

Pain management: clinician survey and institutional needs assessment

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In 1996, 738 BUMC clinicians, representing 8 disciplines and >24 specialties, were surveyed using the Clinician Survey and Institutional Needs Assessment. This survey was developed by the Education Development Center, Inc., and distributed to 50 participating health care institutions in 21 states as part of the Mayday Pain Management Project. The BUMC findings revealed a gap between clinician knowledge and application of that knowledge to patient case scenarios. Clinician knowledge deficits included equianalgesic dosing, analgesic administration and dosing principles, nonpharmacological treatments, and assessment and management of pain in special populations. Fears and misconceptions about oversedation and drug abuse persist. Participants identified several legal and regulatory issues related to pain management, as well as improved collaboration among health care team members, as opportunities for professional growth. Based on these findings, BUMC has developed a pain management continuous quality improvement program.

Efforts to identify barriers to effective pain management and attempts to modify those barriers through quality improvement programs have increased dramatically within health care organizations in recent years. Baylor University Medical Center (BUMC) is no exception. A multidisciplinary pain committee has met to collect data and address pain management issues since the early 1990s. National clinical practice guidelines for the management of acute pain and cancer pain published by the American Pain Society (APS) (1) and by the Agency for Health Care Policy and Research (AHCPR) (2, 3) have been available to health care providers for almost a decade. However, integrating these research-based guidelines into clinical practice is not a simple task. Clinicians, consumers, regulatory and accrediting bodies, and third-party payers all advocate effective, quality pain management, but barriers to relieving pain remain prevalent (2).

The AHCPR Management of Cancer Pain Guideline Panel reviewed the research on barriers to effective pain management and indicated that problems fall into 3 main categories: those related to health care professionals, those related to patients and families, and those related to health care systems. Health care professionals may undertreat pain for several reasons. Among the factors identified were inadequate knowledge of pain management, including the side effects of analgesics and opioid tolerance; poor assessment of pain; and concern about regulation of controlled substances and patient addiction. Patients and families may be reluctant to report pain or to take pain medications. The health care system gives low priority to, and thus low reim-

bursement for, pain treatment. Restrictive regulation of controlled substances and inaccessibility of treatment compound the problem (2).

The Mayday Fund, located in New York, is dedicated to the treatment and relief of pain. The organization focuses on closing the gap between knowledge about and practice of effective methods of pain control. In 1995, the Mayday Fund awarded a grant to Education Development Center, Inc. (EDC), a nonprofit organization with expertise in the design of educational programs for health care professionals. The goal of the EDC/Mayday Pain Management Project funded by the grant is to assist hospitals and nursing homes in undertaking concrete action to improve pain management.

In the spring of 1996, EDC contacted Baylor University Medical Center (BUMC) to assess its interest in participating in a national pain initiative. The BUMC Ethics Committee responded positively to the inquiry due to growing interest in the management of pain at the medical center. A continuous quality improvement project to implement APS guidelines regarding the recognition and prompt treatment of pain had just been

Table 1. Disciplines surveyed

Discipline	No.	%
Dentistry	3	<1
Medicine	105	15
Nursing	486	72
Pastoral care	20	3
Pharmacy	30	4
Physical therapy	13	2
Psychology	0	0
Social work	13	2
Other	8	1
Not indicated	60	
Total	738	

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completed at BUMC. As part of this project, a modified version of a questionnaire recommended by the APS Subcommittee on Quality Assurance Standards was used to survey 83 patients prior to implementation of the effort and 89 patients 1 year later. Half of these BUMC patients reported moderate to severe pain both before and after the project. Less than half reported complete relief after treatment for pain (4). Thus, the Ethics Committee recognized the need for continued attention to pain management in the institution.

BUMC became one of 50 health care institutions in 21 states selected to participate in the national initiative. A multidisciplinary Mayday Pain Steering Committee was formed at BUMC to meet the commitments of participating sites:

- Meet as a team to plan the quality improvements for the institution.
- Commit to at least one major pain management improvement.
- Utilize resources provided by the EDC.
- Select a way to evaluate the impact of improvement efforts.

