Nurses’ Strategies for Managing Pain in the Postoperative Setting

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ABSTRACT:
Acute pain is a significant problem in the postoperative setting. Patients report a lack of information about pain-control measures and ineffective pain control. Nurses continue to rely on pharmacologic measures and tend to under-administer analgesics. The purpose of this study was to determine the strategies nurses used to manage patients’ pain in the postoperative setting. It also sought to examine the effect of context, including organization of care, nurses’ prioritization of work activities, and pressures during a working shift, on their pain-management strategies. An observational design was used in two surgical units of a metropolitan teaching hospital in Melbourne, Australia. Six fixed observation times were identified as key periods for pain activities, each comprising a 2-hour duration. An observation period was examined at least 12 times, resulting in the completion of 74 observations and the identification of 316 pain cases. Fifty-two nurses were observed during their normal day’s work with postoperative patients. Six themes were identified: managing pain effectively; prioritizing pain experiences for pain management; missing pain cues for pain management; regulators and enforcers of pain management; preventing pain; and reactive management of pain. The findings highlighted the critical nature of communication between clinicians and patients and among clinicians. It also demonstrated the influence of time on management strategies and the relative importance that nurses place on nonpharmacologic measures in actual practice. This research, which portrays what happens in actual clinical practice, has facilitated the identification of new data that were not evident from other research studies.

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BACKGROUND
Postoperative pain encompasses a complex phenomenon that involves physical, psychologic, social, cultural, and environmental factors that interconnect and affect how the pain is perceived, managed, and evaluated (International Association for the Study of Pain, 2003). Pain is a personal experience for patients and health professionals and is influenced by the context in which it occurs. The context involves multiple facets and includes how health professionals commu-
nicate with each other and with the patient to determine which pain-management strategies to implement. The organization of care, health professionals’ prioritization of work activities, time constraints and pressures during a working shift, and integration of information to make clinical judgements about how to manage pain all affect such communication (Willson, 2000). A comprehensive understanding of how contextual issues affect pain management will facilitate identification of issues that impede effective pain management and therefore enable a more comprehensive, targeted approach to better care (Schafheutle, Cantrill, & Noyce, 2001).

Despite the availability of well-defined guidelines to help health professionals understand the treatment of acute pain, postoperative pain is not relieved in most patients (American Pain Society Quality of Care Committee, 1995; Bucknall, Manias & Botti, 2001; National Health and Medical Research Council, 1999). Although guidelines offer ideal options to health professionals, the complexity of the clinical practice setting must be considered if guidelines are to be effective in improving pain outcomes in patients. Indeed, institutional practices often lag behind acceptable standards. Acute pain continues to be a major problem in hospitalized patients, therefore highlighting inadequacies with the implementation of guidelines in practice (Dalton et al., 1999).

The strategies used to facilitate pain management have been studied from the perspectives of patients, nurses, and physicians. Patients report lack of information about pain-control measures and ineffective pain control (Carr & Thomas, 1997). Nurses continue to rely on pharmacologic measures and tend to under-administer analgesics (Malek & Oliveri, 1996; Manias, 2003a). Nurses’ misconceptions about pain and comfort levels and nurses’ difficulties in tailoring management to the form of pain or discomfort experienced have also been reported (Knowles, 1996). Physicians often under-treat pain and prescribe immediate postoperative analgesics pro re nata or “as required” rather than routinely (Mac Lellan, 1997; Manias, 2003a). They also focus on ordering traditional opioid therapy and tend to discount the value of anxiolytic and sedative drugs as adjuvant forms of therapy (Manias, 2003a). Despite the enormous volumes of research, gaps still remain about how the context of the clinical practice setting influences nurses’ pain-management decisions.

Observational studies are an effective approach to examine complex issues that influence activities in clinical practice (Lewis, 2003). Survey and interview data collection methods convey self-reported actions that may not necessarily occur in actual clinical practice. On the other hand, observational techniques provide opportunities to examine facets of health professional and patient communication in more depth. Unfortunately, there is a dearth of research undertaken on pain management using observational methods (Manias, Botti & Bucknall, 2002; Wild & Mitchell, 2000; Willson, 2000).

Investigation of pain management using observational methods has enabled researchers to identify enabling and hindering contextual issues that affect the ways in which pain management is implemented. For instance, Wild and Mitchell (2000) completed planned observations and a review of organizational documents, and analyzed patients’ reports of pain intensity and quality of pain-relieving care in medical oncology, orthopedic, and critical care units. Nurses from the oncology unit consistently shared pain management information in their discussions with other nurses compared with nurses in the other environments. This observation was consistent with more favorable pain management outcomes for patients. Nurses in the orthopedic units rated their influence on decisions affecting patients’ pain management and their autonomy to affect pain management decisions significantly lower than did nurses in the other two units. Although differences in patients’ mean scores for satisfaction were not significantly different among the three study units, more patients on the orthopedic units indicated they were either neutral or dissatisfied with their pain relief compared with those in critical care or oncology units. Although this study explored how organizational practices affected nurses’ decision-making about pain management, no information was provided about how many patients were included or on the number of field observations done in the three study units.

