

IMPROVING PAIN MANAGEMENT PRACTICE

A Medical Center Moves beyond Education To Document and Manage Patient Care

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Half of all conscious patients who died in U.S. hospitals in 1994 experienced moderate or severe pain at least half the time during their last three days of life, according to bereaved family members surveyed in the recent SUPPORT study.¹ In 1982 a survey showed that only 3.3 percent of nurses believed that complete pain management should be a major goal for postoperative cancer patients.² And a 1991 study found that only 40 percent of cancer patients recalled being asked if they had pain.³

These statistics are shocking, given the widely publicized need for pain relief among persons with cancer. Physicians and other healthcare professionals have the state-of-the-art cancer pain guidelines of the Agency for Health Care Policy and Research (AHCPR),⁴ which state that 90 percent of cancer pain can be relieved through relatively simple

means. In addition, clinicians have the concise pain management guidelines of the American Pain Society⁵ and the international recommendations of the World Health Organization.⁶ With all these resources available, if care givers are not asking cancer patients about pain, one can only imagine the severity of undertreatment of pain in persons with other diagnoses.

Although information about pain, pain assessment, and analgesia has been available for some time, many clinicians have difficulty putting new pain management knowledge and skills into practice. Most clinicians (nurses, pharmacists, physicians) learn only basic pain management interventions while in school, and many continue to practice those same outdated techniques year after year without realizing that pain science and intervention have changed.

This article describes a successful grassroots effort to change interdisciplinary pain management practices at

Summary In 1993 nurses at Providence/Portland Medical Center, Portland, OR, initiated a quality improvement project to assess pain levels in the facility's inpatients. A convenience sample in April 1993 showed an average pain intensity of 6.30 on a 0-10 scale (where 0 equals no pain and 10 is the worst pain imaginable).

With the nursing administrator's support, pain management nurses presented a four-hour course in the basics of pain assessment and intervention to more than 850 nurses and 100 other professionals. In August 1993 nurses found that the intensity of patient pain had dropped to 5.70 on the 0-10 scale. Still dissatisfied with this situation, the nurses proceeded with a three-pronged approach to improve the medical center's quality of pain management:

- Making the problem visible by better documentation and communication about pain

- Making an institutional commitment to pain management, including establishing pain management quality improvement as the medical center's first patient outcome institutional objective

- Eliciting the endorsement of influential committees

In August 1994 a random sample revealed patient pain had decreased to 3.21. The next step focused on empowering patients and families through education (e.g., revising the booklet on patient rights and responsibilities, posting signs in rooms encouraging patients to report pain) and clearing up myths and misconceptions through in-services and posters.

A sampling in November 1995 showed that the average pain intensity of inpatients had been reduced to 2.32. Plans for continuous quality improvement interventions will further enhance patient comfort and recovery.



Supportive
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Providence/Portland Medical Center, a 483-bed, urban, acute care center in Portland, OR. The process began in early 1993 as a quality improvement project in nursing; grew to a house-wide, interdisciplinary quality improvement project; and evolved to a regional quality improvement project facilitated through nursing research.

STEP ONE: EDUCATING CARE GIVERS

Nurses at Providence/Portland Medical Center became concerned about perceived pain levels in their patients soon after AHCPH published its acute and postoperative pain management guidelines in early 1992.⁷ The AHCPH guidelines indicated that, in 1992, 57 percent of inpatients across the United States experienced moderate to severe pain. Nurses at the medical center initiated a quality improvement project to assess pain levels in their facility. A convenience sample (of readily available patients) in April 1993 showed an average pain intensity of 6.30 on a 0-10 scale (where 0 equals no pain and 10 is the worst pain imaginable)⁸ (see Chart).

With the nursing administrator's support, pain management nurses prepared and presented a four-hour course in the basics of pain assessment and intervention to more than 850 nurses in the inpatient, outpatient, and home care settings. This course was mandatory for inpatient nurses; other nurses and more than 100 physicians and other professionals (including pharmacists, chaplains, counselors, and social workers) received the training as well.

