



Pain is common among long-term care residents and is often undertreated. A high prevalence of dementia, sensory impairment, and disability, as well as structural issues such as staffing patterns and turnover in long-term care facilities make assessment and management of pain challenging. An overview of the evidence regarding the assessment and treatment of pain in individual residents, and recommendations for improving the overall quality of pain management in the long-term care setting, is presented.

Key words: pain, dementia, long-term care, pain assessment, pain management

Optimizing Pain Management in Long-Term Care Residents

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Introduction

Pain is common among long-term care (LTC) residents, and is often underreported, underassessed, and undertreated.¹ The American Geriatrics Society (AGS) Panel on Persistent Pain in Older Persons estimated that 45–80% of LTC residents have substantial pain,² and 25% of those with daily pain received neither analgesic medication nor nonpharmacologic treatment for their pain.³ A high prevalence of dementia, sensory impairment, and disability in the LTC population makes assessment and management of pain challenging. Staffing patterns, nursing staff and administrative turnover, limited physician presence, and hierarchical, as opposed to team-oriented, organizational cultures in many homes exacerbate the problem.⁴ The consequences of poor pain management include sleep deprivation, anorexia, depression, anxiety, agitation, decreased activity and functional status, delayed healing, interference with relationships, and lower overall quality of life.^{5–8} This article will provide an overview of the evidence regarding the assessment and treatment of pain in indi-

vidual residents, and recommendations for improving the overall quality of pain management in the LTC setting.

Recognition and Assessment of Pain

The LTC facility must have in place a screening method for identifying pain—either by regularly asking residents if they are experiencing discomfort, or observing residents for specific behaviours suggesting its presence. All direct care staff, as well as other employee groups in the facility (dietary staff, environmental services), can be taught to recognize and report possible pain to the nursing staff.

Accurate pain assessment is a prerequisite for successful pain management.⁹ The American Pain Society¹⁰ and American Geriatrics Society² both emphasize the importance of obtaining the patient's self-report of pain when possible.⁶ However, identifying pain is particularly difficult among individuals with dementia, who represent 26–67% of LTC residents. Weiner and Scherder both found that persons with scores below 15 on the Mini-Mental State Examination

(MMSE) are significantly impaired in their ability to complete and understand^{13,14} self-report pain rating scales. It is not, however, impossible for cognitively impaired residents to respond to questions about pain. More recent studies show that persons with even moderate to severe impairment (i.e., MMSE scores as low as 6) are able to respond consistently to verbal pain assessment measures.^{11,12} However, since observational pain ratings have been found to consistently underestimate patient self-reports of pain,¹²⁻¹⁵ it is always advisable to begin the pain assessment by asking the resident.

