Using Pain-Rating Scales with Older Adults

The numeric rating scale, verbal descriptor scale, and Faces Pain Scale—Revised.
Overview: Pain is often undertreated and under-diagnosed in older adults. Regular use of short, simple, reliable pain-rating scales provides nurses and physicians with measurable information to establish and modify a pain management plan. This article describes the use of three widely used pain-rating scales: the numeric rating scale, the verbal descriptor scale, and the Faces Pain Scale–Revised. For a free online video demonstrating the use of these scales in older adults, go to http://links.lww.com/A251.

Anne Madrid, age 80, visits the emergency department complaining of a dry cough and flu-like symptoms. (This case is a composite based on my experience.) Three weeks ago she fell in her home and fractured her pelvis; she was prescribed oxycodone plus acetaminophen (Percocet and others) orally every four hours as needed for pain and placed on bed rest at home for a week. Upon examination, she is found to have pneumonia and admitted to the medical–surgical unit. Her admitting orders include acetaminophen 650 mg every four hours as needed for pain.

Ms. Madrid lives with her 82-year-old husband, who tells Lily Sanders, the floor nurse, that his wife has had a great deal of pain since her fall, spending more time in bed than usual and avoiding movement around the house. Ms. Sanders asks Ms. Madrid to rate her pain: “On a scale of 0 to 10, with 0 being no pain and 10 being the worst pain imaginable, what is your pain like now?”

Ms. Madrid says that her current pain level is between 2 and 3 while she is in bed, but increases to between 7 and 8 when she tries to move from the bed to walk to the toilet or sit up in a chair. After her pelvic fracture, says Ms. Madrid, she took oxycodone plus acetaminophen every four hours as needed; however, after a few days she tapered herself off the opioid because she didn’t want to become addicted. Since stopping the drug, she has been taking acetaminophen 650 mg as needed, usually three times per day.

PAIN ASSESSMENT IN OLDER ADULTS

The evaluation of pain intensity using a pain-rating scale provides crucial information to guide treatment plans. This screening will inform the development of an interdisciplinary pain management plan. Because there are no objective measures of pain such as laboratory values or blood pressure, the most reliable measure of pain is the patient’s self-report. A quantified pain measurement can be quickly and regularly obtained and used on an ongoing basis to determine the effectiveness of interventions.

The following three simple pain-intensity scales, as shown in Pain Assessment for Older Adults, page 46, are widely used with older adults in acute, long-term, and home care settings: the numeric rating scale (NRS), the verbal descriptor scale, and the Faces Pain Scale–Revised (FPS–R).

The **NRS** asks a patient to rate her or his pain by assigning it a numeric value, with 0 indicating no pain and 10 being the worst pain imaginable, what is your pain like now?”

Ms. Madrid says that her current pain level is between 2 and 3 while she is in bed, but increases to between 7 and 8 when she tries to move from the bed to walk to the toilet or sit up in a chair. After her pelvic fracture, says Ms. Madrid, she took oxycodone plus acetaminophen every four hours as needed; however, after a few days she tapered herself off the opioid because she didn’t want to become addicted. Since stopping the drug, she has been taking acetaminophen 650 mg as needed, usually three times per day.

**Web Video**

Watch a video demonstrating the use and interpretation of the numeric rating scale, the verbal descriptor scale, and the Faces Pain Scale–Revised at http://links.lww.com/A251.

**A Closer Look**

Get more information on why it’s important for nurses to assess older patients for the intensity of their pain.

**Try This: Pain Assessment for Older Adults**

This is the tool in its original form. See page 45.
range from a smiling face (intensity = 0) to a harsh grimace (intensity = 10).

**ADMINISTERING THE SCALES**

**Choosing a scale.** The NRS and the verbal descriptor scale are widely known and frequently used: one or the other may be preferred by specific institutions or nurses. It is important for clinicians to be able to choose from several pain scales. While most clinicians choose the NRS, it may not be the best scale for all patients. For example, a nurse might use the FPS–R with a patient who is hearing impaired so that the patient can visualize the levels of pain. Regardless of the scale used, one of the most important considerations is the consistent use of the same scale with each patient.

**Why Assess Older Adults’ Pain?**

The philosopher Jean-Jacques Rousseau wrote, “Except pain of body and remorse of conscience, all our evils are imaginary.” In 2000 the Joint Commission called pain a “fifth vital sign” and mandated its regular assessment. Even so, undertreatment of older adults’ pain is common. In 2006, the Centers for Disease Control and Prevention made the following observations, based on data from the 1999–2002 National Health and Nutrition Examination Survey and the 2003 National Health Interview Survey:

- One-fifth of adults age 65 years and older said they had experienced pain persisting for more than 24 hours in the past month. (Of all adults, older adults were, interestingly, the least likely to report pain.)
- Almost three-fifths of adults age 65 and older with pain said it had lasted for one year or more.
- More than one-fourth of adults said they had experienced low back pain in the past three months.
- One-half of adults age 65 and older said they’d experienced “joint pain, aching, or stiffness (excluding the back or neck)” in the previous 30 days.
- Reports of severe joint pain were higher among older adults, and women reported severely painful joints more often than men did (10% versus 7%, respectively).

