Published in final edited form as:

Clin Geriatr Med. 2016 November ; 32(4): 677–692. doi:10.1016/j.cger.2016.06.012.

Assessment and Measurement of Pain in Adults in Later Life

Staja Q. Booker, MS, RN, PHD(c)¹ and Keela A. Herr, PHD, RN*

The University of Iowa, College of Nursing, 50 Newton Road, Iowa City, IA 52242, USA

Summary

Advancing age and multiple comorbidities heighten the risk of persistent pain in older adults. Therefore, assessment of persistent and acute pain is an important part of preventative and palliative health care in older adults. Using the techniques discussed in this article can assist providers in assessing pain and obtaining self-report from older adults. Box 1 provides a list of geriatric pain resources for readers interested in learning more about this topic.

Keywords

Aging; Assessment; Later life; Measurement; Older adult; Pain; Self-report

Introduction

Pain is a complex, multifaceted problem for aging adults who make up a moderate proportion of persistent pain sufferers. Knowing that many older adults experience pain warrants pain vigilance by providers who are expected to regularly assess pain and provide timely interventions when needed. However, older adults are significantly less likely to have any pain assessment or reassessment documented,^{1,2} which contributes to undertreatment. A systematic or step-by-step approach is recommended.^{3,4} This article describes a focused pain assessment for the older adult able to provide a reliable report of pain (Table 1).⁵ Readers interested in learning more about the components of a comprehensive pain assessment should read Malec and Shega's⁶ recent review on this topic.

Pain Assessment

Importance of Assessment

A considerable number of community-dwelling and facility-dwelling (ie, nursing homes) older adults experience persistent pain. Approximately 65% of cognitively intact community-dwelling older adults report pain in the last 3 months,⁷ and similarly, 63.5% of adults with cognitive impairment report bothersome pain.⁸ Pimentel and colleagues⁹ found that 65% of nursing homes residents with cancer had pain, with slightly more than 60% having moderate pain and 13.5% severe pain. More concerning, however, is that an

*Corresponding author. The University of Iowa, College of Nursing, 50 Newton Road, 306 CNB, Iowa City, IA 52242. keela-herr@uiowa.edu.

¹415 Northeast Street, Jonesboro, LA 71251.

Disclosure Statement: The authors have nothing to disclose.

unacceptable number of older adults are not prescribed nondrug interventions¹⁰ nor are taking analgesic medications.^{8,9} With such a large number of older adults in pain and undertreated, it is imperative that pain is assessed regularly, based on the type of pain, severity and impact of pain and setting of care, and appropriate treatment provided. Although numerous barriers are cited for underassessment and decreased self-report,¹¹ it is unacceptable that pain assessment remains incomplete, undocumented, and non-evidence-based across health care settings despite its designation as the fifth vital sign. The intent of the “fifth vital sign” was to encourage providers and nurses to assess pain more frequently and comprehensively. Since this designation, some studies show modest improvement in assessment,¹² whereas others show that pain assessment in older adults remains low and inconsistently documented in patient medical records in acute care.² This is likely owing to a continued need for more provider education on the meaning and effective implementation of pain as the fifth vital sign.

Some providers may believe that, because an older adult is known to have persistent pain, there is no need to assess pain but to simply provide treatments. This is haphazard and potentially harmful because an older adult may experience an acute episode of pain in addition to persistent pain (also known as acute-on-chronic pain or acute pain superimposed on chronic pain), and timely assessment could identify any urgent pain problems, as well as be used to tailor the treatment plan. However, recent research shows that treatment of pain in older adults is associated with pain type; for example, abdominal pain is treated with less analgesics as compared with pain owing to fractures.¹³ Continued efforts are needed to ensure not only regular and appropriate assessment of pain in older adults, but the essential follow-up in developing and implementing an effective treatment plan.

Types and causes of pain

The prevalence of persistent pain increases in later life owing to chronic diseases, acute injuries, and cancer. Abdominal pain and fractures are the 2 most common reasons for older adults presenting to the emergency department.¹³ Often older adults have complex chronic health conditions that result in multiple etiologies of acute and persistent pain. Persistent pain may be a chronic disease unto itself or a symptom of a chronic disease or acute illness. Common pain types and conditions in older adults are provided below:

- Nociceptive – *somatic*: arthritis, gout, chronic low back pain, thermal (cold or heat) burns, pressure ulcers and wounds, skin rashes, fractures
- Nociceptive – *visceral*: pleurisy, diverticulitis, constipation, gastrointestinal ulcers
- Neuropathic – *central*: phantom limb pain, poststroke pain syndrome
- Neuropathic – *peripheral*: diabetic neuropathy, shingles, postherpetic neuralgia
- Mixed and undetermined: cancer, fibromyalgia, polymyalgia, rheumatic, headaches, mental health disorders (eg, depression, posttraumatic stress disorder)

Pain that goes untreated or undertreated has a high likelihood of causing detrimental consequences, such as pain homeostenosis,¹⁴ functional decline, incapacitation, and

frailty.^{6,15} Pain assessment from a prevention perspective should be given as much attention as other primary preventive actions, such as vaccinations, in older adults.

