Commentary

Pain as the Fifth Vital Sign: Exposing the Vital Need for Pain Education

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The push to evaluate pain in patients as exemplified by the fifth vital sign has exposed serious deficits in practitioner education and training in pain assessment and management because patient report of pain level has become commonplace in clinical practice. The rapid increase in prescription opioid medications suggests that practitioners are trying to address their patients' pain by prescribing opioids. However, the increase in prescription opioids has also been associated with an increase in prescription opioid–related unintended deaths. In clinical practice, the fifth vital sign has proven to be more complex to assess, evaluate, and manage than originally anticipated. Expanding pain education and training is critical to remedying some of the issues the routine report of pain by patients has uncovered. (*Clin Ther*. 2013; 35:1728–1732) Published by Elsevier HS Journals, Inc.

INTRODUCTION OF PAIN AS THE FIFTH VITAL SIGN AND CLINICIAN RESPONSE

Because of concern regarding the undermanagement of pain, Dr James Campbell, in his 1995 Presidential Address to the American Pain Society, presented the idea of evaluating pain as a vital sign.[1] By elevating pain to the level of essential information, he hoped it would be properly evaluated and managed. This idea rapidly caught on nationally and has been adopted by the Veterans Health Administration (VHA) and the Joint Commission on Accreditation of Healthcare Organizations (now called simply The Joint Commission). The VHA created an extensive toolkit to implement pain assessment and management in all their patients.[2] The Joint Commission recommended that pain be assessed in all patients (standard PE1.4, 2000). Given the influence of both of these organizations, it is not surprising that clinics and hospitals across the country now assess pain routinely. In all inpatient settings, pain scores are used as a quality measure, especially in Hospital Consumer Assessment of Healthcare Providers reports.

How may clinicians have responded to the information they see at every patient encounter regarding the presence of pain? Having the knowledge that their patients are in pain would often prompt clinicians to react with a response to treat the pain. This occurrence has led to an increase in opioid medication prescribing when acetaminophen and nonsteroidal anti-inflammatory drugs fail. Dispensing opioids has almost doubled according to National Health and Nutrition Examination Survey data indicating that from 1988 to 1994 a total of 3.2% of Americans reported using opioids for pain, whereas from 2005 to 2008 a total of 5.7% reported use.[3(pp129–130)] This significant increase has been associated with serious consequences, including an estimated 40 deaths per day due to prescription opioids.[4,5]

Why would clinician opioid prescriptions increase so significantly? Guided by the Hippocratic Oath, the intention is to do good not harm. Guided by pain as

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the fifth vital sign mandates, patients report pain and expect their practitioners to respond. Many clinicians do not know what the appropriate response is because they lack adequate education in the approach, examination, and management of patients in pain and do not know that prescribing opioids may be an incomplete response. Starting in medical school and continuing through postgraduate, pain education training usually involves piecemeal incorporation of pain topics into existing curricula or clinical rotations, without devoted stand-alone class time. The net effect has been a serious deficit in clinical skills for the evaluation and management of the patient in pain.[6–8]

Another likely cause of the increased opioid prescriptions is that writing a prescription is efficient. Primary care clinicians and emergency department physicians commonly prescribe opioid medications. They have arguably the least amount of time to devote to their patient's pain. A typical office visit in primary care is 15 to 20 minutes, and during that time the clinician must address not only the patient's chief concern but also the numerous quality indicators at each visit. Are blood pressure and weight at goal? Are all preventive measures up to date, such as immunizations and cancer screenings? Is recommended blood work due? In addition, these measures are tied to achieving quality goals set forth by the National Committee for Quality Assurance, whereas pain assessment and management are not. Under these pressures, clinicians may turn to prescribing an opioid medication as an efficient response to their patient's pain.

The increase in prescription of opioids underscores the mistaken view that pain is a unidimensional problem. When both patients and clinicians view pain as a purely sensory experience, then management is necessarily limited to the sensation (and the prescription of pain medications). This approach is likely to result in a suboptimal patient response, especially when managing chronic pain. When clinicians fail to recognize the effects of pain on mood (and vice versa), cognition, and function, they may label patients who do not respond to pain management as drug seekers and feel frustrated with each patient encounter. From the patient's perspective, they may believe that their clinician is neglecting or ignoring their pain. This belief may further exacerbate negative mood and cognitive reactions to pain, amplifying the pain and leading to increasingly confrontational patient-practitioner interactions. This vicious cycle is distressing to both patient and practitioner.

When a patient reports pain, the practitioner sometimes orders a diagnostic test that (s)he hopes will guide management. One of the most common pain problems is low back pain for which health care expenditure has skyrocketed during the past decade without improvement in patient outcomes.[9] Practitioners are relying on procedures to evaluate patients in pain rather than talking with and examining them in an effort to disentangle the multiple contributors that are likely contributing to their pain. A cultural transformation in the way clinicians and the public view pain and its management is required to improve efforts to "prevent, assess, treat, and better understand pain of all types," as recommended by the Institute of Medicine's report *Relieving Pain in America*.[3] (p49)

MEASURING PAIN AT THE PATIENT ENCOUNTER

Pain is usually measured with the 1-dimensional pain Numeric Rating Scale (NRS).[10] As recommended in the VHA toolkit, "On a scale of zero to ten, where zero means no pain and ten equals the worst possible pain, what is your current pain level?" This simple question, although quick and easy to assess, only provides a report of the sensory experience of pain. If clinicians only receive a report of the sensory experience of pain, how are they (or patients) ever supposed to change their attitude toward pain? How are clinicians supposed to adopt a multidimensional approach? Nevertheless, the NRS opens the doorway for clinicians to further assess their patients' pain report, but they need to be provided with the education to do this comprehensively. The American Pain Society, which put forth the idea of the fifth vital sign, recommends a multidimensional approach to pain evaluation and measures such as the Brief Pain Inventory or the Short-Form McGill Pain Questionnaire.[11,12] Both of these forms take 5 minutes to complete, can be self-administered, and provide information on pain intensity, pain interference (in both physical and/or social activity, sleep, or relationships), or mood/cognitive effects of pain.

