Challenges in Pain Assessment

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LAST YEAR WAS the 40-year anniversary of Margo McCaffery’s landmark definition of pain: “Pain is what the experiencing person says it is, existing whenever he says it does.”1 This definition has been supported by decades of clinical trials of analgesics and other pain research. All accepted pain guidelines today reflect the philosophy of McCaffery’s definition, reinforcing that the patient’s self-report is the single most reliable indicator of the existence and severity of pain.2-5 Most health care facilities have implemented policies and procedures that mandate this evidence-based approach to pain assessment by requiring nurses to systematically obtain pain intensity ratings, in addition to other elements of assessment, whenever the patient is able to provide them. This process affords a mechanism for patients to communicate with the health care team about their pain and allows the health care team to evaluate the effectiveness of the pain treatment plan.

However, not all patients are able to provide a report of pain. Those who cannot are collectively referred to as “nonverbal” patients,6 although certainly many in this category are able to vocalize. The nonverbal population includes infants and young children, patients who are cognitively impaired, critically ill, anesthetized or comatose, and some individuals at end of life. These patients present significant challenges to those who manage their pain because they may not be able to use or may have difficulty using customary pain measurement tools such as the 0–10 numerical pain intensity rating scale.6-12

When patients are unable to report pain using traditional methods, an alternative approach based on the Hierarchy of Importance of Pain Measures is recommended.6,10,13 The key components of the Hierarchy are to (1) attempt to obtain self-report, (2) consider underlying pathology or conditions and procedures that might be painful, (3) observe behaviors, (4) evaluate physiologic indicators, and (5) conduct an analgesic trial (see Table 1). The Hierarchy provides a framework for determining the presence of pain and developing a treatment plan. This article presents an update on previously published information on the hierarchy.10,13 Included are a discussion of each component of the hierarchy, practical tips on how to help patients use self-report pain rating tools, and appropriate use of behavioral pain assessment tools.

Attempt Self-Report

The first step of pain assessment in any patient is to determine whether the patient can provide a report of the pain experience. After providing clear instructions, the nurse should ask the patient to rate or select descriptors of pain intensity using a reliable and valid self-report tool.7,13 No one should presume a patient is incapable of providing self-report until such an attempt is made. Research has shown that many mild-to-moderate cognitively impaired patients are able to report their pain using a self-report tool if the tool is reliable and administered properly.7-9,14-16 Some patients, particularly older patients, may respond more readily to questions about pain if a variety of words, such as “ache,” “hurt,” and “sore” are used to describe it.15

Some awake and oriented critically ill, ventilated patients may be able to communicate their pain by pointing to a number on a pain rating scale; others who are unable to point can be asked to squeeze their eyes tightly if they have pain or blink once to indicate pain is present and twice if it is not.10,11 Recording a yes or no in such cases is perfectly acceptable.

The Finger Span Scale is a simple assessment tool that has been used in children who are critically ill or unable to understand customary self-report tools.17 The scale is demonstrated by holding the thumb and forefinger of one hand together and telling the patient that this signifies “no pain.” Next, the thumb and forefinger are spread a small distance apart to indicate “tiny” or “mild” pain, a bit more distance for “medium” or “moderate” pain, and as far apart as possible for “severe” or...
Table 1. Hierarchy of Importance of Pain Measures

1. Attempt to obtain the patient’s self-report, the single most reliable indicator of pain.
2. Consider the patient’s condition or exposure to a procedure that is thought to be painful. If appropriate, assume pain is present (APP).
3. Observe behavioral signs, e.g., facial expressions, crying, restlessness, and changes in activity.
   - A surrogate who knows the patient well (e.g., a parent, spouse, or caregiver) may be able to provide information about underlying painful pathology or behaviors that may indicate pain.
4. Evaluate physiologic indicators, with the understanding that these are the least sensitive indicators of pain and may signal the existence of conditions other than pain or a lack of it (e.g., hypovolemia, blood loss).
5. Conduct an analgesic trial to confirm the presence of pain and to establish a basis for developing a treatment plan if pain is thought to be present.

Data from Herr et al, McCaffery and Pasero

“worst possible” pain. The descriptor the patient selects is recorded.

A notation should be made in the medical record whenever a patient is unable to provide a report of pain using customary tools and what alternative assessment method will be used. Practical tips for maximizing the likelihood of obtaining a patient’s self-report of pain are listed in Table 2.