Initiation of Pain Assessment

When and who should assess pain are often asked questions by providers. Determining the interval at which pain is assessed should occur preferably during the first interaction with the patient, but will vary depending on severity of pain, the type of institution, and needs of the patient. For example, it is crucial that older adults are screened for pain before a procedure to establish a baseline, identify those at high risk for developing persistent postsurgical pain, and determine if perioperative accommodations such as positioning or use of intraoperative analgesics are needed. After the procedure, pain should be reassessed promptly, keeping in mind that the older adult post-sedation may have difficulty understanding pain questioning and articulating a reliable answer. In long-term care, pain assessment may be conducted daily, weekly, or quarterly to identify new pain problems and monitor persistent pain problems.

All health care providers play key roles in assessment of pain: the primary care provider/hospitalist, nurse, nursing assistant, rehabilitative and respiratory therapists, and social workers. The main points to consider with interdisciplinary pain assessment is that everyone uses a consistent approach and same pain scale, documents the assessment in an accessible location, and communicates their findings to other team members.

Intent of Assessment

Self-report is the single most reliable method to determine experience of pain; other methods, such as nurse report or proxy report, are fraught with limitations usually resulting in underestimation or overestimation of pain or little agreement with patient self-report.^{16–18} Self-report is recognized as the gold standard for measuring pain in clinical practice and research.¹⁸ Patient reports are the primary source of information on pain presence, intensity, and impact/interference on daily life. The pain assessment process should always begin with an attempt to obtain a verbal (or nonverbal, namely, deliberate hand gestures, head nods, hand shake) self-report of pain from all older adults, even those with cognitive impairment.¹⁸ Although seemingly a simple task, providers frequently neglect to ask older adults about pain despite agreement that consistent assessment is an essential component for good pain management. Cognitive, sensory, and communication impairments present challenges to assessment of pain in older adults. These impairments may necessitate proxy report from family or caregivers to help gather self-report or to confirm pain.

Challenges in obtaining self-report

Cognitive impairment is single-handedly one of the most prevalent barriers noted by providers, and many assume that those with cognitive impairment are unable to respond to pain questions and provide self-report. Older adults with cognitive impairments may have difficulty verbally describing their pain experiences, but research clearly shows that cognitive impairment and dementia do not always limit self-report.^{18–20} In assessing the presence of pain, there was moderate agreement between self-report of pain and use of a nonverbal observational pain scale in older adults with cognitive impairment.¹⁷ Therefore, it

is important to determine the older adult's ability and reliability to provide an accurate report of pain by using one of the techniques in Table 2 (column 1).^{22–25} When cognition or memory is affected, family or caregivers can provide information on pain. Although cognition itself cannot be acutely improved, the methods used to assess pain can be simplified to enhance patient understanding and obtain patient self-report. When reliability of self-report is suspect, if available, proxy reporters (eg, family, certified nursing assistants) should be used to identify the presence or absence of pain. Studies support accurate recognition of pain presence, but proxy reporters are not reliable estimators of pain severity.²⁶

Providers should assess for and address any sensory and language barriers. Sensory impairments in hearing, vision, and speech can impede pain assessment. Older adults with hearing impairments may not hear the question being asked or may not hear the question accurately, thus providing an answer that is not reliable. Hearing aids or amplifiers should be in place before pain conversation with the older adult. When vision is impaired, the older adult may be unable to see a pain scale on paper or mobile device. Communicating with deaf older adults is another issue that has not been adequately addressed. In these cases, a sign language interpreter or communication tool should be used. Explaining the appearance of the scale can help older adults to visualize the scale and choose an appropriate rating. Motor impairments may limit an older adult's ability to use purposeful nonverbal methods of communication (eg, pointing finger to a number or face on a pain scale or hand squeezes to reply yes/no to pain question). Booker and Haedtke⁴ provide a table on how to address sensory impairments in older adults when conducting a pain assessment.

Tools translated and validated for culturally diverse patients and a translator or communication tool should be available when assessing pain in any adult.¹⁸ The Faces Pain Scale-revised (described elsewhere in this paper) does not require reading or writing ability; thus, the tool may be useful for non-English-speaking older adults.¹⁸ Once cognitive, sensory, and communication barriers are addressed, providers should use a self-report approach to assess pain. Self-report approaches can be general or condition specific and will depend on the willingness of the older adult to openly discuss pain.

General self-report approach: pain presence

The most common and general approach to identifying pain is to simply ask older adults by obtaining self-report. Acute pain may prompt self-report more readily than pain that is constant or persistent. When gathering self-report from older adults, providers should prompt simple and concrete questions (eg, “Does this hurt?”).²⁷ A common mistake made by providers when obtaining self-report is to ask “How are you doing?” or “Are you comfortable?” to solicit a response about pain. Questions about general well-being should not be substituted for pain assessment because these may elicit socially desirable answers and may not elicit any information about pain.^{4,18} Instead questions should explicitly ask about pain or hurt. Although a question such as “How are you feeling?” or “How did you sleep last night?” can elicit information on pain and pain interference from some older adults, for others, this question could represent their affect or mood as opposed to pain.