The first resource provided by the EDC/Mayday Pain Management Project was the Clinician Survey and Institutional Needs Assessment (CSINA), which was distributed to the 50 participating sites. The purpose of the survey was to help participating institutions identify specific deficits in knowledge and inaccurate beliefs of the clinicians within the organization. Educational efforts could then be designed to address these needs. Another purpose was to identify system barriers of the organization that could be modified through the efforts of a quality improvement team.

METHODS

Setting and sample

A nonrandom sample of 738 health care providers at BUMC participated in the survey. The disciplines of medicine, nursing, pastoral care, pharmacy, physical therapy, social work, and dentistry were represented (*Table 1*). Participants represented >24 specialties, with the cardiovascular service line predominating (*Table 2*). Return rates for the disciplines ranged from 33% of physicians to 100% of chaplains (*Table 3*).

Instrument

The Clinician Survey and Institutional Needs Assessment was compiled by the EDC staff for the Mayday Pain Management Project. It incorporated the clinician survey "Knowledge and Attitudes Survey Regarding Pain" developed by Betty Ferrell, RN, PhD, FAAN, and Margo McCaffery, RN, MS, FAAN (5), which is composed of 22 true or false items, 13 multiple choice items, and 2 case studies with 2 multiple choice items each. The content of the instrument was based on APS and World Health Organization standards for pain management. Content validity was established by review of pain experts. Construct validity was established by contrasted-groups method comparing scores of nurses at varying levels of expertise. Test-retest reliability was established

Table 2. Specialties surveyed

Specialty surveyed	No.	%	Specialty surveyed	No.	%
Anesthesiology	46	7	Pain management	1	<1
AIDS/HIV	4	1	Pediatrics	14	2
Behavioral medicine	1	<1	Physical/rehabilitation medicine	17	2
Cardiovascular	122	18	Primary care	7	1
Critical care	99	15	Psychiatry	2	<1
Gastroenterology	20	3	Pulmonology	5	1
Gerontology	7	<1	Renal	6	1
Home health care	5	1	Surgery	53	8
Hospice/palliative care	7	1	Urology	16	2
Internal medicine	48	7	Oncology/hematology	31	5
Neurology	13	2	Other	66	10
Obstetrics/gynecology	41	6	Not indicated	70	
Orthopaedics	37	5	Total	738	

Table 3. Survey sample response rate

	Total within the institution	Total sampled	Total returned	Percent returned
Nurse	1241	1237	495	40%
Physician	958	333	111	33%
Social worker	20	20	13	65%
Chaplain	19	19	19	100%
Pharmacist	58	58	29	50%
Physical therapist	50	50	20	40%
Postanesthesia care unit	100	100	65	65%
Mayday pain committee	21	21	13	62%
Total	2467	1838	765*	42%

*Of the 765 total responses, 27 were from a second survey from some of the sample members used to establish test reliability through test-retest. These second responses were not analyzed and reported with the 738 original responses.

by repeat testing in a continuing education class of staff nurses ($r > 0.80$). Internal consistency reliability was established (alpha $r > 0.70$) with items reflecting both knowledge and attitude domains (Ferrell BR, Leek C, personal communication, 1996).

The second portion of the survey was the "Institutional Needs Assessment" developed by Mildred Z. Solomon, EdD, and Judith Spross, RN, PhD, at EDC. It is composed of 23 Likert items related to perceptions of institutional practices, 35 Likert items related to personal perceptions of additional knowledge or skills needed to manage pain, and 12 Likert items related to personal perceptions of ethical and legal issues pertinent to pain management (6). Reliability and validity data for this section are pending (EDC/Mayday Pain Project staff, personal communication, July 16, 1998).

Procedure

In May 1996, members of the BUMC Mayday Pain Steering Committee distributed surveys to department managers of each clinical discipline. The management team was asked to disburse

the questionnaires to all staff. A drawing, with a \$1000 prize donated by a member of the committee, was used in an effort to increase response rates. A cover letter assuring confidentiality of responses, a ticket for the drawing, and a return envelope were attached to the survey. The Mayday Pain Project and the survey were described in the cover letter with instructions for return of the surveys and tickets. Participants were given 3 weeks to complete and return the survey. Completed surveys were returned to EDC for data entry and analysis.