Consider Underlying Painful Conditions and Procedures

When self-report cannot be obtained, the Hierarchy calls for consideration of the potentially painful underlying conditions or procedures the patient might be experiencing. When pain is indicated, nurses should assume it is present and provide appropriate treatment, such as the administration of recommended starting doses of analgesics (see later discussion of analgesic trial). For example, knowing surgery is painful, PACU nurses appropriately administer analgesia regardless of the patient’s ability to report pain. Similarly, intensive care unit nurses recognize that even the simplest procedures, such as turning, can be very painful in the critically ill patient and so they treat the associated pain preemptively.

Nurses should never presume that patients cannot feel pain and should realize that medications such as neuromuscular blocking agents, propofol, and midazolam do not produce analgesia. When pain is assumed to be present, the condition or procedure thought to be painful is documented, and when approved by institutional policy and procedure, the abbreviation “APP” (assume pain present) may be used.

Table 2. Practical Tips on the Use of Self-Report Pain Rating Scales

- Try using a standard pain assessment tool such as the 0–10 or 0–5 numerical rating scale; verbal descriptor scale with simple adjectives such as “mild,” “moderate,” “severe,” and “worst possible” pain; or the Faces Pain Scale-Revised.
- Increase the size of the font and other features of the scale.
- Ensure eyeglasses and hearing aids are functioning.
- Try using alternative words, such as “ache,” “hurt,” and “sore” when discussing pain.
- Provide a written example of the scale and clear instructions on how to use it.
- Present the tool in vertical format (rather than the frequently used horizontal).
- Ask about pain in the present.
- Repeat instructions and questions more than once.
- Allow ample time to respond.
- Ask awake and oriented ventilated patients to point to a number on the numerical scale if they are able.
- Repeat instructions and show the scale each time pain is assessed.

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Observe Behaviors

Patient behaviors may provide clues about whether they have pain. For example, behaviors such as facial expressions, restlessness, bracing, and changes in activity have been shown to be indicators of pain in nonverbal patients. A surrogate who knows the patient well, such as a parent, spouse, or caregiver, may be able to provide information about underlying painful pathology and behaviors specific to the patient that may signal pain. It is important to remember that behaviors vary significantly among individuals, and determining the patient’s unique pain behaviors, or what is called the patient’s “pain signature,” is crucial.

Behavioral Pain Assessment Tools: Appropriate Use and Inherent Problems

Behavioral pain assessment tools are helpful in determining the presence of pain and whether the pain treatment plan is working in patients who are not able to use traditional assessment tools. The Critical Care Observation Tool, shown to be reliable and valid in a variety of critically ill patient populations, requires evaluation of four categories: (1) facial expression, (2) body movements, (3) muscle tension, and (4) compliance with ventilator (intubated patients) or vocalization (extubated patients). A score of 0–2 is assigned to each category depending on the degree of the patient’s response. For example, in the category of muscle tension, “no resistance to passive movement” warrants a score of 0, whereas “strong resistance”
Table 3. Summary of Points: Pain Assessment in Patients Who Cannot Self-Report

1. Document why self-report cannot be used.
2. List patient’s conditions or procedures that may cause pain.
3. List behaviors the patient demonstrates that may indicate pain; use a pain–behavior scale or checklist if appropriate.
4. Ask others who know the patient well to identify behaviors that may indicate pain in the patient. Ask about preexisting painful conditions.
5. Conclusion: If pain is suspected based on number 2, 3, or 4 and above, assume pain is present. Document APP (assume pain present) if abbreviation is approved.
6. Plan:
   a. Initiate an analgesic trial if analgesia has not already been started. Use recommended starting doses of a nonopioid when pain is estimated to be mild to moderate or an opioid for more severe pain.
   b. Evaluate response to analgesia by observing changes in behaviors, if present.
   c. Make appropriate adjustments, such as increases in dose or addition of other analgesics, if behaviors indicative of pain persist or increase, or additional potentially painful pathology or procedures occur. In patients who are unresponsive, no change in behavior can be seen to guide evaluation of analgesic effect; therefore, continue the same dose.
   d. Ongoing care for all patients: Medicate prior to a painful event. For persistent pain, provide a continuous infusion or scheduled, around-the-clock analgesic doses for continuous pain and supplemental doses for breakthrough pain and prior to painful conditions.

The checklist approach is particularly useful in the long-term care setting, where patterns in the patient’s behaviors can be observed over time. Checklists also are an excellent teaching tool in any care setting, where they can be posted in clinical units so that nurses can become familiar with the wide variety of behaviors that might indicate pain. The actual checklist may be used for documentation in long-term care, and in the acute setting, space can be provided in the medical record to record the behavior(s) that illustrate(s) the patient’s unique “pain signature.”

