Original Article

Nurses' Perceptions and Attitudes Toward Use of Oral Patient-Controlled Analgesia

■ ■ ■ **Susan Riemondy, BSN, RN, BC,**
Lorie Gonzalez, MSN, BSN, RN-BC,
Kirk Gosik, MA, Amy Ricords, MEd, BSN, RN-BC,
and Victoria Schirm, PhD, RN

■ **Abstract:**

Patient-controlled analgesia (PCA) administered intravenously is a generally well-accepted therapy by nurses and patients. PCA devices are now available for oral medications, allowing patients to self-administer pain pills without requesting them from the nurse. Successful introduction of new pain medication delivery devices can depend on nurses' knowledge and attitudes. The aim of this institutional review board approved project was to evaluate nurses' perceptions and attitudes toward using an oral PCA device for patients' pain. A 4-week study was designed and conducted at an academic medical center on an orthopedic unit and a women's health unit. Nurse participants received education on using the oral PCA device and were invited to complete a pre- and poststudy knowledge and attitude survey regarding pain management. Nurses and patients also completed a questionnaire about perceptions related to using the oral PCA device. Findings showed that nurses' attitudes toward using the oral PCA device were less favorable than those of patients, suggesting that nurses may require additional education for acceptance of this device. Results from 37 nurses showed improvement in overall knowledge and attitudes, from 70.8% pretest to 74.2% post-test. Although improvement was not statistically significant ($p = .1637$), two items showed significant improvement. Knowledge about the effectiveness of NSAIDS was 27.5% pretest compared with 60.0% post-test ($p = .0028$); and understanding about use of opioids in patients with a history of substance abuse was 50% pretest compared with 70% post-test ($p = .0531$). Helping nurses overcome the perceived barriers to use of an oral PCA device has potential implications for better pain management as well as enhanced patient satisfaction.
© 2016 by the American Society for Pain Management Nursing

BACKGROUND

Inadequate traditional pain management methods have led to development and routine use of patient controlled analgesia (PCA), a method whereby patients self-administer intravenous pain medication (Macintyre, 2001). PCA offers advantages over conventional forms of analgesia and has benefited both nurses and their patients (King & Walsh, 2007). Advantages include giving patients control of their pain medication administration and freeing the nurse from frequent medication administration. At the same time, continued responsibility for patient comfort rests with the nurse, who must assess the patient's pain and make an appropriate decision about administering medication. In addition, the PCA pump must be programmed to deliver the prescribed amount of analgesic medication, and considerable nursing care is required, including time for pump setup and patient instruction.

Historically, intravenous PCA has been the most common intervention for hospitalized patients to self-manage their pain; when this administration mode is discontinued, the patient becomes dependent on the nurse to manage pain with oral analgesics (Kastanias, Gowans, Tumber, Snaith, & Robinson, 2010). This situation may impede good pain management for patients because of issues that arise in busy inpatient care units. Despite the fact that patients will inevitably self-administer oral pain medications when discharged home, self-administration in the hospital setting is viewed with skepticism and therefore is not a common practice.

The opportunity to evaluate use of an oral PCA device arose at this academic medical center as part of a comprehensive pain task force initiative to better manage patients' pain in the acute care setting. Members of the task force, including clinical nurses, nurse educators, and clinical nurse specialists, took the lead to develop interventions that would specifically impact the overall organizational performance in patient satisfaction with pain control. The oral PCA device was introduced as one potential intervention for enhancing outcomes related to pain management. Subsequently, several task force team members expressed interest in implementing and evaluating the oral PCA device on specific units.

LITERATURE REVIEW

Patient-Controlled Analgesia

Intravenous PCA has become the standard of care for management of postoperative pain. Results of a meta-analysis (Hudcova, McNicol, Quah, Lau, & Carr, 2012) showed that intravenous PCA is an effective intervention for postoperative pain management compared with intramuscular, intravenous, subcutaneous, or oral administration by nurses. Patients who were able to self-administer analgesia for pain relief reported better satisfaction and had no more adverse events compared with patients who depended on nurses for their pain control. Results of the analysis also showed that patients preferred intravenous PCA because of the degree of control they had over their own pain management.

Few reports on oral PCA systems have appeared in the literature. Kastanias, Snaith, and Robinson (2006) evaluated patient use of oral opioid analgesics that were made available at the bedside in a single-dose child-resistant container. The medication was replenished by the nurse after each self-administration by the patient. This method of patient controlled oral analgesia (PCOA) created a low-tech but highly patient-centered approach to pain management. In a later study, Kastanias et al. (2010) compared PCOA to traditional nurse-administered oral analgesia in patients undergoing total knee replacement surgery. Although no significant differences were found in patient satisfaction, opioid use, or side effects, the authors concluded that the merits of promoting patient-centered care warranted continued use of PCOA. Palmer and Miller (2010) pointed out that oral PCA devices may have advantages over intravenous PCA for some patients because they are easier to use and are less invasive.

Results of these studies suggest that PCOA, like intravenous PCA, may enhance satisfaction related to pain management because of the autonomy and self-sufficiency patients experience. At the same time, overcoming the barriers to implementing methods or processes that nurses may perceive as disruptions in their workflow may pose challenges to new ways of managing patients' pain.

Nurses Attitudes and Knowledge

The ease that nurses have in accommodating technology such as intravenous PCA devices into clinical practice is frequently influenced by staffing, time, attitudes, and knowledge (Macintyre, 2001). Overall, nurses' attitudes toward medical devices have been positive, with nurses reporting that such devices have enhanced their ability to provide quality care (Zhang, Barriball, & While, 2014). At the same time, Zhang et al. reported nurses' concerns that device use may increase adverse events for patients because of human errors or mechanical failure, and that attention to device use may interfere with holistic and person-centered care. Palmer and Miller (2010)