RESULTS

BUMC received a report of the survey results from EDC in early 1997. The EDC staff identified 5 broad subject areas addressed by the CSINA: 1) pain assessment, 2) pharmacologic interventions, 3) nondrug interventions, 4) legal and ethical issues, and 5) institutional barriers. The EDC recommended that findings from the survey be analyzed according to these subject areas to facilitate development of an improvement plan within the institution. Both portions of the CSINA contain items related to each of the 5 subject areas.

Assessment

Respondents scored well on many knowledge items related to pain assessment. Seventy-eight percent of the sample knew that patients may sleep in spite of severe pain, and 89% knew that observable changes in vital signs were not needed to verify a patient's report of severe pain. Very few subjects (15%) believed incorrectly that patients who could be distracted from their pain did not have high pain intensity. Most of the sample (95%) believed that comparable painful stimuli in different people could produce different intensities of pain experience; 98% responded that the patient is the most accurate judge of his or her own pain intensity. Ninety-three percent knew that an individual's religious beliefs might impact perceptions regarding pain and suffering, and 96% believed that patients should be individually assessed to determine cultural influences on pain.

However, *clinical application* of pain assessment knowledge was less consistent. Given a scenario in which the patient did not have behavioral indications of distress but reported pain of "4" on a 0 to 5 scale, only 53% of subjects rated the pain at that level. Physicians (35%) were less likely than nurses (59%) to agree with the patient's assessment of pain. In a similar scenario in which the patient exhibited behavioral indications of pain, 85% of subjects rated the pain at the same level as the patient. Physicians (81%) and nurses (86%) varied less in the assessment of this patient's pain. Only 43% of the sample knew that $\leq 10\%$ of patients overreport the amount of pain they have.

Current knowledge of pain assessment in children was also less evident. Unfortunately, 20% of the sample falsely believed that children < 2 years of age have decreased pain sensitivity and limited memory of painful experiences due to an underdeveloped neurological system. In addition, 95% of clinicians responded incorrectly that children < 11 years old could *not* reliably report pain; parents were considered a more reliable source of assessment of a child's pain intensity.

In assessing practice at the institution, most respondents believed that nurses and physicians routinely assessed pain and that pain management was a priority. Over 50% of the sample

felt that they needed little or no improvement in knowledge or skills related to pain assessment.

Pharmacological interventions

Equianalgesic dosing. Subject knowledge of equianalgesic dosing was poor on both items addressing that topic. Very few respondents (20%) knew that one 50-mg meperidine tablet was approximately as effective as 650 mg of aspirin. Only 50% of respondents knew the appropriate conversion dose of oral morphine to intravenous morphine. However, despite the prevalence of incorrect answers, less than half believed that additional knowledge would improve their pain management practice.

Prescribing patterns. Most respondents (92%) knew that subsequent doses of opioids are adjusted according to individual patient response to initial doses. Again, clinical application of this concept was not evident. A scenario was presented in which a patient was ordered 5 to 15 mg of intramuscular morphine every 3 to 4 hours as needed for postoperative pain relief. For a report of pain intensity "4" on a 0 to 5 scale, the patient received 10 mg of morphine intramuscularly. During the 3 hours following the injection, the patient's pain rating ranged from "3" to "4," and no respiratory depression, sedation, or other untoward side effects were experienced. When asked the appropriate action, 13% of the sample responded "administer no morphine at this time," 20% responded "administer morphine 5 mg intramuscularly now," and 28% responded "administer morphine 10 mg intramuscularly now." Only 31% of physicians and 41% of nurses knew that the appropriate action was to "administer morphine 15 mg intramuscularly now."

