MEMORIAL SLOAN KETTERING CANCER CENTER'S QUALITY IMPROVEMENT PAIN MANAGEMENT PROGRAM

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INTRODUCTION

I am honored to be in Japan and I want to thank my hosts, Dr. Mitsuko Matsuki and Professor Chie Ogasawara, and the Osaka University Nursing Department for the privilege of being here. I also thank Professor Ohno for translating today and assisting with this lecture. Memorial Sloan-Kettering Cancer Center (MSKCC) is a comprehensive cancer center located in New York City (Photo of MSKCC). MSKCC is a designated World Health Organization (WHO) collaborating center for pain with a Neurology Pain Service for Chronic Cancer Pain patients and Pediatrics, and Anesthesia Pain Service of Acute Pain Management. We conduct research and provide leadership in pain management worldwide.

IMPROVING THE QUALITY OF CARE IN PAIN MANAGEMENT

"What is the quality of pain care for Memorial patients?" My speech today will describe a quality improvement (QI) project for pain management stated by nurses four years ago to answer this question. We formed a QI Pain Team of 15 professionals from the disciplines of pharmacy, social work, nursing, pain services, and medicine to ensure that standards were being met and new knowledge was implemented into the care of all nurses' practices, giving all cancer patients the access to optimal pain management. This paper will review some facts about the prevalence of cancer pain, Memorial's pain management program for nurses and patients, and the results of the three-year project.

Prevalence of pain

Cancer causes 1 in every 10 deaths worldwide. Pain is experienced by 30－50% of patients receiving cancer treatment and 70－90% of those with advanced disease. Of those with advanced disease, 40－50% report pain as moderate to severe and 25－30% have very severe pain.

Cancer pain relief policy

It is known that cancer pain can be controlled in nearly 90% of patients, yet only 10% of patients are adequately relieved. Undertreatment of pain and other symptoms of cancer present a serious and neglected public health problem for all nations. In 1990, the World Health Organization issued a document urging every nation to give high priority to establishing a cancer pain relief policy.

Nurses' role

Nurses have a critical role in controlling patients' pain. Pain causes unnecessary suffering, loss of control, and decreased quality of life. Because pain is a multidimensional concept, it can be physically, psychologically, socially, and spiritually devastating, and can prevent patients from being productive and enjoying their usual family and social life.

BARRIERS TO TREATMENT

Research shows that there are three major barriers to adequate pain management. They relate to the clinicians, the patient, and the healthcare system. Clinicians lack education in pain assessment and treatment and their fears about addiction make them reluctant to give opioids. Patients and families are reluctant to take medications because:

- They fear addiction to opioids.
- They don't want to distract the doctor from treating their disease.
- They fear that the pain means that the disease is getting worse.
- They want to be "good patients."

Healthcare systems lack a standardized approach to assessment, treatment, and documentation of pain. Most settings lack systematic ways to identify pain management problems in the system and then making changes in practice.

THE QUALITY IMPROVEMENT (QI) PAIN MANAGEMENT PROGRAM

In 1990, the American pain Society published the first quality assurance standards for acute pain and cancer pain management. These are intended to help organizations identify problems and monitor and evaluate the quality of care being given. These five standards provided the structure for our continuous quality improvement study.

1. Recognize and treat pain promptly.
2. Make analgesic information available to professionals.
3. Promise patients attentive analgesic care.
4. Develop policies and procedure for advanced analgesic technologies.
5. Monitor adherence to standards. (Examine the process and outcomes of pain management with the goal of continuous improvement).

I will focus primarily on the first three standards.

Patient controlled analgesia (PCA)

APS Standard IV recommends that policies and procedures be developed for advanced technologies such as epidural and PCA. This is a Memorial nurse setting up a Patient-Controlled Analgesia machine. After surgery, patients are able to give themselves their own medication by pushing a button. Patients like controlling their own medication and not having to call or wait for the nurse. PCA, like epidural, saves nurses' time.

Project aims

The aims of the QI project were:

1. To test the feasibility of implementing the APS standards in a large cancer center.
2. To determine the effect of implementing a Quality Improvement Pain Management Program.
   a) nurses' pain-related knowledge, attitudes, and perceptions of barriers to giving optimal care and
   b) patients' satisfaction with pain management.