When an older adult uses these questions as an opportunity to report pain, providers should then explore in more detail the characteristics of pain (ie, intensity, location, duration).

Pain assessment is an interactive and collaborative process²⁸ and frequently requires creative adaptation to obtain patient self-report. Ensuring privacy can help to elicit an open and honest self-report. Older adults may need repeated explanations about the pain assessment tool and a longer time to respond. Denial or minimization of pain is common among older adults, and they may fear the consequences of acknowledging pain (eg, extensive tests/procedures, retaliation from providers). When denial or minimization of pain occurs, it is recommended that the pain question be rephrased using pain synonyms or use an open-ended question. Open-ended questions or statements generally provide a better response, and opens the conversation to allow the older adult to explain the pain in their words.²⁹

Examples of open-ended questions are, "Please, tell me about your pain (aches or soreness)." Close-ended or biased questions, such as "You aren't in any pain, are you?" will likely not elicit true responses from older adults. Another technique that may prove effective in garnering self-report is to assess pain at specific times of the day. For example, a provider might assess pain in an older adult with osteoarthritis early in the morning or shortly after awakening.

Condition-specific self-report approach: pain presence

When older adults do not self-report pain during general questioning, but pain is highly suspected, a more focused approach can be helpful. A "where does it hurt" approach asks specifically about body locations (ie, pain extensity), possible conditions, or medical procedures that could cause pain. This is a helpful technique for acute care when pain may be more localized owing to injury or procedures. For example, if the medical history notes a diagnosis of osteoarthritis of the knees, then providers should ask older adults specifically about any current pain in their knees. Knowing medical diagnoses, the admitting issues, or recent trauma can influence the specificity of pain questions. If the older adult has had recent trauma, it is good to frame pain screening questions based on this history. For example, "You had a hard fall today; do you hurt or have any soreness anywhere (or *a specific location*)?" This condition-specific approach acknowledges the potential pain-causing condition and reinforces the notion that older adults' pain is important to know about and control.

The condition-specific approach is not without limitations. The pain communication of an older adult is influenced by their cultural and generational language. For example, a provider may ask "Do you have a headache?", but an older adult may respond differently to "Does your head ache?" Herr¹⁸ recommends documenting the language or descriptors that older adults use to describe pain, and then providers using the patient's same language in subsequent assessments.

A different approach is to provide a body map to the older adult and ask him or her to point or mark the area where they are hurting or having pain. A picture communication pain tool originally developed for children, the Mesko-Eliades Pain Area Locator Tool,³⁰ may have promise for use in older adults. Other simple body maps can also work, for example, the Brief Pain Inventory-Short Form (BPI-SF) includes a body map.³¹ Not only do older adults

provide key information about the location of pain using this approach but also the presence of pain.

Proxy report to support self-report

Although older adults with cognitive, intellectual, and communication impairments may be able to report pain, proxy informants like family and caregivers can provide additional information about whether a patient does or does not have pain. Proxies (or surrogates) can discuss with providers more details about pain that the older adult is unable to articulate clearly, these being, location and duration of pain, effectiveness of pain treatment, and relevant medical history. Proxies should, however, be someone who has intimate knowledge of the patient's pain history and is trustworthy in helping the older patient manage pain treatment plans, especially when opioids are used. As noted, seeking information about pain from spouses, adult children, or paid caregivers may be helpful to support pain assessment and treatment decisions, but should not supplant self-report that is judged reliable.

In recent years, there has been an explosion of mobile applications that allow patients to record pain ratings and send real-time pain assessments to providers.^{32,33} Specifically, there are many applications for arthritis, chronic low back pain, and fibromyalgia where patients can monitor and manage their daily pain. These momentary recordings can be sent to providers in real time or shared with providers at inpatient clinic visits or via telehealth visits. Caregivers can use mobile applications and digital technologies to send proxy report of pain or patients' self-report of pain to the provider to facilitate real-time treatment. Although little evidence is available regarding older adults' use of mobile applications for pain assessment and monitoring, the growing resources and tools are likely to be appropriate for use with those who are technologically savvy and willing to use innovative approaches to communicate with their providers.

Unidimensional self-report tools: pain intensity and impact

Most unidimensional tools used for focused assessments ask about the severity or intensity of pain and impact of pain on function (Table 3).

Intensity—Professional organizations and geriatric pain experts recommend a quantitative assessment using standardized, reliable pain intensity tools for older adults.^{3,18} Providers often note the difficulty in selecting an appropriate pain tool for pain intensity, but Table 2 can assist in tool selection.

The intensity of pain can be described numerically (quantification), descriptively (qualification), or both. Tools using numeric ratings include the Numeric Rating Scale (NRS; 0–10). The simple Verbal Descriptor Scale (VDS) and original Iowa Pain Thermometer (IPT)³⁴ use words to describe pain severity, whereas the Faces Pain Scale-revised uses facial expressions to simulate increasing pain severity ratings.³⁵ The IPT-revised (IPT-r) uses both numbers (ie, 0–10) and pain descriptor words, aligned with a thermometer, to help older adults more accurately self-report pain intensity.³⁶ These measures have been tested in diverse older adult populations, and the Faces Pain Scale-revised, VDS, and IPT-r are the most preferred tools.⁶ For older adults with hearing

impairments, a visual pain scale, such as the FPS-r, with written instructions may be appropriate; a verbal scale (eg, verbal NRS or VDS) can be used with patients with vision deficits.