Reasons for the undertreatment of pain in older adults that are frequently mentioned in the literature or have been observed by the author include:

- the belief that pain is a normal part of aging that should be lived with and not complained about.
- nurses’ and physicians’ fear that providing adequate pain relief may lead to respiratory depression or addiction.
- older adults’ fear that they will become addicted to opioid analgesics or that complaints of pain may lead to additional testing.
- inadequate staffing.
- communication breakdown caused by cognitive and sensory impairment in many older adults.
- insufficient education for nurses on pain assessment; and other causes.

Too often, pain assessment in older adults is neither undertaken nor documented. Using patient interviews and chart review, Sengstaken and King identified chronic pain in 66% of a group of 76 nursing home residents who were communicative; however, physicians had detected pain in only 17 of the 43 patients who reported chronic pain when interviewed. Using explicit processes to assess, measure, and document pain is an important step in improving the quality of life in older adults in both acute and long-term care as well as community settings.

Accurate measurement of pain is essential for developing an effective management plan. In addition, the regular measurement of pain intensity helps nurses evaluate the effectiveness of interventions. Pain management is a process, and it is important to measure the success of this process with precision. To watch the portion of the online video discussing the need for ongoing assessment of pain in older adults, go to http://links.lww.com/A254.

**REFERENCES**

To administer the NRS, which asks patients to rate pain on a numeric scale, the nurse should then continue, “On a scale of 0 to 10, with 0 representing no pain and 10 representing the worst pain you have ever experienced in your life, what is your pain now?”

When using the verbal descriptor scale, which uses words instead of numbers, the nurse could say, “Would you please describe your pain for me, from ‘no pain’ to ‘mild,’ ‘moderate,’ ‘severe,’ or ‘pain as bad as it could be?’”

When using the FPS–R, which depicts a range of faces, the nurse could ask: “Would you please look at this card and point to the face that best represents the level of pain you are experiencing right now?” This tool might be used in patients with some challenges with verbal communication, such as patients who primarily speak another language or those with dementia, as well as those with a hearing impairment.

CHALLENGES
Many other factors besides those mentioned above could influence a nurse’s choice of a pain scale. For example, patients with a visual deficit won’t be able to use the FPS–R, while language barriers might interfere with a patient’s comprehension of questions.

Cognitive impairment. Some evidence suggests that the three scales discussed in this article are ineffective with a significant proportion of cognitively impaired older adults. Ferrell and colleagues studied pain assessment in a skilled nursing home with a “very high prevalence of cognitive impairment.” (The mean Folstein Mini-Mental State Examination [MMSE] score was 12 ± 7.9 out of 30; scores of 23 or less indicate cognitive impairment.) They found that 83% of residents could complete at least one of the five pain-rating scales used during the study. Most residents (65%) could complete the Present Pain Intensity Scale of the McGill Pain Questionnaire (choosing words to describe the pain), which is similar to the verbal descriptor scale. Residents were least likely to complete the NRS (called the “verbal scale” in the study) or a “visual analog scale” that required patients to mark their pain level along a line using a pencil.

Scoring the verbal descriptor scale. Interpreting the results of the verbal descriptor scale should focus on the words used to describe the pain. The nurse should record the words used by the patient and compare them with words she or he used previously. They found that participants couldn’t complete the NRS 49% of the time, the visual analog scale 43% of the time, the Wong-Baker scale 39% of the time, and the McGill Word Scale 27% of the time. In addition, residents with an MMSE [score] of less than 15 demonstrated significantly lower response rates to all the severity instruments than residents with higher MMSE scores,” with the NRS, visual analog scale, and face scale eliciting the lowest response rates in this population. The authors stress that more research is needed. They suggest that no single method of pain assessment has been established for use with this population and that the choice of a scale must reflect the needs of individual patients. (To view the segment of the online video discussing the assessment of pain in patients with dementia, go to http://links.lww.com/A253. Also, AJN will feature an article on this topic next month.)

Ethnic and racial minorities. A descriptive study by Ware and colleagues—in which participants were 74% black, 16% Hispanic, and 10% Asian—found that all three of these scales were easily used by over 90% of the study participants. However, more research is needed into the disparities of pain management across racial and ethnic populations, and it is important to consider the possible influence of culture on the expression of pain.