For patients with cancer-related pain, only 51% of the sample knew that nonsteroidal anti-inflammatory agents were effective in relieving pain from bone metastases. Physicians (71%) were more likely than nurses (47%) to know this. Physicians (69%) were also much more likely than nurses (27%) to be aware that the optimal route of opioid analgesic administration for cancer patients with prolonged pain was oral. However, nurses (61%) were more likely than physicians (45%) to know that morphine is the drug of choice for prolonged moderate to severe cancer pain. Eighty-four percent of the sample knew that dosing in this patient population should be scheduled around the clock (only 53% knew this was the correct dosing schedule for postoperative pain). Twenty-eight percent of respondents did not know that the World Health Organization recommends combining classes of drugs, such as an opioid with a nonsteroidal anti-inflammatory drug, in the management of pain. Physicians (85%) were more aware than nurses (45%) of the variety of opioid and adjuvant drugs effective for the treatment of cancer-related pain.

Respondents tended not to believe that narcotics and other medications were underused at the institution due to fear of addiction, hastening death, respiratory depression, or legal issues. However, 20% falsely believed that elderly patients could not tolerate strong medications such as opioids for pain. Eighty to eighty-six percent of the sample felt that they could benefit somewhat to a great deal from additional knowledge or skills in the areas of opioids, adjuvant drugs to manage pain, high-tech analgesic delivery methods, and equianalgesic conversion of narcotics. Approximately 60% felt that more knowledge regarding

regulatory issues would improve their pain management knowledge and skills.

Pharmacology of medication. Responses indicated knowledge deficits in the areas of drug indications, drug actions, and dosing intervals. Only 24% of the sample knew that promethazine is *not* a reliable potentiator of opioid analgesics. Fifty-five percent of respondents incorrectly answered that strong opioids such as morphine have a ceiling effect. Physicians (73%) were more aware than nurses (41%) that meperidine does not have a 4- or 5-hour duration of effect. Only 20% of those surveyed felt that physicians prescribed effective medications “consistently” in therapeutic doses and at appropriate dosing intervals.

Fears related to side effects and addiction. Respiratory depression remains a significant fear among respondents. Only 47% knew that respiratory depression rarely occurs in patients who have been receiving opioids over a period of months. Respondents were given a case scenario of a patient with chronic cancer pain receiving daily opioids for 2 months. Only 25% correctly identified that the patient had less than a 1% chance of developing significant respiratory depression with an increase from 200 mg/hr to 250 mg/hr of morphine intravenously for 3 hours. Responses also indicated that misconceptions about the incidence of opioid addiction still exist. Thirty-six percent of the sample believed that patients with a history of substance abuse should not be given opioids because they have a higher risk of recidivism. Only 39% recognized that <1% of patients treated with opioids would develop an addiction. Twenty-five percent of the sample believed that patients and their families are unwilling to accept the use of narcotics.

Nondrug interventions

Sixty percent of the respondents did not know that nondrug interventions could be efficacious in severe pain as well as mild to moderate pain. Thirty-two percent of the sample believed that nondrug interventions should be used without analgesic medication to determine effectiveness of the treatment. Thirty-four percent did not know that heat or cold could be effective when applied to a nonpainful area. The majority of respondents felt that more knowledge of nondrug pain interventions, such as heat, cold, patient education, relaxation, massage, acupressure, physical therapy, humor, and music, would improve their practice at least somewhat.

Legal and ethical issues

Fortunately, 97% of the sample believed that patients do not need to endure as much pain as possible before resorting to pain relief measures, and 81% did not agree that pain and suffering are to be expected and nothing should be done. Also, 90% believed that patient requests for increased doses of pain medication are due to increased pain. However, only 68% knew that placebos are not a useful or ethical test to determine if the patient's report of pain is real; 65% felt they could benefit from more information related to placebo use. The majority desired more knowledge about other ethical issues related to pain management, including acting to prevent procedure-related pain or treat unrelieved pain, managing patients with a history of substance abuse, and using high-tech interventions. The majority

of respondents did not believe that BUMC staff were reluctant to speak up about undertreatment of pain.

Only 10% of the sample worried about the legal liability for undertreatment of pain, while 26% worried about the liability of overtreatment of pain. Half of the sample agreed that it is illegal to risk respiratory depression to provide adequate pain relief. Twenty-four percent reported feeling helpless in caring for someone in severe pain, despite the fact that 83% felt that it is possible to treat most pain problems effectively. Fourteen percent have, to some extent, acted against their conscience in providing care to patients who were terminally ill.