Some studies have examined the correlation between numeric pain ratings and verbal descriptors to determine the most effective and patient-preferred method to assess pain intensity. Because pain treatment decisions are often based on determination of mild, moderate or severe pain status, the concordance of tools with varying approaches to assessment with the NRS is useful. According to Edelen and Saliba³⁷ and Jones and colleagues,³⁸ item response theory between the VDS and NRS found that older adults with varying cognitive status rated pain as follows:

- No pain = 0 (NRS)
- Mild pain (VDS) = 1 to 4 (NRS)
- Moderate pain (VDS) = 5 to 7 (NRS)
- Severe pain (VDS) = 7 to 10 (NRS)
- Very severe (VDS) = 10 (NRS).

Other studies have also used similar methods to determine cut-offs for mild, moderate, and severe pain. Jones and colleagues³⁸ compared the VDS with the original Faces Pain Scale and found the following correlations:

- No pain = face 1
- Mild pain (VDS) = faces 2 and 3
- Moderate pain (VDS) = face 4
- Severe pain (VDS) = faces 5, 6, and 7.

Impact/interference—Pain intensity alone does not provide an adequate picture of pain or its tolerability. Some older adults are, and providers should be, more concerned about how pain impacts their physical and mental function—mobility, mood, fatigue—rather than pain intensity itself.²⁸ This involves assessing the extent to which pain interferes with daily activities and how tolerable pain is to engage in daily activities. The Functional Pain Scale is a short, self-report tool to gauge how pain interferes with functional ability.^{39,40} Another simple strategy includes asking older patients directly in a pain interview about what they cannot do because of pain but want to do.

Multidimensional self-report tools: Pain intensity and impact

Several tools used for more comprehensive assessments of pain intensity and impact on and interference with daily function that have been validated for use with older adults include the BPI-SF,^{31,41} Geriatric Pain Measure-Short Form,⁴² and Pain Intensity, Enjoyment in Life, and General Activity questionnaire.⁴³ The BPI is one of the most recommended tools, and is useful in identifying older adults at risk for falls due to pain.⁴⁴ Undertreated and overtreated pain can impair physical function and mobility and cause fatigue, all 3 of which significantly increase the risk for falls in aging adults. Assessment should also verify the presence (or

absence of) of delirium, sedation, imbalance, or other factors that can inform judgment about pain and potential risk of falls.

Multidimensional tools are particularly useful when conducting comprehensive pain assessments during the first primary care visit, upon admission to a new care setting, and at select intervals in long-term care settings. However, comprehensive tools require a higher level of conceptual understanding than single-item pain tools. Specifically each tool assesses:

- BPI-SF: 15 questions evaluate pain intensity (0–100), interference, and location; pain treatments and relief.
- Geriatric Pain Measure-Short Form: 12 questions ask about pain intensity (mild pain: <30, moderate pain: 30–69, severe pain: 70) and interference.
- Pain Intensity, Enjoyment in Life, and General Activity: 3 questions assess pain intensity and interference on enjoyment in life and general activity.

There is a high rate of new or existing moderate to severe pain during care transitions (eg, acute to long-term care setting) in older adults.⁴⁵ A modified comprehensive assessment using any of these tools to identify causes, qualities, and severity of pain may be needed at discharge, and this information should be clearly documented and communicated during transitions of care. The presence of pain is demonstrated in cross-setting data from Simmons and colleagues⁴⁵ in which 51 % of older adults had moderate-to-severe pain before hospitalization, upon hospital discharge (38%), and after admission to a skilled nursing facility (53%).

Goals for comfort-function-mood

When pain is reported, the assessment process is incomplete if a comfort-function-mood goal is not developed collaboratively between older patient and provider. This biopsychosocial goal guides treatment intervention and reassessment parameters. In terms of comfort, this relates to reducing pain intensity or number of breakthrough pain episodes, achieving a tolerable level of pain, and satisfaction with pain management.⁴⁶ Families of older adults reported greater satisfaction with end-of-life comfort care when a comfort goal was developed on admission to the nursing home.⁴⁷

As the evidence base grows, the goals of pain management for older patients are shifting from a focus on decreasing pain intensity to a certain pain level to positively affecting function, whether this is to maintain function or improve pain-related disability. Many older adults simply want pain to be tolerable to remain independent and physically and socially functional. Improving mood and satisfaction with life with persistent pain may also be important goals.

