THE UNIVERSITY OF IOWA | IOWA GERIATRIC EDUCATION CENTER

INFO-CONNECT

Pain Management in Nursing Home Residents with Dementia

The Facts . . .

- *45 to 80 percent of residents in long-term care facilities report chronic pain.*
- *40 to 60 percent of long-term care residents don't use the 'as-needed' medications prescribed for them.*
- *Untreated pain has serious, varied, and widespread consequences for older adults.*
- *Effective use of behavioral and medication therapies relies on accurate and ongoing assessment of pain.*[1]

Assessing Pain in Advanced Dementia[1]

- Pain assessment relies on OBSERVING the person's behavior.
- Research suggests that KNOWING the person is key to identifying pain.
- Residents who cannot clearly communicate their discomfort are at high risk for under-treatment of pain.
- All 'traditional' pain assessment scales rely on both verbal and cognitive skills, which make them ineffective in advanced dementia:
  - Responding to 'simple' questions like, "Are you having pain?" may not be possible.
  - Being able to 'point where it hurts' requires problem-solving skills no longer available.
  - Rating the 'intensity' of pain on a scale using numbers or words is beyond the person's ability.

Principles of Pain Management

- Identify and treat multi-dimensional factors that contribute to pain.
  - Depression, anxiety, fatigue, poor eating habits, and nutritional deficits
- Help the resident be comfortable and functional by focusing on overall health and well being.
  - Treatment should decrease pain and improve function, mood, and sleep.

[1] See "INFO-CONNECT: Pain Assessment in Nursing Home Residents with Advanced Dementia," Iowa Geriatric Education Center, for more information on assessment methods.

- Use non-pharmacological interventions in combination with analgesic medication.
  - Using non-pharmacological and analgesic interventions in combination may reduce the level of medication needed.
  - Below is a table of non-pharmacological interventions that may be recommended for those with advanced dementia.

NON-PHARMACOLOGICAL INTERVENTIONS	
Comfort Measures:	**Distraction/Redirection:**
Positioning	Art therapy
Verbal reassurance	Music therapy
Gentle touch	Pet therapy
Massage	Humor/laughter
Support/Counseling:	Relaxation techniques
Spiritual support	Activities/recreation
Support groups	Life review/reminiscence
Talking with friends	**Cognitive Techniques:**
Social support	Psychotherapy
Stress control	Biofeedback
Supportive Physical Methods	Guided imagery/meditation
Balance and fall protection	Hypnosis
Heat/cold applications	**Alternative Therapies:**
Hydrotherapy	Physical therapy
Bracing/splinting	Ultrasound
Joint protection	Chiropractic
Stretching exercises	Acupuncture
Movement and range of motion	Transcutaneous Electrical Nervous Stimulation (TENS)

- The World Health Organization (WHO) suggests using a three-step ladder for pharmacological management of pain.
  1. Start with nonopioids
  2. Proceed to opioid therapies
  3. Use adjunctive nonopioid medications to augment opioid medication

- Follow basic principles to ensure safe and effective analgesic use.
  - Use the least invasive route of administration.
  - Use short-acting drugs for episodic pain and around-the-clock administration for continuous pain.
  - Use long-acting or sustained release formulas for continuous pain only.
  - Adjust doses carefully following the motto: “Start low and go (titrate) slow”.
  - Use both short-acting and long-acting opioids for chronic pain.
  - Consider alternatives for neuropathic pain.
  - Topical analgesics may be helpful with arthritic pain.
- Recognize that older adults, as a group, are more sensitive to analgesics and individual side effects may vary considerably. Anticipate, monitor, and treat the side effects prophylactically.
  - Anticipate mild cognitive impairment and sedation until tolerance develops.
  - Start a bowel protocol.
- Avoid certain analgesic drugs altogether when treating residents.
  - Meperidine
  - Methadone
  - Propoxyphene

CARES Model[2]

This conceptual model helps health care facilities with incorporating national pain standards and guidelines into practice.

Commitment - identify facility commitment toward excellent pain management

Assessment - develop pain assessment criteria and documentation for specific patient populations

Responsibility - assign responsibility within the facility to ensure that standards are continually reviewed and maintained

Education - develop ongoing health professional competency guidelines, educational programs, and an organized system for patient and family education

Standards - develop patient care standards defining expected outcomes of care

[2] Weissman DE. (1995). Educating home health professionals in cancer pain management. *Home Health Care Consultant*, *2*,10-18. Used with permission.

