using preventive safety precautions. Similarly, in pain medicine it is difficult to predict which persons will become problematic with pain prescriptions in terms of abuse or addiction; therefore adopting a universal approach that incorporates recommendations such as monitoring the patient's behaviors and assessing compliance with the treatment plan may reduce barriers to pain treatment and reduce risk (Gourley, Heit, & Almahrezi, 2005).

A mnemonic tool devised by Passik and Weinreb (2000) summarizes the desired outcomes for pain management: analgesia, activities of daily living, adverse events, and aberrant drug-taking behaviors. The "4 A's" were devised to remind health care providers that pain therapy can be considered successful only if it provides pain relief and stabilizes or improves functioning without adverse events or negative drug-taking behaviors (Passik & Weinreb, 2000).

- *Analgesia* refers to regular assessing for pain relief from current pain medications that is enough to make a real difference in quality of life.
- *Activity* indicates monitoring improvement in physical, psychological, and social functioning such as mood, family and social relationships, and sleep due to prescribed pain medications.
- *Adverse events* describes includes reviewing the patient's ability to tolerate the medications and whether any side effects have occurred from the current pain relievers.
- *Aberrant behaviors* include overt indicators such as selling prescription drugs, prescription forgery, stealing or borrowing drugs, concurrent abuse of related illegal drugs, unsanctioned dose escalations, and recurrent prescription

losses. Less obvious indicators include aggressive complaining about need for higher doses, drug hoarding, requesting specific drugs, acquisition of similar drugs from other medical sources, and unapproved use of the drug to treat another symptom.

Recommendation

According to the evidence, persistent pain is under-treated pharmacologically in older adults, and particularly in vulnerable groups such as those with cognitive impairment and nursing home residents (Balfour & O'Rourke, 2003; Dominick & Baker, 2004; Kenefick, 2004; Teno et al., 2004; Unutzer et al., 2004; Won et al., 2004. *Evidence Grade = B*). However, there is evidence that pain can be treated pharmacologically, both effectively and safely, with minimal negative effects in older adults (AGS, 2002; APS, 2003; Hanks-Bell, Halvey, & Paice, 2004). In spite of this evidence, persistent pain continues to be a problem for older adults with major negative consequences. Improvements in persistent pain assessment and management through medication prescribing and administration combined with non-pharmacologic therapies are needed to reduce suffering in older adults.

Education

Appropriate education about pain management assessment and treatment should be considered part of a comprehensive plan for persistent pain management. The plan for managing persistent pain should be discussed with the patient and family so that individualized care based on preferences can be instituted.

Education of the patient and family should include information about:

- The use, purpose, and side effects of medications used to treat pain (Davis, Hiemenz, & White, 2002. *Evidence Grade = C*)
- Issues related to addiction, dependence, and tolerance including myths and fears about addiction (AGS, 2002, Herr, 2002; Weiner & Hanlon, 2001. *Evidence Grade = C*)
- Taking medications on a routine basis to prevent escalation of pain and reduce the amount of medications needed to achieve adequate pain control (AGS, 2002; APS, 2003. *Evidence Grade = C*)
- Nonpharmacologic therapies that may be used instead of, or in conjunction with, pharmacologic measures such as relaxation, imagery, massage, exercise, transcutaneous electrical nerve stimulation, and acupuncture (AGS, 2002; Meng et al., 2003; Orisi et al., 2002. *Evidence Grade = C*).
- Resources such as the American Chronic Pain Association, The American Pain Society, and the American Pain Foundation at internet sites: www.theacpa.org, www.ampainsoc.org, www.painfoundation.org.
- In addition, encourage disclosure of barriers to effective pain treatment such as mistrust, age-related misconceptions, use of adaptive resources; then work together to remove barriers as well as encourage personal decision-making in the process (Davis, Hiemenz, & White, 2002. *Evidence Grade = C*).

Definitions:

Evidence Grading

- A. Evidence from well-designed meta-analysis
- B. Evidence from well-designed controlled trials, both randomized and nonrandomized, with results that consistently support a specific action (e.g., assessment, intervention or treatment)
- C. Evidence from observational studies (e.g., correlational, descriptive studies) or controlled trials with inconsistent results
- D. Evidence from expert opinion or multiple case reports

CLINICAL ALGORITHM(S)

A clinical algorithm is provided in the original guideline document for determining pain management strategies in cognitively impaired older adults.

EVIDENCE SUPPORTING THE RECOMMENDATIONS

REFERENCES SUPPORTING THE RECOMMENDATIONS

[References open in a new window](#)

TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

The type of supporting evidence is identified and graded for selected recommendations (see "Major Recommendations" field).

BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

POTENTIAL BENEFITS

- When persistent pain is proficiently assessed and treated, improved outcomes such as decreased pain and improved physical and psychological functioning can be expected.
- An individualized approach to pain management strategies that combines both non-pharmacologic and pharmacological approaches may reduce side effects from medications by allowing reduced dosing and may be more effective in reducing pain in older adults

POTENTIAL HARMS

- Pharmacologic therapies may result in tolerance, dependence, and/or addiction
- See Table 1 in the original guideline document for a listing of possible side effects of specific pharmacologic therapies.

QUALIFYING STATEMENTS

QUALIFYING STATEMENTS

This evidence-based practice protocol is a general guideline. Patient care continues to require individualization based on patient needs and requests.

IMPLEMENTATION OF THE GUIDELINE

DESCRIPTION OF IMPLEMENTATION STRATEGY

The "Evaluation of Process and Outcomes" section and the appendices of the original guideline document contain a complete description of implementation strategies.

IMPLEMENTATION TOOLS

Audit Criteria/Indicators
Chart Documentation/Checklists/Forms
Clinical Algorithm
Resources
Staff Training/Competency Material

For information about [availability](#), see the "Availability of Companion Documents" and "Patient Resources" fields below.

INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

IOM CARE NEED

Getting Better
Living with Illness

IOM DOMAIN

Effectiveness

IDENTIFYING INFORMATION AND AVAILABILITY

BIBLIOGRAPHIC SOURCE(S)

McLennon SM. Persistent pain management. Iowa City (IA): University of Iowa Gerontological Nursing Interventions Research Center, Research Translation and Dissemination Core; 2005 Aug. 58 p. [174 references]

ADAPTATION

Not applicable: The guideline was not adapted from another source.

DATE RELEASED

2005 Aug

GUIDELINE DEVELOPER(S)

University of Iowa Gerontological Nursing Interventions Research Center,
Research Translation and Dissemination Core - Academic Institution

SOURCE(S) OF FUNDING

Developed with the support provided by Grant #P30 NR03979, [PI: Toni Tripp-Reimer, The University of Iowa College of Nursing], National Institute of Nursing Research, NIH

GUIDELINE COMMITTEE

University of Iowa Gerontological Nursing Interventions Research Center Research Development and Dissemination Core

COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE

Author: Susan M. McLennon, MSN, ARNP

Series Editor: Marita G. Titler, PhD, RN, FAAN

FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

Not stated

GUIDELINE STATUS

This is the current release of the guideline.

GUIDELINE AVAILABILITY

Electronic copies: Not available at this time.

Print copies: Available from the University of Iowa Gerontological Nursing Interventions Research Center, Research Dissemination Core, 4118 Westlawn, Iowa City, IA 52242. For more information, please see the [University of Iowa Gerontological Nursing Interventions Research Center Web site](#).

AVAILABILITY OF COMPANION DOCUMENTS

The original guideline document and its appendices include a number of implementation tools, including a pain assessment tools and intensity scales, outcome and process indicators, staff competency material, and other forms.

PATIENT RESOURCES

None available

NGC STATUS

This NGC summary was completed by ECRI on March 14, 2006. The information was verified by the guideline developer on April 12, 2006.

COPYRIGHT STATEMENT

This summary is based on content contained in the original guideline, which is subject to terms as specified by the guideline developer. These summaries may be downloaded from the NGC Web site and/or transferred to an electronic storage and retrieval system solely for the personal use of the individual downloading and transferring the material. Permission for all other uses must be obtained from the guideline developer by contacting the University of Iowa Gerontological Nursing Intervention Research Center, Research Dissemination Core.

DISCLAIMER

NGC DISCLAIMER

The National Guideline Clearinghouse™ (NGC) does not develop, produce, approve, or endorse the guidelines represented on this site.

All guidelines summarized by NGC and hosted on our site are produced under the auspices of medical specialty societies, relevant professional associations, public or private organizations, other government agencies, health care organizations or plans, and similar entities.

Guidelines represented on the NGC Web site are submitted by guideline developers, and are screened solely to determine that they meet the NGC Inclusion Criteria which may be found at <http://www.guideline.gov/about/inclusion.aspx>.

NGC, AHRQ, and its contractor ECRI Institute make no warranties concerning the content or clinical efficacy or effectiveness of the clinical practice guidelines and related materials represented on this site. Moreover, the views and opinions of developers or authors of guidelines represented on this site do not necessarily state or reflect those of NGC, AHRQ, or its contractor ECRI Institute, and inclusion or hosting of guidelines in NGC may not be used for advertising or commercial endorsement purposes.

Readers with questions regarding guideline content are directed to contact the guideline developer.

© 1998-2008 National Guideline Clearinghouse

Date Modified: 10/13/2008