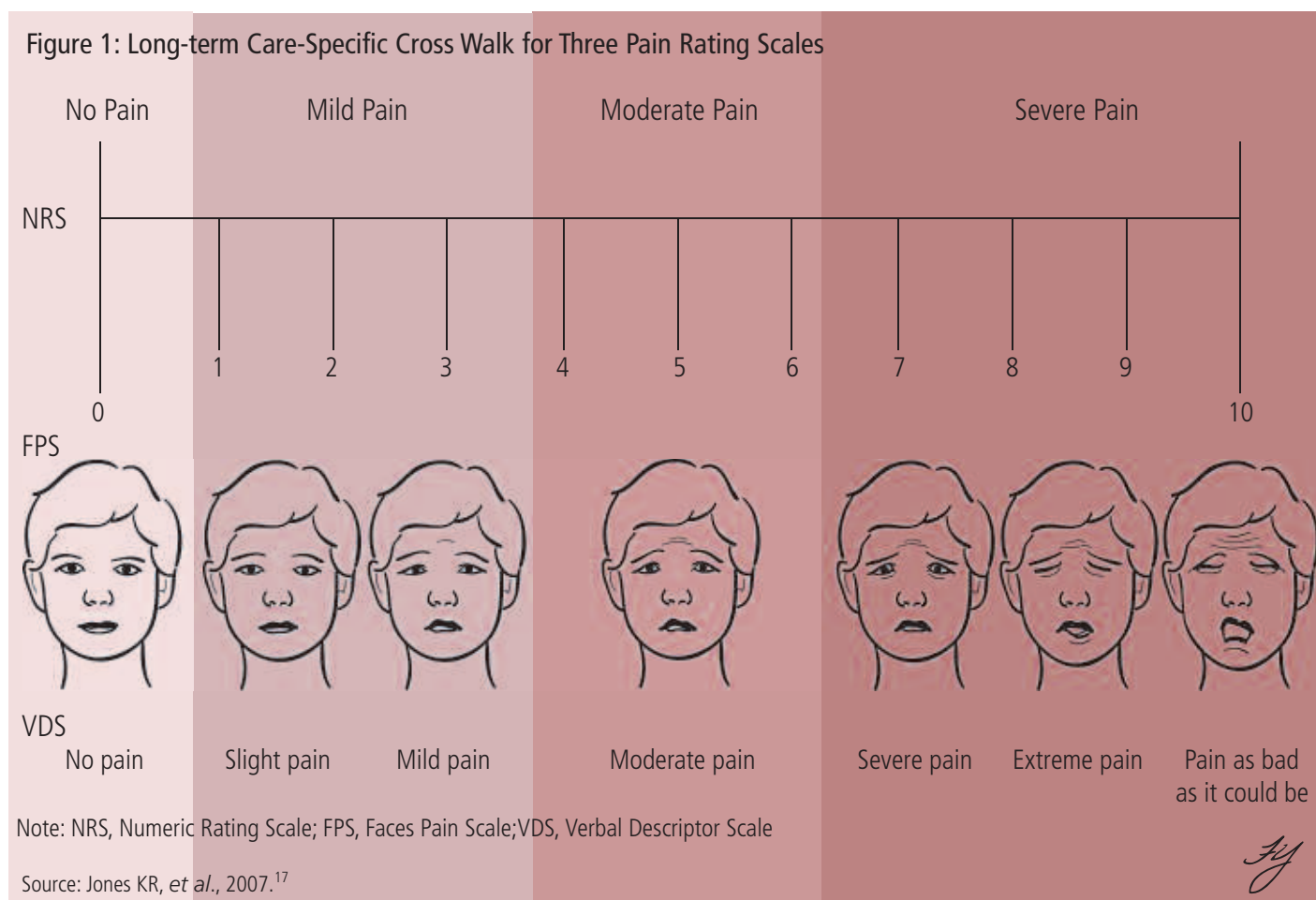
Pain Rating Scales

Assessing pain means eliciting information about its intensity, chronicity, persistence, and location. Intensity is the component most often measured in clinical practice and pain management research,⁶ and multiple tools exist for its

quantification: the visual analogue scale (VAS), verbal descriptor scale (VDS), numeric rating scale (NRS; 0–10 points, horizontal or vertical), Faces Pain Scale (FPS; 6 or 7 faces, with or without tears), Color Pain Assessment Scale, and the Pain Thermometer (PT). The 0–10 scale has been recommended for universal adoption in the clinical assessment of pain intensity in adults,^{16,17} but it does not work particularly well for older adults. Studies suggest that the majority of LTC residents find self-report instruments using written word cues (VDS) the easiest to use and the VAS the most difficult.⁹ Several studies have demonstrated that many older adults prefer the VDS when given a choice of instruments on which to report their pain intensity.^{9,15} However, Jones *et al.*¹⁵ also reported differences among subgroups of LTC residents in their preferences for pain scales: males preferred the NRS significantly more often than

females, and Hispanic/Latino residents preferred the FPS significantly more often than nonminority residents. Both the AGS² and the American Medical Directors Association (AMDA) pain guidelines¹⁸ recommend using a standardized tool, such as the verbal descriptor, numeric rating, Faces Pain, or visual analogue scale to quantify the intensity of the resident's pain at its highest and lowest levels. These scales, however, contain varying numbers of pain levels and different descriptions of pain intensity, making comparison across instruments difficult. Therefore, Jones and colleagues recently validated a clinically relevant usable categorization of pain equating three different, commonly used standardized scales, as illustrated in Figure 1.¹⁷ This four-category intensity rating has the advantage of suggesting the appropriate pharmacologic treatment based on the World Health Organization's ladder and the