Rather than simply teaching care givers to refer to algorithms for pain management, the course focused on the art and science of pain assessment and intervention. New science informs clinicians that unrelieved pain exhausts the immune system, and that healing can be aided by aggressive pain management. Skilled, pre-emptive analgesia before, during, and after surgery, for example, allows surgical patients to recover more quickly and with fewer complications than patients who are in pain. Lower doses of opioids (a class of drugs formerly referred to as "narcotics"⁹) can be used when combined with appropriate adjuvant analgesics,¹⁰ thereby allowing patients to be more alert and functional. Unrelieved pain results in a "wind-up" phe-

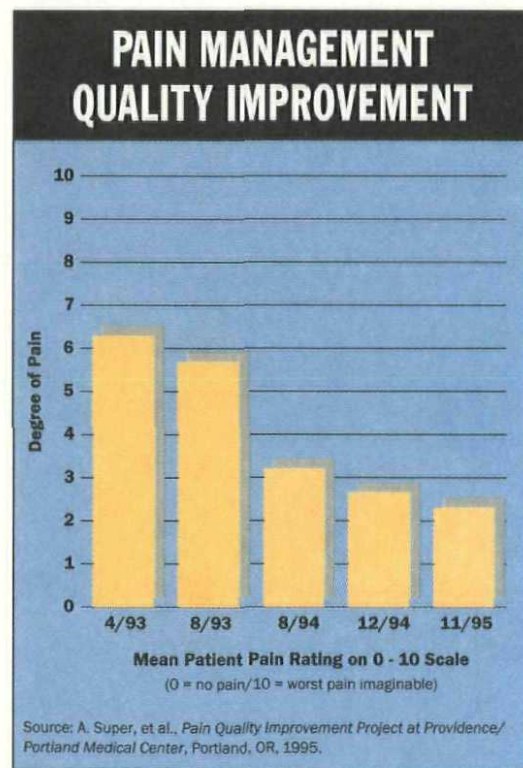
Active listening is as important as understanding pain etiology and treatment.

nomenon in the central nervous system (CNS) and actually imprints a "message of injury" in the CNS neurons. As a result, patients develop a lowered pain threshold and experience painful sensations even with a light touch. Patients who experience "wind up" require larger doses of analgesics and thus suffer more frequent side effects, such as nausea, sedation, and confusion. Early, aggressive pain management

prevents the wind-up phenomenon, CNS imprinting, and lowered pain thresholds.

Skillful pain management also promotes physical functioning and quality of life. When properly viewed, physical pain is understood as an issue of global suffering, intertwining with social, spiritual, and emotional distress. The mere nociceptive message (of injury) in the peripheral nerve fibers transmits to both the cerebral cortex, where the sensation of pain is noted, and to the limbic system, where emotion is triggered (generally, anxiety in acute pain, and depression with prolonged, unrelieved pain). Physical pain impairs functioning in the social, spiritual, and emotional dimensions and, in turn, is exacerbated by suffering in these dimensions. The phenomenon of global suffering points to the need for a skilled, multi-dimensional pain assessment and interdisciplinary intervention.

Students learned that active listening is as important as understanding pain etiology and treatment. Attendees learned to differentiate between types of pain (somatic, visceral, neuropathic) and to choose appropriate treatments while



honoring patient values and preferences. Acute, postoperative, and cancer pain management was covered for adult patients, including those with substance abuse issues.

Students learned that skillful pain management does not hasten death in the terminally ill person; in fact, unrelieved pain may exhaust the person's reserves and cause death. Although it is clear that a person relieved of pain may be able to relax and "let go" when death is near, pain management does not *cause* death. This is a fine example of how the course enhanced care givers' critical thinking by avoiding cookbook recipes and algorithms and promoting individualized care instead.

Following the exhaustive educational effort, nurses measured pain levels within the facility in

August 1993. Although the intensity of patient pain had been reduced from 6.30, it remained high at 5.70 on the 0-10 scale. Dissatisfied with this situation, the nurses proceeded with a three-pronged approach to improve the quality of pain management.