Conceptual model

A conceptual model was developed to guide the project and includes interventions to address the three of the barriers mentioned earlier. By providing nurses with a structure for assessing and treating pain, basic education about pain, and a problem-solving process for making changes in practice we expected:

1. increases in nurses' knowledge, their behaviors of assessment, and documentation of pain. Once these behaviors were routine, we expected patient outcomes would improve.
2. increased patient satisfaction with pain relief and the time to receive medication administration; in time, lower pain intensity scores.

Assessment

To meet Standard I, recognized and treat pain promptly, we made two changes in our practice. We added some questions to the pain assessment portion of the admission history. The patient completes the left side of the form noting any previous experience and the effectiveness of treatment. (insert form). This assessment is an important first step in recognizing patients with problems early in their care. In a review of 476 admission forms, we found that 55% patients had pain two weeks before admission and 38% had inadequate relief from medication.

The nurse reviews the patient's entry and completes the right side of the form asking the patient about the

location, intensity, quality, onset duration, any precipitating and relieving factors, if they experience breakthrough pain, (i.e., any intermittent episodes of pain that occur spontaneously or in relation to specific activity), and reasons for any dissatisfaction with current treatment.

At this point, nurses teach patients that pain management is important and that they should expect satisfaction with pain relief. They also teach them that will be asked twice daily about the presence of any pain and teach them to use the 0 (no pain) to 10 (worst pain) scale. For patients having difficulty using numbers, word descriptors (none-mild-moderate-severe) are used. A pain score of 5 or greater is acted upon immediateiy.

"pain is what the patient says it is."

"If we don't ask, we don't know."

"Lack of pain expression does not mean lack of pain."

Margo McCaffrey, a leading in pain management, says that pain is what the patient says it is. We must believe that the patient is the best judge of his/her pain and the patient has the right to be pain-free. This principle is the cornerstone of our program. Initially, nurses and some patients found the pain questions bothersome and did not see their value. But as nurses became more comfortable with the procedure, so did our patients. Within 1.5years, implementation of this screening practice improved from 33% to 92% for all nurses.

Interviews with 720 patients who did not have pain intensity recorded on the bedside chart revealed that 50%, or half of all patients, experienced pain within the previous 12 hours. These findings persuaded nurses about the need for screening and that if we do not ask, we will not know if the patients have pain. They also realize that the lack of pain expression does not mean lack of pain, especially with chronic cancer pain patients.

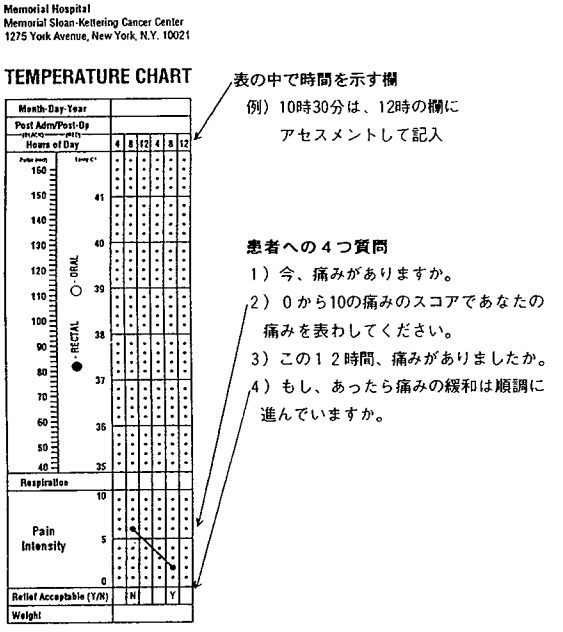
Pain is the fifth vital sign

To meet Standard 1 on a daily basis, we screen all patients twice daily and call it the FIFTH VITAL SIGN. We want nurses and physicians to respond as quickly to patients' reports of high pain intensity or unacceptable relief as they would for an elevated temperature of >37C. Placing pain intensity and relief on the vital sigh sheet at the patient's bedside makes it highly visible and easy to record. A pain intensity score of 5 or greater or unacceptable relief for two consecutive episodes raises a red flag and prompts an immediate investigation.