Figure 1: Long-term Care-Specific Cross Walk for Three Pain Rating Scales



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For residents who cannot respond verbally, there are a number of valid and reliable observational scales available. All require the rater (typically a nurse) to observe the resident at rest and in motion, and note the presence or absence of specific behaviours that may indicate the presence of pain (e.g., vocalizations, facial grimaces, the rubbing or bracing of a body part, restlessness). Herr *et al.* recently published a systematic review of 10 of these scales online at www.cityofhope.org/prc/elderly.asp.¹⁹ It is important to remember, however, that in persons with limited capacity for self-report, pain is typically manifested through behaviours that overlap widely with those indicative of hunger, thirst, too little or too much stimulation, or depression. The use of a behavioural observation scale is therefore an important first step in screening for pain, but positive screens should be followed by clinical evaluation to determine if the observed behaviours are due to pain or to some other cause. Kovach *et al.* have recently tested a methodology for conducting such an evaluation. If a distressed behaviour is observed, nursing interventions such as repositioning, toileting, feeding, and giving fluids are undertaken serially, while watching for a change in behaviour. If the behaviour persists, pain treatment is instituted.²⁰ By testing one intervention at a time, specific resident needs can be addressed; for example, if the intervention was an analgesic and it demonstrated effectiveness, a regular

schedule could be implemented.

Developing a hypothesis about the etiology of a LTC resident's pain is important to the planning and implementation of a treatment strategy. Residents who acknowledge being in pain should be queried about its duration, persistence, frequency, location, and aggravating or alleviating factors, in addition to its intensity and quality. Due to the unique armamentarium for treating neuropathic pain, clinicians should be particularly alert for its presence in residents with diagnoses that commonly produce nerve irritation, such as diabetes, spinal stenosis, or post-herpetic neuralgia. While it is appropriate to supplement information obtained directly from residents by querying family members and nursing staff, it must always be kept in mind that the resident is the preferred informant.

Treatment

Once an initial assessment is complete, a treatment strategy that includes both nonpharmacologic and pharmacologic approaches to pain management needs to be developed. The efficacy of several nonpharmacologic approaches has been established in cognitively intact populations; these include physical exercise, cognitive-behavioural therapy, pain education, acupuncture, transcutaneous nerve stimulation (TENS), chiropractic, heat, cold, massage, relaxation, and distraction techniques.² Although there are no research reports about the efficacy of these techniques in persons with cogni-

tive impairment, it is reasonable to assume that the methods not requiring significant cognitive ability might be helpful; moreover, the risk of adverse effects is low. There is also some evidence that among cognitively intact individuals the use of such techniques in combination with pharmacotherapy can enhance the therapeutic effect of the medication, allowing medication doses to be reduced and thus decreasing the risk of potential side effects.^{2,18} As nursing staff may be unaware of the permissibility and efficacy of these methods,⁴ the prescribing physician or nurse practitioner may need to provide additional education and encouragement to include these modalities in the treatment plan. Consultants can provide expertise for methods outside the scope of nursing or physician practice (e.g., physical therapy, psychotherapy, acupuncture).

Pharmacologic treatment is an integral component of pain management for the majority of patients and is particularly important in the cognitively impaired population where nonpharmacologic techniques based on self-management are not as feasible. Optimal pharmacologic treatment of pain should be based on the guiding principles featured in Table 1. Rapid pain detection and promptly initiated treatment are essential to a successful treatment regimen.

Instituting treatment expeditiously is particularly critical in the LTC setting for several reasons. First, dementia is prevalent and may impair the perception of pain, ability to report pain, ability to recall pain sensation for evaluating relief, and the ability to communicate about relief. Thus, the potential for unrelieved and unrecognized pain is greater among those who cannot reliably evaluate and/or verbally express their discomfort.² Moreover, this undertreatment could occur persistently. Second, even relatively cognitively intact residents are unlikely to request pain medication when they are in pain. In a study designed to improve pain management in LTC facilities, Jones *et al.* conducted 2,033 interviews of residents in pain. Of this number, 58% admitted to being in

Table 1: Principles for Optimal Pharmacologic Treatment of Pain

When pain is detected, institute treatment rapidly.

Use scheduled, rather than "as needed" dosing for chronic, persistent, or predictably recurrent (e.g., post-operative) pain.

If the pain is neuropathic, use an agent known to be effective for that type of pain (e.g., anticonvulsants, antidepressants, local anesthetic agents).

Titrate medication to pain level and assess the verbal, behavioural, and functional responses to that medication.

Choose a regimen that will mitigate common side effects of pain medication among older adults such as sedation, impaired cognition, and constipation.

Key Points

Screen all residents for pain on admission and daily, obtaining the resident's self-report whenever possible.

Nonpharmacological approaches to pain management may incorporate physical exercise, cognitive-behavioural therapy, education, distraction techniques, and complementary therapies such as acupuncture.

Practitioners should institute pharmacological treatment agents rapidly, scheduling dosing for predictably recurrent pain.

Neuropathic pain requires the use of an anticonvulsant, antidepressant, or local anesthetic agent.

