Preoperative Pain Management Education: A Quality Improvement Project

Katherine F. O'Donnell, DNP, APRN, FNP-BC

The management of pain is one of the greatest clinical challenges for nurses who care for patients during the postoperative period. It can be even more challenging for patients who must manage their own pain after discharge from the health care facility. Research shows that postoperative pain continues to be undermanaged despite decades of education and evidence-based guidelines. Ineffective management of postoperative pain can negatively impact multiple patient outcomes. The purpose of this quality improvement project was to evaluate the effectiveness of a preoperative pain management patient education intervention on improving patients' postoperative pain management outcomes. The project was conducted with patients undergoing same-day laparoscopic cholecystectomy in an outpatient general surgery service at a teaching institution. Patients in the intervention and comparison groups completed the American Pain Society Patient Outcome Questionnaire-Revised during their first postoperative clinic visit 2 weeks after surgery. Results showed that patients who received the preoperative education intervention reported less severe pain during the first 24 hours postoperatively, experienced fewer and less severe pain medication side effects, returned to normal activities sooner, and used more nonpharmacologic pain management methods postoperatively compared with those who did not receive the education.

Keywords: *patient education, postoperative pain, pain management outcomes.*

THE MANAGEMENT OF postoperative pain is challenging for health care professionals. Although research shows improvements in some aspects, studies also show that postoperative pain continues to be poorly managed.[1,2] Patients may find the management of their own pain after discharge equally challenging and daunting. It is imperative that pain is optimally controlled at all points postoperatively to prevent negative outcomes such as deep vein thrombosis, atelectasis, pulmonary embolism, chronic pain, increased length of hospital stay, and readmission because of unrelieved pain.[3] Pain can decrease the ability to return to work quickly, contributing to financial and emotional burdens for patients and families.[2,3]

Overview of the Literature

The Centers for Disease Control and Prevention reported that nearly one billion surgical procedures were performed in the United States in 2006, with the number increasing annually,[4] making postoperative pain the most common cause of pain. Postoperative pain is considered acute pain, resulting from

Katherine F. O'Donnell, DNP, APRN, FNP-BC, is a Family Nurse Practitioner, Department of General Surgery, University of Texas Health Science Center, San Antonio, Texas.

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Address correspondence to Katherine F. O'Donnell, Department of General Surgery, University of Texas Health Science Center, 8300 Floyd Curl Drive, San Antonio, TX 78229; e-mail address: odonnellk@uthscsa.edu.

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tissue damage, inflammation, and the healing process in general.[5] Most patients report pain after surgery, but pain levels vary depending on the type of surgery, comorbidities, previous experiences with pain, age, gender, and patient expectations.[6] This combination of factors makes it difficult to predict the level of pain the patient will experience and how well pain will be tolerated, underscoring the wide variability among patients in terms of the pain experience. Inadequate assessment and management of postoperative pain can result in patients experiencing anxiety, insomnia, increased stress, and limited mobility, in addition to or as a result of unrelieved pain.[3,6,7] Other factors contributing to the problem of insufficient pain management include poor communication between patient and providers, unrealistic patient expectations, and lack of proper patient education.[8] The consequences of poorly managed pain can lead to negative outcomes such as the development of chronic pain, deep vein thrombosis, atelectasis, and delayed resumption of normal daily and work activities.[3,6]

Obstacles to pain management include deficiencies in patient knowledge about pain management,[9,10] lack of systematic and comprehensive assessment, improper use of pain assessment tools,[11] inadequate or incomplete documentation, and barriers related to clinicians' knowledge and attitudes about pain.[12] Tools exist for the assessment of pain in patients who can report pain and those who cannot, such as neonates, infants, toddlers, and critically ill or cognitively impaired patients.[11] The process of assessing pain includes the use of age and condition-appropriate assessment tools, ongoing documentation of the patient's pain experience, treatment measures, reassessment of the patient's response to treatment, and adjustments in the treatment plan if indicated.

Efforts to increase patients' knowledge about pain and analgesic choices may increase their likelihood of achieving optimal pain control postoperatively. With shorter hospital stays and an increase in same-day surgical procedures, it is imperative that patients be comfortable enough to participate in the recovery process and resume self-care activities quickly in the postoperative period. Preoperative education is a vehicle for preparing patients about their role in the pain management plan and postoperative recovery. Education should include information about the importance of pain control, goals of treatment, the degree of pain the patient may experience, and the importance of reporting pain, especially if the patient is unable to participate in recovery activities because of poorly controlled pain.[2] Pain management options, including both pharmacologic and nonpharmacologic methods, should be explained and made available.[13–15]

Project Design: The Iowa Model

The framework for this project was based on Marita Tilter's Model of Evidence-Based Practice to Promote Quality Care.[16] Dr Titler's framework evolved from a quality assurance model and is applied in the investigation of quality improvement issues. The model is based on problem-focused or knowledge-focused triggers to initiate the process of examining current practice and to find the best evidence to improve outcomes. Based on the evidence gathered, changes in practice are instituted, and the effects of these changes on patient outcomes are monitored over time.[16,17]

Postoperative pain management was identified as a problem for clinicians at the University of Texas Health Science Center, San Antonio (UTHSCSA) Outpatient Surgery Clinic. Thus, using Tilter's model, postoperative pain management served as the project's problem-focused trigger. Patients returning to the clinic after surgery often reported having poorly controlled pain, inadequate understanding of pain and analgesics, and insufficient knowledge about medication side effects. Some returned to the emergency department because of unrelieved postoperative pain. Other problems identified were frequent patient requests for pain medication refills, whereas other patients were unable to return to work because of excessive pain.

In an effort to improve postoperative pain management after discharge with the goal of reducing the identified negative outcomes at UTHSCSA, the author (hereafter referred to as the project director) developed an evidence-based pilot project to educate patients preoperatively about postoperative pain management. The project targeted patients undergoing elective outpatient laparoscopic cholecystectomy. The educational program provided patients with information about taking medications correctly, managing side effects, using nonpharmacologic pain management techniques,