Verbal pain scale-adults

Using a pain scale of (0 = no pain to 10 = worst possible pain) can be helpful for postoperative acute pain patients and cancer patients. The nurse who reports to a physician that the patient's pain score is still 8 one hour after giving medication will be heard in a more objective and precise manner than one who responds by saying "the patient is still having pain... it is only slightly better." By using the same "language," nurses, patients, families, and Physicians can work more efficiently to achieve satisfactory pain relief. Our goal is to reduce the pain score to less than three.

痛みは「5番目のバイタルサイン」
疼痛の強さと緩和の評価の流れ図



Pain scale for children

Verbal children are able to use the 0-10 numeric rating scale, but for preverbal children, the faces pain scale is being used. This scale can also be used with adults having difficulty with the numeric scale.

Reminders

Posters helped to remind nurses about screening for pain and to increase reliability among staff about how the pain screening questions should be asked:

1. Are you having pain now?
2. Rate your pain on a scale of 0 = no pain to 10 = worst pain.
3. Have you had pain in the last twelve hours? If so, has your pain relief been acceptable? (yes/no)

WHO 3-step ladder for prescribing analgesics

To answer Standard II, make information available about analgesics to professionals, the WHO 3-step ladder for ordering analgesics and a dose conversion chart are placed in each nurses' station to facilitate nurses' and physicians' awareness of prescribing practices. Medications are listed for mild pain (1-2), moderate (3-7), and severe pain (8-10). The patient with moderate to severe pain should have a drus prescribed on the second of third step of the ladder.

Timeline and educational interventions for nurses

This is a timeline of the three-year project. From 1993-1995 the PMP was implemented throughout the hospital. A pre-posttest design was used. Baseline questionnaires were administered to nurses to assess their attitudes, knowledge, and perceptions of barriers to optimal pain management. Patients were interviewed within 48 hours of discharge about their satisfaction with pain management during their hospitalization using a 20-item survey developed by the APS. These measures were repeated one year later.

In Year 1

- A series of six videotapes developed by Memorial's pain experts were seen by all nurses over a four-month period.
- Focus groups, or discussion groups, were held following each video with day and night nurses to get feedback about the project and identify the most difficult pain management problems on their units.
- Four Pain CNSs in acute, chronic, pediatric, and palliative care were available for education and consultation to staff.

In Year 2

- Pain rounds were started twice monthly for nurses and doctors to present case studies of patients with pain problems.
- Communication workshops, using case scenarios, were given to educate senior staff who were the unit resources in advanced pain problems.

In Year 3

- A Pain Resource Mannual that includes pain scales in nine languages is available on all nursing units.
- Unit/service-specific Quality Improvement projects to reduce pain intensity began.

CONTENT FOR THE SIX VIDEOTAPES

Tape 1 : Overview of pain management and pain assessment principles.

Tapes 2 and 3 : Pharmacologic approach to pain management, including nonopioids, and adjuvant therapies.

Tape 4 : Cancer pain and use of PCA and epidural analgesia: A nursing perspective.

Tape 5 : Use of algorithms for signal events (pain intensity 5 or greater or unacceptable relief for two consecutive episodes).

Tape 6 : Cognitive behavioral approaches including relaxation techniques and touch.

RESULTS

RN knowledge and attitudes

One year after the educational interventions, significant improvements were found in nearly all 46 knowledge and attitude survey items. This slide shows the improvements for the first 14 items of the survey. Improvements were greatest in the areas targeted by the program including performing more frequent assessment, administering medications on a continuous, rather than PRN basis, medicating patients before severe pain returns, and believing that the patients' report of pain is the most valid. We also found a significant correlation between nurses educational levels and correct answers to the survey items. The age of the nurse, number of years in nursing, and other characteristics were not significantly correlated. Areas that needed more education related to interpreting clock-watching behaviors, providing better comfort to the

dying patient, dispelling myths about addiction, and converting dosages of opioids.

Barriers

The last ten items of the survey queried nurses about their perceptions of barriers to giving optimum pain management. This slide shows that their perceptions of most barriers significantly decreased. The top ranking barriers related to a lack of knowledge in pain management, inadequate assessment of pain severity. The two areas that remained unchanged, however, related to need for more patient education, patients' reluctance to report pain and patient reluctance to take narcotics. This was not a surprise, since our educational program was directed at nurses. Although we developed specific patient education materials to address this, it underscores the impact of deeply held beliefs and attitudes surrounding the use of opioid drugs in all cultures. We need to continually educate nurses, physicians, patients, and families that $<1\%$ of hospitalized patients develop addiction.