Organizational barriers

Policies and procedures. Respondents were asked questions regarding institutional structures in place to support efforts to improve pain management. Less than half of respondents (41%) felt that patient reports of pain were recorded in the medical record consistently. Physicians perceived that recording of this information was less frequent than did nurses. Very few respondents (10%) believed that efforts to manage pain were specifically included in the discharge summary consistently. Even fewer (7%) felt that written referrals to other institutions consistently included projected pain management needs and goals. Very few respondents felt that they had no room for improvement in knowledge and skills related to quality improvement initiatives, such as the use of APS and AHCPR pain guidelines (6%), the use of assessment tools (8%), and standardizing assessment (9%). Most felt that they could benefit from greater knowledge of established comfort committees (89%) and continuous quality improvement activities (90%). Only 3% of the sample did not agree that pain management was a priority at the institution; 5% did not agree that standards for pain management were in place.

Collaboration among team members. Over half of the respondents believed that pain management was “consistently” a priority for nurses; fewer believed it was “consistently” a priority for physicians (31%), physical therapists (20%), and pharmacists (18%). Forty-eight percent believed that nurses and physicians disagree about how a patient's pain should be managed “sometimes”; 17% believed they disagree even more frequently. The majority of clinicians surveyed believed that their management of pain could be improved at least “somewhat” with increased knowledge and skills related to collegial communication (80%), collegial collaboration (81%), conflict negotiation (78%), and assertiveness techniques (74%). In each of these areas, physicians felt that they would benefit from such training significantly less than nurses did. However, nurses agreed that their opinions about the importance of treating patients' pain were valued by their colleagues significantly more frequently than physicians did.

DISCUSSION

The sampling method was a limitation of the study. The size of the sample was excellent, with higher than normal response rates; however, because the sample was nonrandom, it may not be representative of all clinicians at BUMC. The knowledge and attitude survey developed by Ferrell and McCaffery (5) was designed for nurses. Its validity and reliability for physicians, pharmacists, social workers, and chaplains is unknown. Psychometric data for the second portion of the instrument are unavailable at

publication time. The data reported to BUMC from the EDC were analyzed at a fairly rudimentary level, giving only frequencies of correct responses of the total group, the physicians, and the nurses. From the report, no comparisons across the other disciplines or across service specialties can be made. There is no clear distinction between knowledge and attitudinal views.

For all disciplines and specialties surveyed, findings from this study revealed a gap between knowledge of pain assessment principles and application of these principles to clinical case scenarios. Most respondents answered correctly that the patient is the authority on his or her pain. However, when given a case scenario, respondents often rated pain intensity less than that reported by the patient described in the case, especially if no behavioral indications of suffering were evident. Attitudes likely contribute to this gap; unfounded fears and misconceptions about oversedation and drug abuse still exist among the clinicians surveyed.

Knowledge deficits most evident in these findings related to analgesic administration and dosing principles (particularly equianalgesic dosing), nonpharmacological treatments, and assessment and management of pain in special populations, such as pediatric and geriatric patients. Respondents reported that they wished to learn more about several legal and regulatory issues of pain management. The establishment of standards and guidelines by such bodies as the World Health Organization, APS, and AHCPR has created a consensus about how to provide adequate pain care. As a result, professional accountability for failing to adequately treat pain is growing. Professional disciplinary boards, public interest organizations, and malpractice attorneys now have a yardstick by which to measure the quality of pain care provided. Vulnerable populations such as children, the elderly, and dying patients are of particular interest to these groups (7).

Institutional issues identified by the vast majority of clinicians included a knowledge deficit regarding established comfort committees and quality improvement activities. Team issues emerged regarding collegial communication and collaboration, assertiveness techniques, and conflict negotiation. Physician and nurse perceptions regarding these issues differed significantly. Accrediting bodies, most notably the Joint Commission on Accreditation of Healthcare Organizations, are now setting standards for the pain care provided by the medical center. A multidisciplinary approach to improving pain assessment, management, and patient and staff education is needed to meet these institutional standards (8).