Pain Reassessment

Assessment of pain is an iterative and collaborative process, but reassessment of pain is commonly neglected breaching the continuity of pain control.¹ Having a routine order for pain medication should not replace regularly scheduled assessments of pain. In fact, baseline

assessment of pain provides a reference point for follow-up assessments when evaluating the effectiveness of the routine treatment or assessing for adverse effects of pharmacologic treatments. Assessment completed over time should use the same pain self-report tool and assessor when possible, and conduct pain assessment under similar situations (eg, during movement).²⁷ Reassessment should always occur:

- Upon transitions of care/settings—discharge and admission
- After initial report of pain, regardless of intervention administration
- At each new report of pain (eg, breakthrough pain)
- After any intervention (pharmacologic, including analgesic trials in nonverbal older adults, and nondrug) has been provided to determine efficacy in reducing pain intensity and/or improving pain-related disability. If a medication is given, reassess at predetermined intervals: (1) at the onset of action of analgesic effect, (2) during the peak analgesic effect, and (3) at the time when medication levels are lowest (ie, generally 4–6 hours after administration).
- Within 6 hours after first acute pain assessment in the emergency department.⁴⁸
- To determine if there is a need to modify comfort–function–mood goals.⁴⁶

References

1. Herr K, Titler M. Acute pain assessment and pharmacological management practices for the older adult with a hip fracture: a review of ED trends. *J Emerg Nurs.* 2009; 35(4):312–20. [PubMed: 19591725]
2. Spillman SK, Baumhover LA, Lillegraven CL, et al. Infrequent assessment of pain in elderly trauma patients. *J Trauma Nurs.* 2014; 21(5):229–35. [PubMed: 25198078]
3. Hadjistavropoulos T, Herr K, Turk DC, et al. An interdisciplinary expert consensus statement on assessment of pain in older persons. *Clin J Pain.* 2007; 23(Suppl 1):S1–43. [PubMed: 17179836]
4. Booker SQ, Haedtke C. Assessing pain in verbal older adults. *Nursing.* 2016; 46(2):65–8.
5. Booker, S., Herr, K. Pain in older patients. In: Murinson, BB., Barreveld, A., editors. *Fundamentals of pain care.* London: Oxford University Press; in press
6. Malec M, Shega JW. Pain management in the elderly. *Med Clin North Am.* 2015; 99(2):337–50. [PubMed: 25700587]
7. Nahin RL. Estimates of pain prevalence and severity in adults: United States, 2012. *J Pain.* 2015; 16(8):769–80. [PubMed: 26028573]
8. Hunt LJ, Covinsky KE, Yaffe K, et al. Pain in community-dwelling older adults with dementia: results from the National Health and Aging Trends study. *J Am Geriatr Soc.* 2015; 63(8):1503–11. [PubMed: 26200445]
9. Pimentel CB, Briesacher BA, Gurwitz JH, et al. Pain management in nursing home residents with cancer. *J Am Geriatr Soc.* 2015; 63(4):633–41. [PubMed: 25900481]
10. Rasu RS, Sohraby R, Cunningham L, et al. Assessing chronic pain treatment practices and evaluating adherence to chronic pain guidelines in outpatient practices in the United States. *J Pain.* 2013; 14(6):568–78. [PubMed: 23578958]
11. Gammons V, Caswell G. Older people and barriers to self-reporting of chronic pain. *Br J Nurs.* 2014; 23(5):274–8. [PubMed: 24642819]
12. Purser L, Warfield K, Richardson C. Making pain visible: an audit and review of documentation to improve the use of pain assessment by implementing pain as the fifth vital sign. *Pain Manag Nurs.* 2014; 15(1):137–42. [PubMed: 24602432]