For more information about the CARES model, please contact Sandra Muchka, RN, OCN, by phone at (414) 805-6828 or email at smuchka@mcw.edu

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NON-OPIOID MEDICATIONS[3]

Drug	Dose	Max Dose/24	Medication-related Adverse Effects	Comments
Acetaminophen (Tylenol®)	325-1000 mg every 4-6 hrs	4000 mg	Hepatoxicity above maximum dose.	Avoid exceeding maximum dose. Potent analgesic but no anti-inflammatory effect. No GI or anti-platelet side effects. Potentiates nonsteroidal anti-inflammatory drugs and opiates. Those consuming more than 2 ounces of alcohol per day should not exceed 2000 mg Anetaminophen per day due to increased risk of liver toxicity.
Nonselective Non-steroidal anti-inflammatory Ibuprofen, Naproxen, others COX-2 selective inhibitor Celecoxib (Celebrex®)	Individualize dosage 100-200 mg QD or BID	 200mg	Serious gastrointestinal toxicity can occur. May cause an increased risk of serious cardiovascular thrombotic events, myocardial infarction, and stroke, which can be fatal. This risk may increase with duration of use. Patients with cardiovascular disease or risk factors for cardiovascular disease may be at greater risk.	May be considered rarely, with extreme caution when other therapies fail Use requires ongoing assessment of adverse events/risks/benefits Contraindicated in individuals with active peptic ulcer disease, chronic kidney disease or heart failure. Relatively contraindicated in individuals with hypertension, *H. pylori*, history of peptic ulcer or concomitant use of corticosteroids or SSRIs Use a proton pump inhibitor for gastrointestinal protection with nonselective NSAIDs Use a proton pump inhibitor for gastrointestinal protection in individuals on celecoxib and aspirin

Adapted from:
[3] American Geriatrics Society (AGS) Panel on Chronic Pain in Older Adults. *Journal of the American Geriatrics Society.* 2002;50(suppl):*5205*-24. Used with permission.

OPIOID MEDICATIONS[4]

Drug	Dose	Max Dose/24	Medication-related Adverse Effects	Comments
Tramadol (Ultram®)	25 mg every 4-6 hrs	300 mg	Side effects include dizziness/ vertigo, nausea, constipation.	Central analgesic with weak opioid activity used for moderate to severe pain in osteoarthritis and other chronic pain syndromes. Bowel regimen mandatory.
Hydrocodone (Vicoden®, Lortab®)	5-10 mg every 3-4 hrs	NA	Acetaminophen, nonsteroidal anti-inflammatory drug combinations limit dose; toxicity similar to morphine. Constipation.	Do not exceed recommended maximum dose of acetaminophen. Begin a bowel program early.
Morphine, Immediate release (IR) (Roxanol®)	2.5-30 mg every 4-6 hrs.	NA	Intermediate half-life. Older adults more sensitive to side effects. Constipation.	Continuous use for continuous pain; intermittent use for episodic pain. Titrate does with short acting then convert to sustained release. Gold standard for pain relief. Tolerance develops for all side effects except constipation. Bowel regimen mandatory.
Morphine, Sustained release (MS Contin®, Oramorph SR®)	15-30 mg every 12 hrs. If previously on IR divide 24 hr used and ad-minister q12 hrs	NA	Rarely requires more frequent dosing. Constipation.	Escalate dose slowly due to drug accumulation; immediate release opioid often needed for break-through pain. Switch from IR to sustained release at same dose. Dosing interval can be adjusted if pain is not controlled. Do not crush pills. Bowel regimen mandatory.
Oxycodone, immediate release (IR) (Percodan®, Percocet®, Tylox®)	5-10 mg every 4-6 hrs	NA	Oxycodone is available as a single agent. Acetaminophen-nonsteroidal anti-inflammatory drug combinations limit dose; toxicity similar to morphine. Constipation.	Do not exceed recommended maximum dose of acetaminophen or aspirin. Begin bowel program early.
Oxycodone, Sustained release (OxyContin®)	10-20 mg every 12hrs. If previously on IR divide 24 hr use and administer q12 hrs	NA	Same as sustained-release morphine. Constipation.	Immediate-release opioid often needed for break-through pain. Bowel regimen mandatory.
Hydromorphone (Dilaudid®)	2 mg oral every 3-4 hrs	NA	Half-life may be shorter then morphine (3 hrs); toxicity similar. Constipation.	Similar to morphine; start low and titrate to comfort; give continuously (every 3-4 hrs) for continuous chronic pain. Bowel regimen mandatory.
Fentanyl, transdermal (Duragesic®)	NA>25 mcg/h not recommended for opioid naïve patients	NA	Effective activity may exceed 72 hrs in older patient (designed for 3-day duration). Constipation.	Titrate slowly using immediate-release analgesics for break-through pain; peak effects of first does may take 18-24 hrs. Caution: Fever increases dose absorption rate. Expensive, use selectively. Bowel regimen mandatory.