Older adults benefit most from a regimen that mitigates sedation, impairment of cognition and balance, gastrointestinal upset, and constipation.

pain, and of those, 60% of residents told interviewers they had not requested pain medication. When asked why, residents reported concerns about medication in general and pain medication side effects in particular, such as possible dependency, addiction, and tolerance to the drugs. They also reported a need to remain stoic, a hesitancy to bother the staff, and a desire to avoid an anticipated negative response from care providers.²¹ This suggests that it is common for residents to delay complaining about pain until it becomes quite severe. Finally, untreated pain increases anxiety, which in turn aggravates pain. Therefore, as soon as pain is recognized, it should be treated. Pain should also be anticipated—residents should be premedicated if scheduled for physical therapy or other pain-producing activities. In cognitively impaired residents, activities or treatments that have caused pain in the past should be anticipated as causing pain in the future.

Use of scheduled rather than “as needed” dosing orders is desirable for similar reasons. In addition, schedules take into consideration the constraints of nurse/resident staffing ratios which make it unlikely that nurses and nurses’ assistants will be able to proactively and frequently ask residents whether they are in need of pain medication. Scheduling continuous or sustained release pain medication on a regular basis (e.g., q 12–24 hours [long-acting morphine or oxy-

codone] or q 72 hours [fentanyl patch]) is also likely to result in the patient receiving a greater percentage of the amount assigned than when the orders are written “as needed.”²² Some of the newer sustained-release products are available in capsule form and can be sprinkled on applesauce or administered via nasogastric tube to residents who are unable to swallow.

Neuropathic pain is common among older adults because of the prevalence of late-stage diabetes, spinal stenosis, hypothyroidism, and post-herpetic neuralgia. Treatment with a low-dose tricyclic antidepressant (e.g., nortriptyline, desipramine), an anticonvulsant (e.g., gabapentin), or a local anesthetic (e.g., lidocaine patch) is likely to be very helpful and should be strongly considered.²³

To achieve adequate pain relief, the intensity of treatment needs to match the intensity of pain. As outlined in the latest American Pain Society guidelines, mild pain should be treated with a nonopioid; moderate pain, with weaker, compounded opioids; severe pain, with strong opioids.¹⁰ Reassessment and titration are critical, as individual responses will vary.

Finally, a regimen that mitigates common side effects of pain medication among older adults should be provided. The key side effects to consider include sedation, impairment of cognition and balance, gastrointestinal bleeding, and constipation.

Unfortunately, both opioids and non-

steroidal anti-inflammatory agents (NSAIDs) may impair cognitive function and balance, cause gastrointestinal bleeding and distress, and manifest adverse cardiovascular effects.^{24,25} Of the opioids, there is good evidence²⁴ that the use of meperidine (Demerol®) is significantly associated with postoperative delirium, and that propoxyphene (Darvon®) has neuro-excitatory effects that can cause ataxia and dizziness. Both are still commonly used for older adults in LTC facilities, but should be avoided. Several studies point to the value of rotating opioids to mitigate morphine-induced delirium.²⁶ In addition to impairing cognitive function, NSAIDs are well known to increase the risk of gastrointestinal ulceration and bleeding. The AGS Guideline concludes, “In the final analysis, the chronic use of opioids for persistent pain... may have fewer life-threatening risks than does the long-term daily use of high-dose nonselective NSAIDs.”²

Finally, since all opioids cause constipation, it is imperative to prescribe a prophylactic bowel regimen when prescribing opioids.² Stool softeners alone are unlikely to be adequate in preventing constipation if more than a few doses of opioids are anticipated. Instead, a cathartic regimen is preferred, beginning with bisacodyl suppositories and enemas, and progressing to lactulose, senna, or magnesium preparations.

Improving Overall Quality of Pain Management

In order for appropriate and effective treatment plans to be implemented, it may be necessary to overcome particular staff and physician attitudes and misconceptions concerning pain and its management in the older adult. For example, clinicians may discount resident reports of pain if typical signs and symptoms of pain are not displayed. Some clinicians are reluctant to order or administer strong opioids due to concerns about side effects, possibility of drug-seeking behaviour, or exposure to drug enforcement authorities as a prescriber of strong opioids. Occasionally, staff members believe that pain is just a normal consequence of getting old and thus should not be treated with strong medica-

tion. Although attitudes are more difficult to influence than knowledge deficits, staff education, reinforcement of learning, and feedback reports may help to achieve desired practice changes.



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