13. Hwang U, Belland LK, Handel DA, et al. Is all pain treated equally? A multicenter evaluation of acute pain care by age. *Pain*. 2014; 155(12):2568–74. [PubMed: 25244947]
14. Shega J, Dale W, Andrew M, et al. Persistent pain and frailty: a case for homeo-stenosis. *J Am Geriatr Soc*. 2012; 60:113–7. [PubMed: 22150394]
15. Booker SS, Bartoszczyk DA, Herr KA. Pain management in frail elders. *Am Nurse Today*. 2016; 11(4):1–9.
16. Hadjistavropoulos T, Herr K, Prkachin KM, et al. Pain assessment in elderly adults with dementia. *Lancet Neurol*. 2014; 13(12):1216–27. [PubMed: 25453461]
17. Ngu SSC, Tan MP, Subramanian P, et al. Pain assessment using self-reported, nurse-reported, and observational pain assessment tools among older individuals with cognitive impairment. *Pain Manag Nurs*. 2015; 16(4):595–601. [PubMed: 26088939]
18. Herr K. Pain assessment strategies in older patients. *J Pain*. 2011; 12(3 Suppl 1):S3–13. [PubMed: 21396599]
19. Chen YH, Lin LC. The credibility of self-reported pain among institutional older people with different degrees of cognitive function in Taiwan. *Pain Manag Nurs*. 2015; 16(3):163–72. [PubMed: 25194480]
20. Lukas A, Niederecker T, Gunther I, et al. Self- and proxy report for the assessment of pain in patients with and without cognitive impairment: experiences gained in a geriatric hospital. *Z Gerontol Geriatr*. 2013; 46:214–21. [PubMed: 23474866]
21. Buffum MD, Miaskowski C, Sands L, et al. A pilot study of the relationship between discomfort and agitation in patients with dementia. *Geriatr Nurs*. 2001; 22(2):80–5. [PubMed: 11326214]
22. Herr, KA., Booker, SS. Assessment of pain in persons with dementia. In: Lussier, D., Cruciani, RA., editors. *Handbook of pain management in older persons*. New York: Springer Publishing Company; in press
23. Texas Department of Disability and Aging Services. [Accessed October 11, 2015] Pain scale determination process. 2011. Available at: <http://www.dads.state.tx.us/providers/qmp/docs/painscaledeterminationprocess.pdf>
24. Herr KA, Coyne PJ, McCaffery M, et al. Pain assessment in the patient unable to self-report: position statement with clinical practice recommendations. *Pain Manag Nurs*. 2011; 12(4):230–50. [PubMed: 22117755]
25. Kovach CR, Noonan PE, Griffie J, et al. The assessment of discomfort in dementia protocol. *Pain Manag Nurs*. 2002; 3(1):16–27. [PubMed: 11893998]
26. van Herk R, van Dijk M, Biemold N, et al. Assessment of pain: can caregivers or relatives rate pain in nursing home residents? *J Clin Nurs*. 2009; 18:2478–85. [PubMed: 19619210]
27. Hadjistavropoulos T, Fitzgerald TD, Marchildon GP. Practice guidelines for assessing pain in older persons with dementia residing in long-term care facilities. *Physiother Can*. 2010; 62:104–13. [PubMed: 21359040]
28. Salaffi F, Ciapetti A, Carotti M. Pain assessment strategies in patients with musculoskeletal conditions. *Reumatismo*. 2012; 64(4):216–29. [PubMed: 23024966]
29. Hehl J, McDonald DD. Older adults' pain communication during ambulatory medical visits: an exploration of communication accommodation theory. *Pain Manag Nurs*. 2014; 15(2):466–73. [PubMed: 24882026]
30. Eliades, A., Mesko, PJ. Developing and testing the effectiveness of the Mesko-Eliades pain area locator tool to assess pain location in children. 26th Sigma Theta Tau International Research Congress 2015; Puerto Rico. July 23-27, 2015;
31. McDonald DD, Shea M, Fedo J, et al. Older adult pain communication and the brief pain inventory short form. *Pain Manag Nurs*. 2008; 9(4):154–9. [PubMed: 19041613]
32. Lalloo C, Jibb LA, Rivera J, et al. “There's a pain app for that”: review of patient-targeted smartphone applications for pain management. *Clin J Pain*. 2015; 31:557–63. [PubMed: 25370138]
33. de la Vega R, Miro J. mHealth: a strategic field without a solid scientific soul. A systematic review of pain-related apps. *PLoS One*. 2014; 9(7):e101312. [PubMed: 24999983]

34. Herr K, Spratt KF, Garand L, et al. Evaluation of the Iowa pain thermometer and other selected pain intensity scales in younger and older adult cohorts using controlled clinical pain: a preliminary study. *Pain Med.* 2007; 8:585–600. [PubMed: 17883743]
35. International Association for the Study of Pain. [Accessed October 15, 2015] Faces Pain Scale-Revised. 2001. Available at: <http://www.iasp-pain.org/Education/Content.aspx?ItemNumber=1519>
36. Ware LJ, Herr KA, Booker SS, et al. Psychometric evaluation of the revised Iowa Pain Thermometer (IPT-r) in a sample of cognitively intact and impaired diverse older adults: a pilot study. *Pain Manag Nurs.* 2015; 16(4):475–82. [PubMed: 26256217]
37. Edelen MO, Saliba D. Correspondence of verbal descriptor and numeric rating scales for pain intensity: an item response theory calibration. *J Gerontol A Biol Sci Med Sci.* 2010; 65(7):778–85. [PubMed: 20106962]
38. Jones KR, Vojir CP, Hutt E, et al. Determining mild, moderate, and severe pain equivalency across pain-intensity tools in nursing home residents. *J Rehabil Res Dev.* 2007; 44(2):305–14. [PubMed: 17551881]
39. Gloth FM 3rd, Scheve AA, Stober CV, et al. The functional pain scale: reliability, validity, and responsiveness in an elderly population. *J Am Med Dir Assoc.* 2001; 2(3):110–4. [PubMed: 12812581]
40. Arnstein, P. Pain assessment. In: Arnstein, P., editor. *Clinical coach for effective pain management*. Philadelphia: FA Davis Company; 2010. p. 63p. 66
41. Keller S, Bann CM, Dodd SL, et al. Validity of the brief pain inventory for use in documenting the outcomes of patients with non-cancer pain. *Clin J Pain.* 2004; 20(5):309–18. [PubMed: 15322437]
42. Blozik E, Stuck AE, Niemann S, et al. Geriatric pain measure short form: development and initial evaluation. *J Am Geriatr Soc.* 2007; 55(1):2045–50. [PubMed: 18031489]
43. de Waal MWM, den Elzen WPJ, Achterberg WP, et al. A postal screener for pain and need for treatment in older persons in primary care. *J Am Geriatr Soc.* 2014; 62:1832–7. [PubMed: 25284455]
44. Stubbs B, Eggermont L, Patchay S, et al. Older adults with chronic musculoskeletal pain are at increased risk of recurrent falls and the brief pain inventory could help identify those most at risk. *Geriatr Gerontol Int.* 2015; 15(7):881–8. [PubMed: 25163605]
45. Simmons SF, Schnelle JF, Saraf AA, et al. Pain and satisfaction with pain management among older patients during transition from acute to skilled nursing care. *Gerontologist.* 2015 Epub ahead of print.
46. Booker S, Haedtke C. Evaluating pain management in older adults. *Nursing.* 2016; 46(6):66–9.
47. van Soest-Poortvliet MC, van der Steen JT, de Vet HCW, et al. Comfort goal of care and end-of-life outcomes in dementia: a prospective study. *Palliat Med.* 2015; 29(6):538–46. [PubMed: 25690602]
48. Hwang U, Platts-Mills TF. Acute pain management in older adults in the emergency department. *Clin Geriatr Med.* 2013; 29:151–64. [PubMed: 23177605]