Adapted from:
[4] American Geriatrics Society (AGS) Panel on Chronic Pain in Older Adults. *Journal of the American Geriatrics Society*. 2002;50(suppl):*5205*-24. Used with permission.

ADJUVANT MEDICATIONS[5]

Drug	Starting Dose	Max Dose/24	Indication	Medication-related Adverse Effects	Comments
Corticosteroids					
Prednisone	2.5-5.0 mg daily	NA	Inflammatory disease	Increased risk of hyperglycemia, osteopenia, and Cushing's.	Avoid high dose for long-term use.
Tricyclic Antidepressants					
Desipramine Nortriptyline	10 mg at bedtime	25-100 mg	Neuropathic pain, sleep distrubance	Increased sensitivity to side effects, especially anticholinergic effects.	Monitor carefully for anticholinergic effects, Desipramine may be as effective as amitriptyline with fewer side effects; start at lowest dose possible; titrate bedtime dose 10 mg q 3-5 days.
Anticonvulsants					
Carbamazepine (Tegretol®)	100 mg	2500 mg	Lancinating pain (e.g., trigeminal neuralgia)	Can cause somnolence, ataxia, dizziness, leukopenia, thromocytopenia, and rarely aplastic anemia.	Start at 100 mg daily; increase slowly; check liver function tests, complete blood count (CBC), renal function at baseline; CBC at 2 and 8 wks.
Gabapentin (Neurontin®)	100 mg	3600 mg	Neuropathic pain	May prove to have less serious side-effects than carbamazepine.	Neuropathic doses not established; monitor for idiosyncratic side effects (e.g., ankle swelling, ataxia).
Topical Agents					
Capsaicin (Zostrix® cream, lotion) Capsaicin (Zostrix-HP®)	0.025% topically every 6 hrs 0.075% topically every 6 hrs	NA	Apply to the site of pain.	Initial burning sensation.	Useful for neuropathic pain. Solarcaine® may help reduce initial burning sensation. Patients should be warned about the transient burning sensation that follows application and need for regular use to maintain effectiveness. Skipping doses results in reaccumulation of substance P and return of pain. As with 0.025% creams and lotions. Several weeks may be needed to be effective. Clinical trials are lacking.
Counter irritants containing menthol (Ben-Gay®, Icy Hot®)	Topically	NA	Apply to the site of pain.	May cause local irritation, especially in patients with sensitive skin.	May be effective in self-management of osteoarthritis.
Lidocaine Patch 5% (Lidoderm®)	Up to three patches to intact skin in painful area	Apply once for 12 hours within a 24 hr period	Localized neuropathic pain	Application site reactions	Little systemic absorption
Diclofenac 1% Gel (Voltaren® Gel)	4 gm to affected lower extremity joint or 2 gm to affected upper extremity joint QID	32 grams	Pain of osteoarthritis of knees and hands	Application site reactions Carries same warning as oral nonselective non-steroidal anti-inflammatory drugs	Should be used with the same caution as orally administered NSAIDS

Adapted from:
[5] American Geriatric Society (AGS) Panel on Chronic Pain in Older Adults. *Journal of the American Geriatric Society*. 2002;50(suppl):*5205*-24. Used with permission.

[3,4,5] A number of guidelines relating to the assessment and treatment of pain among older adults are now available. Additions and changes to the preceding three tables were made by Michael Kelly, PharmD, MS.

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