Focus groups

Other barriers, closer to the nurses' management of pain at the bedside, were identified in the focus groups. Listed on this slide are the top 5 ranking barriers. Four to five nurses on the day and night shifts met with us to discuss the difficulties patients had in self-reporting pain, to reinforce the content from the video, and to describe the day-to-day problems they were having managing patients' pain. The most common theme related to the difficulty in assessing patients who cannot self-report pain, e.g., those who are acutely ill or confused. The second highest ranking problem related to physicians' and nurses' reluctance to give opioids for fear of reducing respirations and causing the patients' death. A third theme related to the need for better communication with physicians and the need for clarity about the patients' treatment plan and goals of care, especially for the terminally ill.

フォーカスグループで明らかにされた疼痛管理の障害

(N = 336)

順位	項目	%
1	複雑な患者（混乱している患者や病気が活動期にある患者）に対して行う適切な疼痛コントロールのためのアセスメント	55%
2	患者の現在の身体状態（呼吸抑制、傾眠状態）と損傷の可能性	54%
3	医師からのオーダーを受けるのが遅くなること	47%
3	治療方針についての医療チーム間の共通理解が欠けていること	47%
5	医療チームでの目標に関して、医師、患者、家族、看護婦間で合意に欠けていること	46%

Patient satisfaction

Patients reported increased satisfaction with caregivers, with the greatest improvements seen in their satisfaction with nurses (10%). But we know from research that patients can report high satisfaction and yet have high pain intensity. To account for this phenomena, we added a concerns checklist to help us understand more about patients' responses.

"Pain kept me from sleeping" and "pain kept me from doing the things I normally do, e.g., ADL" were the two most frequently reported concerns. The average worst pain during hospitalization for these patients was 7.7. This supports other research that pain intensity scores of 7 or greater interfere with patients' activities of daily living. These were the top five concerns reported by our sample of patients experiencing pain. They were also concerned about pain relief, side effects, and possible addiction.

Timeliness of pain medication administration

The amount of time it takes to get medication once patients ask for it was significantly correlated to patient dissatisfaction. This slide illustrates patients' reports of how long it took to receive medication. Memorial's standard is less than 15 minutes. About 92% of patients said they received medication within 15 minutes. This factor may be contributing to the high satisfaction ratings of Memorial patients. Now in the third year of the pain program, there are 15 smaller, multidisciplinary Quality Insurance studies being conducted at Memorial to reduce pain. I will describe three of them for you.

1. Tapering of opioids

In the first study, nurses and physicians standardized the tapering of opioids in BMT patients receiving continuous morphine for pain related to mucositis. By gradually weaning patients, they reduced the withdrawal symptoms experienced by patients. Our goal is

to have the standard implemented at least 90% of the time. Within nine months, the team had reached the goal of one taper decrease in 24 hours and each taper was 30% or less of the hourly dose more than 85% of the time without withdrawal symptoms.

2. Intravenous team

The next two studies relate to interventions for pain associated with procedures. In the second study, nurses on our IV team were taught relaxation techniques and the use of touch to reduce patients' pain and anxiety during angiocatheter insertion. Within the first year (see the purple bars) pain intensity scores have reduced significantly: no patients reported pain in the severe category (8－10) and most patients (77%) had 0－3 pain scores.

3. Chest tube insertions

In the third study, nurses and physicians collaborated to develop a standards practice for inserting chest tubes. Physicians were taught by the Chief Resident to medicate patients adequately and nurses prepared patients for the procedure by using relaxation techniques and touch. Patients are asked: Are you ready?" before the procedure begins. Again, pain intensity and anxiety were reduced significantly. In fact, within one year's time, the average pain intensity has decreased from 6.5 to 3.5, and now is 1, anxiety decreased from 4.1 to 1.5, and is now 0. To the right you see the mode of most frequently reported score has decreased. The mode is now 0 for both pain and anxiety.