Box 1**Geriatric pain resources**

- Geriatric pain <http://www.geriatricpain.org/Pages/home.aspx>
- Hartford Institute for Geriatric Nursing <https://consultgeri.org/try-this/general-assessment>
 - Modules: Assessing Pain in Older Adults, Assessment of Nociceptive versus Neuropathic Pain in Older Adults, and Assessing Pain in Persons with Dementia
- Collaboration for Home Care Advances in Management and Practice (CHAMP) geriatric pain management course <http://www.champ-program.org/page/66/geriatric-pain-management-course>
- Health in Aging: “Pain Management” <http://www.healthinaging.org/aging-and-health-a-to-z/topic:pain-management/>
- City of Hope Pain Resource Center http://prc.coh.org/pain_assessment.asp

Key Points

- Pain is a common health issue experienced by adults in their later years.
- Assessment, reassessment, and measurement of pain requires a consistent approach, and is critical to the pain management plan.
- Self-report is the key component and practice standard for assessment of pain presence, intensity, and interference and should be obtained from all older adults when possible.
- Sensory, motor, and cognitive impairments along with language issues can affect an older adults' ability and reliability to provide a timely and accurate self-report of pain.
- Assessment of pain should include developing goals for comfort, function, and mood.

Table 1
Steps for a focused pain assessment in older adults

Step	Cognitively Intact and/or Able to Self-Report	Cognitively Impaired and/or Unable to Self-Report
1	Determine ability to reliably self-report pain and attempt to obtain self-report.	Same as for those able to self-report. Also note if there is a diagnosis of cognitive impairment or dementia. If able to self-report, continue with steps 2–6 in the left column. If unable to self-report, continue with steps 2–6 below.
2	Determine presence or absence of pain by asking older adult if she or he is experiencing pain, hurt, aches, or discomfort “right now” or “at this moment.”	Search for possible causes/sources of pain.
3	Measure self-reported pain intensity using a valid, reliable, and preferred pain scale, such as the Faces Pain Rating Scale–revised, Iowa Pain Thermometer, and Verbal Descriptor Scale.	Observe for potential pain behaviors using reliable and valid pain–behavior observation tool.
4	Assess impact of pain on function to determine pain tolerability.	Incorporate proxy reporting.
5	Assess interference of pain on sleep and emotional stability.	Initiate analgesic trial to evaluate if pain is the cause of behaviors.
6	Develop a multimodal plan of pain care with realistic goals for comfort, function, and mood.	If the analgesic trial confirms pain, develop a multimodal plan of pain care evaluating treatment options' risks/benefits.

Courtesy of S. Booker, MS, RN, PhD(c) and K.A. Herr, PhD, RN, FAAN, University of Iowa, College of Nursing, 2015.