Factual knowledge deficits can be addressed with a variety of carefully planned and implemented health care system-wide educational programs. The practical application issues may best be addressed in a case conference format. Multidisciplinary educational opportunities may facilitate the team approach to the management of pain. A common knowledge base and the opportunity for interdisciplinary discourse on pain management issues may increase communication and collaboration among colleagues.

Members of the BUMC pain management improvement committee presented some or all of the CSINA results to members of all disciplines in a variety of venues throughout the medical center during late 1997 and early 1998. In May 1998, findings were also presented to the faculty of the Baylor University School of Nursing, from which many of the medical center nurses are

recruited. A framework of a quality improvement plan for pain management was developed by the committee based on a resource provided by the EDC/Mayday Pain Management Project (9). The "Development of Quality Improvement Plan Worksheet" from the Wisconsin Cancer Pain Initiative, Madison, Wisconsin, was used as a template for the BUMC plan. The following elements of a pain continuous quality improvement program have been initiated at this time:

- **Form an interdisciplinary workgroup.**
 - 1994: The Pain Continuous Quality Improvement Team was initiated.
 - 1996: The Continuous Quality Improvement Team evolved into the Mayday Pain Steering Committee.
 - 1999: The committee was renamed the Pain Management Improvement Group.
 - 2000: The membership of the Pain Management Improvement Group was reconstituted to include physician representatives from every service.
- **Assess current pain management practices in your care setting.**
 - 1993: Quality assurance measures were developed for assessment and documentation of pain.
 - 1993: A survey on decisions at the end of life was administered.
 - 1994: A survey of patient satisfaction with pain management was administered.
 - 1996: A clinician survey was administered, and an institutional assessment was conducted.
- **Adopt a uniform measure for assessing pain intensity and pain relief and develop a method for documenting pain intensity and pain relief that encourages regular assessment of pain and/or intervention by all health care providers.**
 - 1994: A 5-point pain intensity scale was adopted.
 - 1994: Nursing policies and procedures related to pain assessment and documentation were initiated.
 - 1996: A 10-point pain intensity scale was adopted.
 - 1996: Nursing policies and procedures on pain assessment and documentation were updated, making pain the "fifth vital sign."
 - 2000: Nursing policies and procedures on pain and sedation assessment and documentation were significantly revised.
- **Develop explicit policies/resources to guide the use of specialized techniques for drug administration.**
 - 1987: "Medications: Controlled Substances" was developed. It was revised in 1998.
 - 1987: "Medications: Intravenous Medication Administration Guidelines" was developed. It was revised in 1995.
 - 1987: "Operation of Abbott 4100 Infuser for Patient-Controlled Analgesia" was developed. It was revised in 1998.
 - 1992: "Epidural Narcotic Analgesia for Acute and Chronic Pain" was developed. It was revised in 1998.
 - 1994: "Use of Epidural Abbott Pain Management Pump" was developed. It was revised in 1998.
 - 1995: "Pain Assessment: Utilization of a Pain Scale Tool" was developed.
 - 1995: "Patient-Controlled Analgesia Administration Record" was developed. It was revised in 2000.
 - 1995: "Neuromuscular Blockade Infusion: Patient Management" was developed. It was revised in 1997.