CONCLUDING REMARKS

The APS standards have provided Memorial with a valuable organizational structure. This project has increased all staff's awareness about the need to routinely screen patients for pain. A pain score of 5 or greater raises a "red flag" to all staff to take action. Our goal of therapy for most patients is achieving a pain score of ＜3. We are now conducting other QI studies to ensure that vulnerable populations are receiving optimal pain control. these populations include patients discharged home with pain medication, the elderly, children, cognitively impaired and sedated patients, culturally diverse, terminally ill (end of life), and home care patients.

Since we started this project in 1991, two important publications are now available to help clinicians manage pain. The National Institutes of Health, Agency for Health Care Policy and Research distribute guidelines for Acute Postoperative Pain (1992) and Cancer Pain Management (1994), which are based upon over 1000 studies in the area of pain satisfaction. Each comes with guidelines for the clinician and for patients.

Pain relief can be achieved for most patients if nurses begin to answer the question, as we did, "What is the quality of our care in pain management?"

Tips for achieving pain relief

- Routinely assess and screen patients for pain.
- Empower patients by teaching them to self-report pain.
- Launch a PAIN awareness campaign on your unit.
- Integrate alternative therapies into the pharmacologic management of pain.
- Educate patients and professionals about pain management.
- Follow up with evaluation of patient satisfaction and areas for improvement

Relief（緩和）

R Routinely
：定期的な患者の痛みのアセスメントとスクリーニング

E Empower
：患者に自己報告するよう励ます

L Launch
：それぞれの職場で疼痛への関心を高めるための運動を始める

I Include
：薬物による疼痛管理を補足するためにその他の治療を含める

E Educate
：患者や専門職者への疼痛に関する教育

F Follow
：患者の満足度と改善領域についての追跡調査

〈講演要旨〉

講演抄訳

「スローンケタリングメモリアル癌センター病院における疼痛管理プログラムの開発」

ブックバインダー氏の略歴

Marilyn Bookbinder

1946年10月27日生まれ

アメリカ、ニューヨークスローンケタリングメモリアル癌センター看護研究所長

ボストン大学看護学部卒業後、ニューヨーク市立大学で修士、博士号取得

専攻　看護管理学　特に疼痛看護管理

癌患者における疼痛管理は、医師、患者・家族、医療システムそれぞれに問題があり今まで積極的に取り組んでこられなかった。当病院では、入院患者のアンケートにより疼痛コントロールが不十分であるとの結果を得、医療スタッフが協力して病院システムとして対応を検討した。

(1) 疼痛の把握

患者が入院すると、看護職は通常の問診に加え疼痛に関し、痛みの位置、質、持続時間、間隔、痛さの変動要因など詳しく情報をとる。同時に患者に対し疼痛コントロールの意義を教育し、疼痛管理の治療上の有効性を理解させる。

痛みの判断は患者の主訴をスコア化したものに基づき行われ、看護職はスコア変化を十分疼痛管理に活かせるようバイタルサインと同じ用紙に記録する。医療スタッフは、スコア変化に基づき投薬など疼痛管理を進める。

(2) 疼痛管理プログラム施行の実際

疼痛管理を円滑に行うにはスタッフ間で、疼痛管理の重要性を理解していること、スコアの意義および変動評価を周知していること、が重要である。当病院ではこのために、スタッフ教育も含め病院システムとして疼痛管理プログラムの導入を図り現在4年目である。まず初年度には、疼痛コントロール教育ビデオを用いつつ、少人数グループによるグループ学習をした。次年度には看護職と医師とが病棟をラウンドしていくコミュニケーションワークショップ形式の研修が行われた。3年度には各配属病棟において疼痛管理の質的改善を目指した臨床検討が行われた。プログラムが施行され、アンケート結果によると、麻薬系鎮痛剤投薬量の減量、患者の疼痛スコアの軽減、患者QOL向上、など種々の改善が認められている。

(3) 疼痛管理にむけて

アメリカでは、1990年以降疼痛管理に関するガイドライン作成が進み、急性疼痛、癌性疼痛、など疼痛管理研究の集約化、出版が続いている。これらのガイドラインには医療者むけのものと患者家族むけのものとがあり、高齢者、小児を含むさまざまな患者における疼痛アセスメントや治療法について情報提供してくれる。当病院のスタッフもこれらに基づき日々実践している。

すべての看護職が「私たちの痛みの管理はうまくいっているか」という問題意識をもつこと、そこからすべてが始まるのである。

（文責　大野ゆう子）