Scoring the NRS. The numerical scores of the NRS are interpreted as follows: 1 to 3 represents mild pain; 4 to 6, moderate pain; and 7 to 10, severe pain. When any confusion exists about the intensity of the patient’s pain (such as when the nurse suspects that the patient has underestimated her or his pain), the nurse can confirm the results of the NRS by using verbal descriptors, as in the following exchange between Ms. Sanders and Ms. Madrid:

“Ms. Madrid,” says Ms. Sanders, “would I be correct in describing your pain as mild when you are resting and severe when you try to move?”

“Yes,” says Ms. Madrid. “I think this is why I have spent so much time in bed. My pain is just so severe when I move around.”

Watch It!
Go to http://links.lww.com/A251 to watch a nurse use pain-intensity scales to assess pain in a patient and discuss how to administer them and interpret results. Then watch the health care team plan intervention strategies.

View this video in its entirety and then apply for CE credit at www.nursingcenter.com/AJNolderadults; click on the How to Try This series link. All videos are free and in a downloadable format (not streaming video) that requires Windows Media Player.
For example, if the patient describes her or his pain as “excruciating,” the nurse would need to clarify the patient’s meaning by asking whether the best descriptor would be “severe” or “pain as bad as it could be.”

**Scoring the FPS–R.** This scale is interpreted by applying a numeric scale with values assigned to each of the six facial expressions. The face that depicts a slight smile would be scored 0 points. The remaining faces are scored from 2 to 10 points depending upon the severity of the pain depicted by the face. The numeric notation for the faces on the scale is not displayed to the patient.

**Using the results.** The following dialogue describes how Ms. Sanders uses the results of the NRS to help Ms. Madrid think more objectively about her own pain and whether her treatment should be modified. The results of the verbal descriptor scale and the FPS–R could be used in similar ways.

Ms. Sanders tells Ms. Madrid, “I am concerned that your level of pain is as high as 7 or 8 when you start moving around. Reducing your pain level will certainly help you to feel better but will also allow you to move around more and speed your recovery from pneumonia. I think it would be helpful if I call Dr. Stevens to discuss how we can work to increase your comfort. At what level would you like your pain to be when you’re moving around?” Ms. Madrid: “I would feel much better if my pain was less than 5 when I’m moving around.” (The pain rating that allows the patient to perform a range of activities with relative ease is sometimes called the comfort–function goal. For more, see “Comfort–Function Goals,” *Pain Control*, September 2004.)

Dr. Stevens agrees that Ms. Madrid’s pain should be better controlled. He changes her acetaminophen prescription to 650 mg orally three times per day (rather than “as needed”) and recommends that Ms. Madrid take one tablet of oxycodone plus acetaminophen orally every morning one hour before she engages in activity such as rehabilitation. Ms. Sanders also implements a fall-risk care plan for her because of the increased risk of falls when a patient is taking opioid analgesics.

**COMMUNICATING THE RESULTS**

Managing pain in older adults with multiple medical problems is best accomplished by an interdisciplinary team. Communication around the issue of pain should include team members, the patient, caregivers, and others. (For more information about the prevalence and perceptions of pain in older adults, see “Why Assess Older Adults’ Pain?” on page 42.)

**A sense of control.** Teaching patients to use quantitative or descriptive reports of pain will help them to communicate their concerns about pain to nurses, physicians, and physical therapists and can also increase their sense of control. Ms. Sanders teaches Ms. Madrid how to keep a pain diary in which she can document her pain and her responses to analgesics and other interventions. This simple tool can help patients determine the effectiveness of their pain management plans and share their findings with the team members. (For more on pain diaries, see “Pain Diaries,” *Pain Control*, page 36.)

**Patient education.** Nurses need to provide patients with information on the importance of pain management to maintain mobility and safety. They should also address patients’ fears of addiction, letting them know that fear of addiction is common but that the percentage of patients who become addicted to pain medications has been shown to be quite low.4 Patient education that focuses on the benefits of effective pain management is important.

**CONSIDER THIS**

What evidence supports the use of the scales? A literature review found that all three scales presented in this article (and variations of these scales) have demonstrated solid psychometric properties across health care settings.7 A study measuring “experimentally induced thermal stimuli” conducted by Herr and colleagues found strong reliability and validity for all three scales when they are used in adults of all ages, including older adults with mild cognitive impairment. Overall, the study found the verbal descriptor scale to have the “strongest psychometric support,” followed by the FPS–R and the NRS or its equivalent.4 And the participants in the study said...
WHY: Studies on pain in older adults (persons 65 years of age and older) have demonstrated that 25%-50% of community dwelling older people have persistent pain. Additionally, 45-80% of nursing home residents report pain that is often left untreated. Pain is strongly associated with depression and can result in decreased socialization, impaired ambulation and increased healthcare utilization and costs. Older adults tend to minimize or not report their pain or are unable to due to sensory or cognitive impairments. A significant barrier in treating pain in older adults is inadequate pain assessment. Therefore, a proactive, consistent approach must be taken to screen and assess older adults for persistent pain.