- 1996: “Intrathecal Analgesia for Acute Postoperative Pain Management” was developed. It was revised in 1997.
- 1998: “Palliative Care Guidelines” was developed.
- 1998: “Conscious Sedation” was developed. It was revised in 2000.
- 1998: “Application of Emla Cream” was developed.
- 1999: “Propofol Administration” was developed.
- 2000: “Pain and Sedation Assessment” was developed.
- 2000: “Self-Administered Medication (Bedside PRN Medications)” was developed.
- 2000: “Medication: Use of Resource Manuals” was developed.
- **Provide information about analgesics and nonpharmacological interventions to clinicians so that they can follow basic principles of drug treatment and use nonpharmacological interventions to augment other therapeutic modalities.**
- 1994: All nurses completed the self-study module “Overview of Pain Management and Use of the Pain Scale Tool” (which included pharmacologic and nonpharmacologic management).
- 1997: All pediatric nurses completed the self-study module “Pediatric Pain.”
- 1997: The self-study module “Pain Assessment and Documentation” was added to the nurse orientation *CareerPath Manual*.
- 1999: Pain management resource nurses were identified in 52 patient care areas of BUMC.
- 1999–2000: Pain management resource nurses received 22 hours of education in pain assessment and management and were equipped with current educational resources to share with unit staff.
- **Provide ongoing staff educational strategies/opportunities.**
- 1995: The BUMC pain seminar “Tell Me Where It Hurts” was offered.
- 1998: A BUMC pain seminar was sponsored by the Healing Force Education Committee.
- 1999: The BUMC pain symposium “Strategies for Pain Management for a New Century” was offered.
- 2000: Pain management resource nurse training workshops were followed by comprehensive staff nurse education.
- 2000: American Medical Association “Educating Physicians on End-of-Life Care” curriculum classes were presented twice monthly. They emphasized pain management.
- **Establish accountability for pain management.**
- 2000: Pain management resource nurses were identified. These are registered nurses who function as both resources and change agents in disseminating information and interfacing with nurses, physicians, other health care providers, and patients and families to facilitate quality pain management in an assigned clinical area.
- 2000: The Pain Management Improvement Group was developed, consisting of the chairmen of the quality committees of each medical service, as well as pharmacy, nursing, and administrative representatives.
- 2000: The Pain Management Improvement Group reported to the BUMC Professional Standards Committee and the medical board.

Planning is under way to address the following elements:

- Inform patients that effective pain relief is important. Teach them how to communicate pain and let them know that they can expect quick response to reports of pain from health care professionals.
- Monitor the progress and the quality of pain management at regular intervals.

Clearly, the multidisciplinary Pain Management Improvement Group must continue to increase its visibility among BUMC clinicians, especially as it continues to develop and implement the health care system-wide action plan. The use of institutional newsletters to disseminate current information about pain management principles, legal and ethical issues, and quality improvement activities would bring pain management to the forefront of clinician attention on a regular basis. Ongoing education for all members of the multidisciplinary team should initially target the deficits revealed in the findings from this survey. Before-and-after quality assurance data will be gathered on a variety of variables affected by changes implemented through the action plan. Findings from these studies will be analyzed, published, and distributed throughout the health care system.

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1. American Pain Society. *Principles of Analgesic Use in the Treatment of Acute Pain and Cancer Pain*. Skokie, Ill: American Pain Society, 1992.
2. Management of Cancer Pain Guideline Panel. *Management of Cancer Pain. Clinical Practice Guideline*. AHCPR Pub. No. 94-0592. Rockville, Md: Agency for Health Care Policy and Research, Public Health Service, US Department of Health and Human Services, 1994.
3. Acute Pain Management Guideline Panel. *Acute Pain Management: Operative or Medical Procedures and Trauma. Clinical Practice Guideline*. AHCPR Pub. No. 92-0032. Rockville, Md: Agency for Health Care Policy and Research, Public Health Service, US Department of Health and Human Services, 1992.
4. Comley AC, DeMeyer ED. Assessing patient satisfaction with pain management through a continuous quality improvement effort. *J Pain Symptom Manage*. In press.
5. Ferrell BR, Dean GE, Grant M, Coluzzi P. An institutional commitment to pain management. *J Clin Oncol* 1995;13:2158–2165.
6. Spross JA, Solomon MZ, Watt ML. *How to Interpret Your Survey Results for PainLink Action Planning*. Newton, Mass: Education Development Center, Inc, 1996:18.
7. Tucker KL. Treatment of pain in dying patients. *N Engl J Med* 1998;338:1231.
8. Lowers J. To improve pain management: measure, educate, change habits. *The Quality Letter for Healthcare Leaders* 1999;11(10):2–10.
9. Gordon DB, Dahl JL, Stevenson KK. *Building an Institutional Commitment to Pain Management: The Mayday Resource Manual for Improvement*. Madison: University of Wisconsin Board of Regents, 1996:section A.