STEP TWO: IMPROVING PAIN MANAGEMENT

Making the Pain Problem Visible In the 1991 study previously referred to, researchers found that although 40 percent of nurses actually asked patients if they had pain, when pain was present, it was documented only 17 percent of the time.¹¹ Even when they assessed pain, nurses had no way to document and communicate the patient pain experience, leaving the problem virtually invisible.

To better document pain, nurses at Providence/Portland Medical Center revised existing chart forms. A baseline pain assessment, completed by the patient, was required for all patients admitted to acute care. The patient was asked to mark the body location of pain; rate the intensity of the pain on the standard 0-10 scale (or an alternate scale if the patient preferred); describe the duration of the pain; and describe, in his or her own words, the quality of that pain. If time permitted, nurses gathered additional information about how pain affected the patient's function, mood, and activity.

Each shift thereafter, nurses asked patients to rate their pain. This patient pain rating was documented on the required nursing assessment at least every eight hours. A standard of care for pain management established a goal for pain to be managed to the patient's satisfaction *and* for pain to be less than 5 on a 0-10 scale. When pain remained at 5 or greater, the standard of care outlined hospital resources, including the patient's physician, the *unit pain management resource nurse*, the *interdisciplinary Supportive Care Team*, or the medical center's nurse pain consultant.

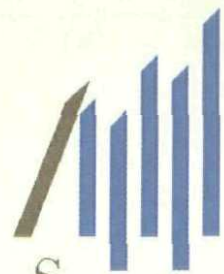
Once nurses began the routine assessment of baseline and ongoing pain, a common "pain language" was established among patients, families, and the healthcare team. Patients preferring alternate scales had signs posted above their beds indicating the scale to be used (e.g., visual analog scales, faces pain rating scale, verbal description scale, "pain poker chips").

By summer's end, the Department of Surgery requested that the pain course be presented at the next department in-service. Other physician groups followed, and soon the "pain language" and assessment were institutionalized and interdisciplinary.

Making an Institutional Commitment to Pain Management

CHANGING PAIN MANAGEMENT PRACTICE

1. Measure baseline pain levels.
2. Provide education: comprehensive, multidimensional, interdisciplinary.
3. Remeasure pain levels to check progress and motivate staff.
4. Make the pain problem visible.
 - a. Establish standardized language.
 - b. Adopt housewide standard pain rating scale.
 - c. Create housewide standard of care for pain, establishing pain threshold for referral.
 - d. Require documentation of mandatory baseline assessment and ongoing reevaluation.
5. Publicize an institutional commitment to improved pain management, and link it to tangible rewards.
6. Elicit support of influential committees.
7. Remeasure pain levels, and publicize progress.
8. Empower patients and families.
 - a. Revise preadmission and admission handouts to indicate patient rights and responsibilities regarding pain management.
 - b. Ensure patients and families receive information verbally and in writing.
 - c. Make pain rating scales for various languages and developmental stages available in preadmission clinics and on nursing units.
 - d. Teach patients to use pain rating scales before surgery.
 - e. Post sign above patient beds if they use an alternate pain rating scale.
 - f. Post signs in patient rooms encouraging patients and families to report unrelieved pain.
 - g. Ask families to report their perception of pain in patients who are infants, comatose, or noncommunicative.
9. Remeasure pain levels, and publicize progress.
10. Analyze data for focused intervention areas.
11. Implement necessary interventions, and repeat as necessary.
12. Measure pain levels annually to maintain continuous quality improvement.



Supportive Care of the Dying

The medical center's pain quality improvement nurses elicited administrators' support to provide the tools and resources necessary to create change throughout the institution. They challenged the medical center's measurement of patient satisfaction with pain management, which had traditionally been somewhere between 8 and 9 on a 0-10 scale (where 0 equals completely dissatisfied and 10 equals completely satisfied). New research information revealed that patient satisfaction with pain management was not a true measure of quality.¹² In fact, in many cases, a high patient satisfaction score for pain management could simply indicate patients' low expectations and lack of awareness of what healthcare providers could do about their pain.