BEST TOOL: Patients' self report is the most reliable measure of pain intensity as there are no biological markers of pain. Simply worded questions and tools, which can be easily understood, are the most effective, as older adults frequently encounter numerous factors, including sensory deficits and cognitive impairments. The most widely used pain intensity scales used with older adults are the Numeric Rating Scale (NRS), the Verbal Descriptor Scale (VDS) and the Faces Pain Scale—Revised (FPS-R). The most popular tool, the NRS, asks a patient to rate their pain by assigning a numerical value with zero indicating no pain and 10 representing the worst pain imaginable. The VDS asks the patient to describe their pain from “no pain” to “pain as bad as it could be.” The FPS-R asks patients to describe their pain according to a facial expression that corresponds with their pain.

TARGET POPULATION: All three scales are used with both community and older adults in acute and long term care settings. While there are specific tools designed to capture pain in non-verbal cognitively impaired older adults, studies have shown that the Faces, Numeric Rating and Verbal Descriptor scales may be used effectively with cognitively impaired older adults. The choice of a scale may depend on the presence of a particular language or sensory impairment. The same scale should be used consistently with each individual patient.

VALIDITY AND RELIABILITY: Among these three scales, several studies have demonstrated concurrent validity between 0.56 and 0.90 with the lowest correlations found between the FPS-R and the other scales, suggesting that the FPS-R may be measuring a broader construct incorporating pain. Test-retest reliability was demonstrated with coefficients ranging from 0.75-0.89.

STRENGTHS AND LIMITATIONS: Overall, the NRS was the preferred scale with cognitively intact older adults and the FPS-R was the preferred scale with cognitively impaired patients. In addition, African-Americans and Hispanics preferred the FPS-R. The FPS-R was also the scale that was preferred with mildly, moderately and severely impaired older adults. These brief assessment tools should not replace performing a comprehensive health history and physical exam, which may lead to the determination of etiologies of pain.

MORE ON THE TOPIC:
Best practice information on care of older adults: www.ConsultGeriRN.org
American Geriatrics Society Panel on Persistent Pain in Older Persons. (2002). Clinical practice guidelines:
   The management of persistent pain in older persons. JAGS, 50, S205-S224. Available at
   http://www.americangeriatrics.org/products/positionpapers/persistent_pain_guide.shtml, from the American Geriatrics Society Web site,
   www.americangeriatrics.org
   in cognitively impaired and cognitively intact older adults. Rehabilitation Nursing, 30(2), 55-61.
   scale, numeric rating scale, and Iowa pain thermometer in older minority adults. Pain Management Nursing, 7(3), 117-125.

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FACES PAIN SCALE – REVISED


Note: This is a smaller sample of the actual scale. For further instructions on the correct use of the scale in order to get valid responses, please go to www.painsourcebook.ca

NUMERIC RATING SCALE

Please rate your pain from 0 to 10 with 0 indicating no pain and 10 representing the worst possible pain. _____________


VERBAL DESCRIPTOR SCALE

Please describe your pain from “no pain” to “mild”, “moderate”, “severe”, or “pain as bad as it could be.”

they most preferred a version of the NRS with 21 gradations (from 0 to 20), then the verbal descriptor scale, the 11-point NRS (from 0 to 10), and the FPS–R.

- **Reliability.** All of the scales have demonstrated good internal consistency, with Cronbach’s α coefficients of 0.86 to 0.88 for the NRS, 0.85 to 0.86 for the verbal descriptor scale, and 0.88 to 0.89 for the FPS–R. Test–retest reliability for each ranged from 0.57 to 0.83 for the NRS, from 0.52 to 0.83 for the verbal descriptor scale, and from 0.44 to 0.94 for the FPS–R.

- **Validity.** Herr and colleagues also reported that a factor analysis showed that all three scales were valid, although the FPS–R was the weakest. Sensitivity. Herr and colleagues found that all three scales were sensitive to the discomfort reported by older adults with exposure to various temperatures.

**REFERENCES**


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**GENERAL PURPOSE:** To describe for registered professional nurses the use of three widely used pain-rating scales with older adults.

**LEARNING OBJECTIVES:** After reading this article and taking the test on the next page, you will be able to:

- discuss the background information helpful for understanding the need for pain-rating scales for use with older adults.
- outline the use of these scales with older adults.

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