Although measuring pain at every clinical encounter highlights pain as important, calling it a vital sign fails to recognize the fundamental differences between acute and chronic pain. Although it may be appropriate to consider rating of acute pain (that which is destined to naturally abate) a vital sign, chronic pain

should be viewed in a different light. Chronic pain is not a vital sign but a final common pathway that results from the convergence of typically numerous biopsychosocial contributors. Further, unlike a vital sign, pain is subjective. As such, we cannot accept the patient's pain rating at face value because assessment of pain with the NRS is not sufficient, as we noted above. We must interpret its meaning. Failure to do so can result in significant morbidity. Consider the 85-year-old patient with dementia and low back pain for many years who, because of the mandate of pain as the fifth vital sign, reported a pain level of 6 of 10 at each visit to his primary care physician. When a series of nonpharmacologic modalities and nonopioid analgesics resulted in no change in his pain rating, treatment with opioids was initiated and the drugs titrated to the point of his becoming unconscious and requiring hospitalization. After hospital discharge, he reported pain (only when asked), although his wife of 60 years indicated that he was not in pain; he was simply "talking about the pain." We treated him by tapering the opioid and prescribing daycare for distraction from pain and caregiver respite. Readers of this commentary can undoubtedly recall numerous cases in which pain reporting could not be equated with experiencing pain and in which analgesic prescribing imposed significant patient risk, such as sedation and delirium.

For patients with chronic pain, unraveling the contributors to a patient's pain intensity rating means the clinician must spend time assessing pain interference, mood, and social and psychological factors. The multiple physical contributors also must be evaluated, which is especially important for the frail older adult. Patients with chronic pain who are older are more psychologically robust and have better coping skills than their younger counterparts.[13] We have found them to have very low pain catastrophizing scores, suggesting that they do not have exaggerated negative cognitions and emotions toward pain, and high mindfulness scores, suggesting they are able to purposefully and nonjudgmentally engage in the present moment.[14,15] We have found that in older adults with low back pain, the duration of pain is inversely associated with self-reported, performance-based assessment of disability. That is, the longer the pain, the less disabled the older adult.[16] In another of our studies, severity of low back pain was not associated with disability risk, that is, gait speed.[17] When considering how to manage older adults with chronic noncancer pain, these data should be juxtaposed against the unacceptable risks associated with many analgesics and invasive procedures that are frequently prescribed to treat these patients.[18–23] Further, data indicate that the "bio" part of biopsychosocial chronic pain conditions in older adults is multifactorial, requiring time and skill to identify[24,25] and, therefore, to appropriately tailor treatment.

Pain is complex. Trying to box it into a vital sign may unwittingly diminish the importance of a comprehensive pain assessment. Although the fifth vital sign helps to recognize when a patient is in pain, this information is not complete. What is necessary is that clinicians possess the foundational knowledge critical for untangling the contributors to pain and the knowledge of management options based on these contributors.

Because pain is now routinely measured because of efforts of the VHA and The Joint Commission, the NRS is also administered to patients who are seeing physicians who have little to do with pain management on a day-to-day basis. So what is the role of pain assessment in these settings? There is not a simple answer, but assessing pain at every patient encounter may not be reasonable. Careful thought needs to go into the purpose of the pain assessment and what will be done with the pain assessment once the clinician receives it. This brings us full circle to the importance of practitioner education and management of pain.

Implementation of pain as the fifth vital sign has created practitioner awareness without preparedness. In recognition of the crisis that the country currently faces because of the increase in prescription opioids and death, as well as the roots of this crisis in the lack of health care practitioner education and training in pain diagnosis and management, the National Institutes of Health Pain Consortium released a call for proposals for Centers of Excellence in Pain Education. As 1 of 12 recipients of these awards, we are developing innovative, interactive clinical pain cases. The cases target common pain and pain-related scenarios seen in the clinical setting (ie, chronic low back pain, fibromyalgia and comorbid myofascial pain, opioid misuse, knee osteoarthritis pain complicated by dementia, metastatic cancer pain, and headaches) but include a comprehensive, multidimensional approach that also reviews pain theory, the physical examination, and management of the various contributors to pain. The target audience is

not only medical but also nursing, pharmacy, physical therapy, and dental students. The production of cases from our own and other Centers of Excellence in Pain Education has begun and will continue for the next 2 years. It is projected that cases will start becoming available for consumption and implementation in spring 2014. They will be accessible at http://painconsortium.nih.gov/CoEPEs.

In summary, the introduction of routine assessment of pain during the patient encounter has been an effective method of bringing it to the practitioner's attention and should continue. However, the response to the fifth vital sign has exposed serious deficits in practitioner education and training in comprehensive pain evaluation, examination, and management. Attention must now move from collecting pain ratings to educating and training health care practitioners in the further evaluation and management of the fifth vital sign. Only then can a true cultural transformation begin.

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CONFLICTS OF INTEREST

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