The pain research nurses emphasized that patient satisfaction with pain management would actually go down while the quality improvement project was under way. The nurses explained that a lower satisfaction score coupled with decreasing mean pain intensity scores should be viewed as an indicator of both improved pain management and increasing patient awareness of the importance of adequate pain management. Patients who learned that pain could be managed, that unrelieved pain was unhealthy, and that adequate pain management was a patient right would temporarily be less satisfied with their pain management while clinicians were learning to respond to patient pain in the inpatient setting.

The administrator for patient care services helped establish pain management quality improvement in 1994 as the medical center's first patient outcome institutional objective. The 1994 objective was to reduce by a relative 10 percent the number of patients experiencing pain of 5 or greater on the standard 0-10 scale. This objective, which was repeated in 1995, was one of several institutional goals used to determine whether, and to what degree, administrators and managers would receive salary increases for the year. The heightened visibility and priority of the pain problem encouraged the interdisciplinary healthcare team to continue its efforts to improve patient pain relief.

Eliciting the Endorsement of Influential Committee The medical center's Pharmacy and Therapeutics Committee endorsed the AHCPH guidelines for acute, postoperative, and cancer pain during this quality improvement phase. Nurses recognized the committee's influence on physician-prescribing practice. The committee's endorsement was publicized in institutional newsletters to "get the word out" to physicians, other healthcare providers, and the community.

When nurses measured the average pain intensity

by random sampling in August 1994, they noted a significant decrease to 3.21.

STEP THREE: RETURNING POWER TO PATIENTS AND FAMILIES

Educating Patients and Families The next step in the nursing research plan to improve pain management focused on empowering patients and families. The booklet outlining patient rights and responsibilities given to every patient on admission to acute care or outpatient surgery was revised to notify patients of (1) their right to adequate pain management and (2) their responsibility to report unrelieved pain.

Signs were posted in every patient room encouraging patients and families to report unrelieved pain. Sample pain management "rulers" with the standard 0-10 scale, visual analog scale option, and a color-coded scale were posted in each patient room as well. Patients were instructed in preadmission clinics to report pain using the 0-10 scale. Nurses reinforced this learning on admission to the nursing unit. For comatose, noncommunicative, or infant patients, nurses encouraged family members to look for and report physical and emotional signs of discomfort. The standard Spanish-language scale supplied by the AHCPH was used for Spanish-speaking patients, while interpreter services were used whenever necessary to customize scales for other non-English-speaking patients.

SUPPORTIVE CARE OF THE DYING: A COALITION FOR COMPASSIONATE CARE

The Supportive Care of the Dying coalition was founded in 1995 by the Catholic Health Association and five Catholic healthcare systems: Carondelet Health System, St. Louis; Catholic Health Initiatives, Denver; Daughters of Charity National Health System, St. Louis; PeaceHealth, Bellevue, WA; and Providence Health System, Seattle. The coalition's goals are to:

- Assess the current level of care to identify, develop, and share delivery models pertaining to all dimensions of care for the suffering and dying
- Develop and implement a paradigm of compassionate care that integrates ethical, clinical, and spiritual dimensions
- Develop educational programs for professional care givers, families, and the broader community
- Establish criteria and measurement guidelines to assess processes, outcomes of education, compassionate care services, and methods of assigning accountability for these guidelines and processes
- Foster networking among care givers and identify resources within the broader community that support compassionate care of persons with life-threatening illness

Resampling in December 1994 revealed an average pain intensity of 2.67. The plan to improve patient pain management was clearly working. Analysis of the data in the December 1994 collection revealed that 61 percent of those patients rating their pain as 5 or greater also reported fears related to taking pain medication—primarily concerns about possible addiction, but also concerns such as feeling “out of control,” sedated, or unable to think clearly. The focus for the next step in quality improvement was decided.