Willson’s (2000) observational study of three patients after a fractured hip repair examined people-oriented, environmental, and situational factors that affected nurses’ decision to administer analgesics. Factors found to influence decision making about pain management included time, organization of care, shift worked, multidisciplinary team, concerns over the use of opioid analgesia, and information giving and collection. Unfortunately, this study was limited by the use of only three patients for observation.

More recently, Manias et al. (2002) conducted 12 field observations on nurses’ activities related to pain management. Four themes were identified as barriers to effective pain management: nurses’ responses to interruptions of activities related to pain, nurses’ attentiveness to patient cues of pain, nurses’ varying interpretations of pain, and nurses’ attempts to address competing demands of nurses, doctors, and pa-
tients. In this study, nurses placed lower priority on activities that directly impacted on patient comfort, such as administering analgesics within an appropriate time frame. On the other hand, they placed higher priority on activities that impacted on their interactions with other health professionals such as taking telephone calls and assisting nurses with procedures. The time of day also impacted nurses' decision making for pain management. For instance, nurses tended to be very attentive to pain cues at times when other observations were made, including blood pressure, pulse, and temperature. During these times they also examined medication charts to determine analgesic orders. At other times, when patients expressed pain or discomfort outside the periods when vital signs were assessed, nurses acknowledged the patients' concerns, but did not follow up with further questioning or affirmation of the condition. A major limitation of this research was that only 12 field observations were carried out in one surgical unit.

In summary, the observational method is a useful means to examine the complexity of how health professionals communicate with each other and with patients in deciding pain management strategies. Previous observational studies have been hampered by small patient samples and lack of systematic observation at different times. In identifying the contextual issues that create barriers to effective pain management, it is possible to introduce strategies aimed at improving outcomes for patient care.

PURPOSE

The purpose of this study was to determine how nurses managed patients' pain in the postoperative acute care setting. The specific aim was to examine the effect of time and context on the nurses' pain-management strategies.

METHODS

Design

A single group, noncomparative design was used, which included observations and individual interviews to examine pain activities in two surgical units of a metropolitan teaching hospital in Melbourne, Australia. The investigators used a random number computer program to select a consenting nurse from the nursing roster for each observation to remove any researcher selection bias. The two surgical units were selected on the basis that the types of surgical procedures completed were likely to produce a large number of cases with moderate to severe pain.

Participants

All registered nurses involved in direct patient care in the two surgical units and who were on ward roster during the time of data collection were invited to participate ($n = 76$). Although 66 nurses consented to participate (86.8%), 52 nurses were randomly selected to be observed in practice. Before each observation, eligible patients allocated to the nurse selected for observation were invited to consent, therefore enabling their medical records to be accessed for relevant demographic information. Patients were eligible to participate if they were aged 18 years or more and had undergone surgery that required a skin incision. Patients with confusion or dementia were still eligible to participate if signed consent was obtained from the next-of-kin or guardian. The total number of eligible patients was 364. Approval was not obtained from 52 patients (14.3%) because of logistic difficulties associated with obtaining informed consent. These difficulties included patient absence at the time of observation and lack of an appropriate interpreter to explain the study. Therefore the total number of patients involved in the study was 312. Informal ward presentations were carried out to inform other health care professionals about the intention of the study. Patients and nurses were assured that privacy and confidentiality of collected information would be maintained at all times.

Definitions

For this study, the postoperative setting involved patients undergoing gastrointestinal, ophthalmic, cardiac, respiratory, vascular, renal, gynecologic, or musculoskeletal surgery. It also included patients with burn injuries who were awaiting surgery for skin grafting. The investigators focused on these forms of surgery to ensure a high number of pain activities during observation periods. Context was defined as the interplay of factors associated with pain management. The source of these factors included the patient, nurse, or environment. A pain activity was defined as any interaction between the nurse and the patient or patient-related documentation that concerned the patient’s pain or comfort. This activity was either patient-initiated or nurse-initiated. For example, the pain activity may have involved the nurse asking patients if they wanted analgesic medication for their pain.