A pitfall of all of the behavioral scales and checklists is the tendency of nurses to draw conclusions about the intensity of a patient’s pain based on the type or number of behaviors observed or the behavioral score the tool yields. Nurses must resist this temptation because there is no evidence that any single behavior or number of behaviors signifies more or less intense pain than any other behavior or number of behaviors. For example, one patient may remain completely still and quiet, whereas another patient may grimace and pace; yet both could have severe pain. It is essential that nurses use behavioral tools to help determine the presence of pain, with the understanding that they are not pain intensity rating scales. The take-home messages are that a behavioral pain score is not the same as a pain intensity rating and if a patient cannot report pain intensity, the exact intensity of the pain cannot be known.

Evaluate Physiologic Indicators

Although nurses often rely on physiologic indicators such as elevated heart rate or blood pressure when assessing pain, they must remember that these parameters are the least sensitive indicators of pain. Increases in heart rate or blood pressure may occur with sudden, severe pain; however, the human body seeks equilibrium and quickly adapts. Patients may actually exhibit lower than normal vital signs despite having severe pain. In addition, other factors may influence vital signs, including hypovolemia, blood loss, hypothermia, and some anesthetic and analgesic agents. The pain assessment may include evaluation of

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physiologic indicators, but they are given less importance than other measures in the hierarchy.\textsuperscript{10}

**Conduct an Analgesic Trial**

The final measure in the hierarchy is the analgesic trial, which requires the administration of a low dose of an analgesic (eg, 2 mg intravenous morphine in an adult) when pain is suspected.\textsuperscript{5,7} The patient is then observed for any behavioral changes. An improvement in behaviors after analgesic administration indicates a positive analgesic trial and that pain is likely to be the underlying cause. The purposes of the trial are to help confirm the presence of pain and provide a foundation for the development of a pain treatment plan.

Although the exact pain intensity may be unknown, assumptions about intensity must be made when initiating an analgesic trial. Recommended starting doses of non-opioid analgesics, such as acetaminophen or a nonsteroidal anti-inflammatory drug, are given when pain is estimated to be mild to moderate, and an opioid analgesic is given for more severe pain.

A key to a successful analgesic trial is an understanding that the initial low dose administered at the start of the trial may not be high enough to elicit a change in behavior. When there is no change in behavior and the initial dose is well tolerated, the dose should be increased or other analgesics added. However, if behaviors continue to be unchanged despite optimal analgesic doses, other possible causes for the behaviors (eg, agitation, anxiety) should be investigated.

**Ongoing Pain Treatment**

The analgesic trial is used to develop a treatment plan. Patient response in terms of behavioral changes and adverse effects are systematically assessed to determine analgesic safety and effectiveness. Ongoing pain treatment includes making adjustments to the plan as needed, which may include increases in analgesic dose and the addition of other analgesics if behaviors persist or increase, or if additional painful pathology or procedures occur. In patients who are unresponsive, no change in behavior will be evident; therefore, the optimized analgesic doses should be continued (see Table 3 for Summary of Points).

**Conclusion**

The patient’s self-report of pain is the gold standard of pain assessment. When patients are unable to provide a report of pain using customary assessment tools, the hierarchy of Importance of Pain Measures is recommended as a framework for pain assessment. This includes attempting to obtain self-report using a variety of techniques, making appropriate assumptions about the presence of pain, observing behaviors, evaluating physiologic indicators, and conducting an analgesic trial. The information gleaned from this comprehensive approach to pain assessment in nonverbal patients serves as the foundation for developing a sound plan for the treatment of ongoing pain.

**References**


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**Calendar of Events**

**March 21, 2009.** PANANM celebrates its 25th Anniversary at Spring Conference: “Legacies; Past, Present, Future,” in Las Cruces, NM, at the Memorial Hospital. We are proud to feature ASPAN President Lois Schick as our keynote speaker. We will be honoring all PANANM past presidents. Contact PANANM President, Corinne Flores at corinne.flores@yahoo.com or work phone: (505) 521-5489 for further information.

**May 16, 2009.** OPANA Spring Seminar and 30th Anniversary Celebration: “Pearls of Wisdom,” in Columbus, OH, at Ross Heart Hospital at the Ohio State University Medical Center. For further information contact: Alabelle Zghoul, 4808 Bourke Road, Columbus, OH 43229, (614) 846-9537, alabelle.zghoul@osumc.edu; or Nancy McGushin, 1789 Nelson Road, Lancaster, OH 43130, (740) 653-1334, gushin@sbcglobal.net.