Clearing Up Myths and Misconceptions Interventions for the following year involved in-services for nurses and poster displays for patients, families, and the healthcare team about the facts of pain management. Nurses were encouraged to ask patients if they had any fear or concern about using pain medications. When patients expressed concerns, nurses provided information or referred them or their families to the physician, Supportive Care Team, or nurse pain consultant. Colorful posters reported new findings about the benefits of adequate pain management; dispelled the myth of addiction; and explored the relationship between unrelieved pain and complications such as sleep deprivation, nausea, anorexia, anxiety or depression, and impaired physical functioning.


When data collection was completed in November 1995, the average pain intensity of inpatients was further reduced to 2.32 on the 0-10 scale. Future plans for continuous quality improvement in pain management include annual data collection to monitor patient pain intensity and other variables. A baseline assessment of pain in the outpatient surgery arena in 1996, with subsequent quality improvement intervention in 1997, will further enhance patient comfort and recovery.

BEYOND EDUCATION

Intense pain and suffering continue to plague surprisingly large numbers of people in the United States, despite the vast array of readily available pain management guidelines and educational opportunities. Even for people with cancer, who often first come to their physician because of pain, pain management is often a low priority. Clinicians in current practice generally receive little training in pain management and often have personal biases and outdated information about pain and pain management.

Education alone cannot alter these ingrained clinical regimens. However, when education is coupled with institutional commitment, pain visibility,

empowerment of patients, and a common pain language, great strides can be made to improve patient comfort. □

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NOTES

1. SUPPORT Principal Investigators, "A Controlled Trial to Improve Care for Seriously Ill Hospitalized Patients: The Study to Understand Prognoses and Preferences for Outcomes and Risks of Treatments (SUPPORT)," *JAMA*, vol. 274, 1995, pp. 1,591-1,598.
2. F. L. Cohen, "Postsurgical Pain Relief: Patients' Status and Nurses' Medication Choices," *Pain*, vol. 9, 1982, pp. 265-274.
3. J. A. Paice, S. M. Mahon, and M. Faut-Callahan, "Factors Associated with Adequate Pain Control in Hospitalized Postsurgical Patients Diagnosed with Cancer," *Cancer Nursing*, vol. 14, 1991, pp. 298-305.
4. Agency for Health Care Policy and Research, *Clinical Practice Guideline: Management of Cancer Pain*, U.S. Department of Health and Human Services Pub. No. 94-0592, 1994.
5. American Pain Society, *Principles of Analgesic Use in the Treatment of Acute Pain and Chronic Cancer Pain: A Concise Guide to Medical Practice*, Skokie, IL, 1992.
6. World Health Organization, *Cancer Pain Relief and Palliative Care: Report of a WHO Expert Committee*, WHO Technical Report Series, 804, 1990.
7. Agency for Health Care Policy and Research, *Acute Pain Management in Operative or Medical Procedures and Trauma: Clinical Practice Guidelines*, U.S. Department of Health and Human Services Pub. No. 92-0032, 1992.
8. A. Super, et al., *Pain Quality Improvement Project at Providence/Portland Medical Center*, Portland, OR, 1995.
9. Opioids are a class of drugs (e.g., morphine, oxycodone, methadone) formerly referred to as "narcotics" and used primarily for analgesia. The term "narcotic" has fallen out of favor, since it has been used to describe illicit drugs such as cocaine and heroin. See F. M. Ferrante, "Principles of Opioid Pharmacotherapy: Practical Implications of Basic Mechanisms," *Journal of Pain and Symptom Management*, May 1996, pp. 265-273.
10. Adjuvant analgesics are medications with primary therapeutic indications other than analgesia. These medications (e.g., anticonvulsants, steroids, tricyclic antidepressants) are used for secondary analgesic effects in specific types of pain (e.g., lancinating neuropathic pain, intractable bone pain, neuropathic pain), especially pains resistant to opiates.
11. Paice.
12. C. Miaskowski, et al., "Assessment of Patient Satisfaction Utilizing the American Pain Society's Quality Assurance Standards on Acute Cancer-related Pain," *Journal of Pain and Symptom Management*, January 1994, pp. 5-11.