Procedures

The hospital and university ethics committees approved the study. Six fixed observation times were identified for data collection: 4 a.m. to 6 a.m., 8 a.m. to 10 a.m., 12 p.m. to 2 p.m., 2 p.m. to 4 p.m., 6 p.m. to 8 p.m. and 9 p.m. to 11 p.m. These times were se-
lected because they covered changes in the working shift, nursing staff overlap times, pre-sleep patient assessment times, patient hygiene and ambulation activities, medication rounds, ward rounds, nursing handover, availability of medical staff for consultation, and staff breaks. Each 2-hour period was observed at least 12 times, resulting in the completion of 74 observations (Table 1).

The research assistant, who was also a registered nurse, conducted all observations with minimal disturbance to staff and patients (Table 2). One research assistant was used for all observations to prevent observer bias, and the investigators were present for the initial observations to ensure that appropriate skills were used. Nurses were individually observed during their normal day’s work with postoperative patients. All observations were recorded using a portable audio-recorder with a head-mounted microphone to allow for accurate descriptions of pain activities. After an observation, the research assistant asked clarifying questions of the participating nurse, and these responses were also audiotaped. Audiotaped data were transcribed verbatim and analyzed. At the completion of an observation period, the research assistant also collected data for the ward environment questionnaire, which sought information about ward activities at the time of observation including ward rounds, change of shift time, nursing handover, staffing levels, availability of doctors, and telephone calls taken by the observed nurse.

| TABLE 1. Demographic Characteristics of Nurses (N = 52) |
|---------------------------------|--------|--------|
| Characteristic                  | Number | Percent |
| Sex                             |        |        |
| Female                          | 50     | 96.2   |
| Male                            | 2      | 3.8    |
| Position                        |        |        |
| Clinical nurse                  | 41     | 79.8   |
| Associate nurse manager         | 7      | 13.5   |
| Clinical nurse specialist       | 2      | 3.8    |
| Clinical educator               | 1      | 1.9    |
| Nurse manager                   | 1      | 1.9    |
| Highest qualification achieved  |        |        |
| Hospital certificate            | 5      | 9.6    |
| Bachelor of Nursing             | 42     | 80.8   |
| Postgraduate Diploma of Nursing | 4      | 7.7    |
| Not stated                      | 1      | 1.9    |
| Nurses’ perceived level of surgical experience |        |        |
| Novice                          | 12     | 23.0   |
| Intermediate                    | 25     | 48.1   |
| Expert                          | 15     | 28.8   |

<table>
<thead>
<tr>
<th>TABLE 2. Frequency Counts for Strategies Nurses Used to Manage Patients’ Pain (N = 316 Pain Cases) and the Time of Day</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time and Number of Strategies n (% of 316 Pain Cases)</td>
</tr>
<tr>
<td>Nurses’ Strategies</td>
</tr>
<tr>
<td>Administration of analgesics</td>
</tr>
<tr>
<td>4 a.m.–6 a.m.</td>
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<tr>
<td>8 a.m.–10 a.m.</td>
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<tr>
<td>12 p.m.–2 p.m.</td>
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<td>2 p.m.–4 p.m.</td>
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<tr>
<td>6 p.m.–8 p.m.</td>
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<tr>
<td>9 p.m.–11 p.m.</td>
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<tr>
<td>Total</td>
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<tr>
<td>Massage</td>
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<tr>
<td>Bandaging, reinforcing dressings, splinting</td>
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<tr>
<td>Applying heat compresses</td>
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<tr>
<td>Hot bath</td>
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<tr>
<td>Mobility, walking</td>
</tr>
<tr>
<td>Changing position, relieving pressure</td>
</tr>
<tr>
<td>Discussing management options with patients</td>
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<tr>
<td>Discussing management options with health professionals</td>
</tr>
</tbody>
</table>
Data Analysis

The computer software package, NVIVO (Version 1) was used to systematically manage the data (Richards, 1999). Analysis required identifying the pain activities within the data, and each pain activity became a “case” in NVIVO for a 2-hour period. Cases were identified when a pain cue was evident for a patient. Pain cues included the nurse offering the patient something to manage the pain, the patient asking for medication to treat the pain, or the observed nurse communicating with a healthcare professional about managing the patient’s pain.

In total, 316 pain cases were identified. Data from pain cases were categorized into specific themes pertaining to nurses’ strategies for managing pain. Processes used to determine themes included reflection, thinking, dialogue, questioning strategies, and comparative thinking (Richards, 1999). Frequency counts of strategies nurses used to manage patients’ pain for the 316 pain cases and of the environmental influences during the time of data collection were also calculated. An independent individual was used to undertake all data analysis. All members of the investigation team also separately analyzed the data to guarantee rigor of the emerging themes.