Table 2
Pain self-report determination and tool selection process

Reliability and Ability to Self-Report Determination Process ⁴	Pain Tool Selection Process ²⁴		Additional Considerations for Pain Tool Selection ⁴
<p>Triggers to establish self-report ability:</p> <p>Note a diagnosis of cognitive impairment, dementia, or mental health condition.</p> <p>Note a condition that may interfere with verbal report (eg, aphasia).</p> <p>Administer a quick, reliable mental status examination, and/or</p> <p>Observe coherence of thoughts and verbal communication (and/or ability to explain what pain is to them).</p>	<p>If older adult: Can communicate verbally or nonverbally purposefully (eg, pointing, head nods, etc.), can self-report reliably, and is cognitively intact.</p>	<p>Use a valid, reliable, and patient-preferred self-report pain scale such as:</p> <ul style="list-style-type: none"> FPS-r VDS IPT-r NRS 	<p>Congruent with patient's culture of pain expression, accurate language, and available in different languages (or can be easily translated).</p> <p>Accommodates patient's sensory impairments.</p> <p>Accommodates patient's developmental, intellectual, and cognitive level; easily understood.</p> <p>Easily and quickly explained to patient or observer.</p> <p>Easily used, scored, and recorded consistently.</p> <p>Can be used by interdisciplinary personnel.</p> <p>Easily linked to patient's comfort–function–mood goals.</p> <p>Meets organizational and regulatory standards.</p> <p>Fits with quality indicators and institutional documentation system.</p> <p>Can be used as data for quality improvement and evidence-based practice projects.</p>
	<p>Cannot consistently communicate verbally or nonverbally purposefully, cannot self-report consistently, and has fluctuating cognitive status (eg, dementia, delirium).</p>	<p>Attempt self-report first by using a valid, reliable, and preferred self-report pain scale (see previous) and observational pain–behavior tool such as:</p> <ul style="list-style-type: none"> PAINAD PACSLAC-II Abbey Pain Scale DOLOPLUS-2 	
<p>Techniques to establish reliability to self-report using pain tools:</p> <p>Ask older adult to pick 2 words that similarly describe pain from a list mixed with pain and nonpain descriptors and observe for conceptual understanding.</p> <p>Assess conceptual understanding on the use of a self-report pain scale by asking the person where mild and severe pain are represented on a 0–10 pain scale, then repeat this task several minutes later (should have the same or similar scores if reliably reporting pain)¹⁸; this can also be done by asking if 7 is more intense pain than 9 on the NRS.</p> <p>Use a pain screener test.²¹</p>	<p>Cannot communicate verbally, cannot self-report, and is not cognitively intact.</p>	<p>Use an assessment protocol such as the:</p> <ul style="list-style-type: none"> Hierarchy of PainAssessment²⁵ ADD MOBID-2 and a valid, reliable observational pain–behavior tool (see previous). 	

Abbreviations: ADD, Assessment of Discomfort in Dementia Protocol; FPS-r, Faces Pain Scale-revised; IPT-r, Iowa Pain Thermometer-revised; MOBID-2, Mobilization-Observation-Behavior-Intensity-Dementia-2 pain scale; NRS, Numeric Rating Scale; PACSLAC-II, Pain Assessment Checklist for Seniors with Limited Ability to Communicate; PAINAD, Pain Assessment in Advanced Dementia; VDS, Verbal Descriptor Scale.

Courtesy of S. Booker, MS, RN, PhD(c) and K.A. Herr, PhD, RN, FAAN, University of Iowa, College of Nursing. 2015; and *Data from* Refs.^{22–25}

Table 3
Synthesis of evidence on unidimensional pain intensity self-report scales in older adults

Scale	Other Names	Scale Orientation	Scale Metrics	Level of Conceptual Understanding Needed	Recommendations
Colored Analog Scale (CAS)	None	Horizontal or vertical	Uses colors to represent increasing pain; begins with white (no pain) and increases to red (extreme pain).	Minimal-moderate	Can be used in older adults with and without cognitive impairment. Ensure older adult understands what the colors represent. May not be appropriate for all cultures. Visual acuity must be intact.
Faces Pain Scale-revised (FPS-R)	None; different from the Wong-Baker FACES scale	Horizontal	0–10 (Face 1 = 0, Face 2 = 2, Face 3=4, Face 4=6, Face5 = 8, Face 6 = 10)	Moderate-significant	Recommended in older adults including ethnic minorities. Clearly explain that faces represent pain and not mood/ emotional state. Visual acuity must be intact.
Iowa Pain Thermometers (IPT)	Pain thermometers, Iowa Pain Thermometer-revised (IPT-r)	Vertical	Uses a picture of a thermometer with colors similar to CAS, verbal descriptors, and numbers to show increasing pain IPT: No pain to the most intense pain imaginable. IPT-r: 0–10 and no pain to The most intense pain imaginable.	Minimal	Recommended in older adults including those with cognitive impairment and ethnic minorities. Can gather a numeric and descriptive rating using this scale. Visual acuity must be intact.
Numeric Rating Scale (NRS)	Verbal Numeric Rating Scale (VNRS)	Horizontal or vertical. Can be administered verbally or written.	0–5, 0–10, 0–20, or 0–100 (0 = No pain and 5, 10, 20, 100 = extreme pain)	Moderate-significant	Use a vertical NRS. Often used in most settings, but may be difficult for older adults with cognitive impairment.
Verbal Descriptor Scale (VDS)	Simple Descriptive Scale, Verbal Rating Scale (VRS)	Horizontal or vertical	A combination of any of the following descriptors: no pain, slight pain, minor pain, mild pain, moderate pain, severe pain, very severe pain, extreme pain, pain as bad as it could be, worst imaginable pain, worst possible pain. Usually have 4–6 descriptor anchors. Pain thermometers are an example of a VDS.	Minimal-moderate	Older adults with and without cognitive impairments can use this scale. Ensure verbal descriptors are simple and match patient's cultural language.
Visual analog scale	None	Horizontal or vertical	Anchored with no pain and pain as bad as it could be or 0 and 10.	Moderate-significant	Difficult to conceptually understand leading to higher failure rates and low reliability. Avoid in older adults.

Notes: These scales can be used across setting types, ethnic cultures, and cognitive status.

Data from Hadjistavropoulos T, Herr K, Turk DC, et al. An interdisciplinary expert consensus statement on assessment of pain in older persons. Clin J Pain 2007;23(Suppl 1):S1–43.