RESULTS

Fifty-two nurses participated in the study. Their ages ranged from 21 to 55 years (mean = 27.5 years, standard deviation [SD] = 7.3 years), and their time since registration to practice varied from 4 to 408 months (mean = 63.5 months, SD = 76.5 months). Their surgical ward experience ranged from 4 to 180 months (mean = 38.4 months, SD = 41.0 months). Other demographic characteristics related to the nurses are shown in Table 1.

The total number of patients involved in the study was 312, which included 197 males and 115 females. Patients’ ages ranged from 17 to 97 years (mean = 56.7, SD 18.9 years), and observations were carried out with patients 0 to 57 days after their operations (median = 3, Q25 = 1, Q75 = 8 days). The most common diagnoses on admission were of a gastrointestinal nature (n = 138, 44.2%) followed by an integumentary (n = 52, 16.7%) or renal condition (n = 29, 9.3%). Seven patients had experienced a language barrier through dysphasia, hearing deficit, or difficulty in speaking English.

Table 2 shows the frequency of strategies nurses used to manage pain for the 316 pain cases according to the time of observation. The most common strategies nurses used involved administering analgesics (37.9% of 316 cases), discussing management options with health professionals (17.4%), and discussing management options with patients (15.8% of cases). Non-pharmacologic strategies, including walking (1.9% of cases), giving patients hot baths (1.3% of cases), and applying heat compresses (0.6% of cases), were rarely used by nurses.

Table 3 indicates the incidence of environmental context on pain management strategies for the 74 observation periods. The nurse manager was present in only 27% of the 74 observations, whereas associate nurse managers, clinical nurse specialists, and doctors were present in 68%, 54%, and 55% of the 74 observations, respectively. Other notable environmental influences included phone calls taken by the observed nurse (88% of observations), ward transfers (58% of observations), and ward admissions (49% of observations).

Six themes were identified from the observational transcripts: managing pain effectively; prioritizing pain experiences for pain management; missing pain cues for pain management; regulators and enforcers of pain management; preventing pain; and reactive management of pain (Table 4). Excerpts from the data are included to provide support for each of the themes.

<table>
<thead>
<tr>
<th>Environmental Influence</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Presence of doctor</td>
<td>41</td>
<td>33</td>
</tr>
<tr>
<td>Change of shift time/handover</td>
<td>32</td>
<td>42</td>
</tr>
<tr>
<td>Ward round in progress</td>
<td>14</td>
<td>60</td>
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<td>Associate nurse manager on duty</td>
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<td>24</td>
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<tr>
<td>Nurse manager on duty</td>
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<td>54</td>
</tr>
<tr>
<td>Clinical nurse specialist on duty</td>
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<td>34</td>
</tr>
<tr>
<td>Presence of allied health professionals</td>
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<td>39</td>
</tr>
<tr>
<td>Phone calls taken during observation time</td>
<td>65</td>
<td>9</td>
</tr>
<tr>
<td>Presence of ward admissions</td>
<td>36</td>
<td>38</td>
</tr>
<tr>
<td>Presence of ward discharges</td>
<td>24</td>
<td>50</td>
</tr>
<tr>
<td>Presence of ward transfers</td>
<td>43</td>
<td>31</td>
</tr>
<tr>
<td>Patients returning from operating theatre</td>
<td>28</td>
<td>46</td>
</tr>
<tr>
<td>Agency nurse on duty</td>
<td>23</td>
<td>51</td>
</tr>
</tbody>
</table>

TABLE 3. Environmental Influences During the Time of Data Collection
Managing Pain Effectively

There were 28 cases that demonstrated nurses using strategies in which they attempted to manage pain effectively. In these cases, nurses identified pain cues and responded quickly to intervene and minimize and treat the pain. Interventions were either medication-related or involved nonpharmacologic strategies. Case analysis showed that effective pain management required patient involvement in decision making, an evaluation of the medication administered or alternative strategies adopted, and an agreed on plan of what would be done for the patient’s current pain situation. In the following example, the nurse probed to determine the cause of the patient’s inability to sleep and administered an analgesic rather than a sedative to resolve his discomfort. There was little time lag from the patient seeking pain relief to medication administration.

The time is 9:30 p.m. and the nurse is going through the patients’ charts in the nurses’ station. . . . The nurse goes to see the patient and asks him how he is. He says he is fine. She asks if he needs anything and he says, “I’d like some sleeping tablets.” She asks why, and he says because of the pain in his legs. The nurse says, “How would you rate it?” and he rates it at 4.5 to 5 on a scale of 1 to 10. She said she would get him something and came out into the nurses’ work area, got some tablets, went back in, and gave them to him, and said, “Here’s some Panadeine Forte [acetaminophen and codeine combination tablet].” She’s now just getting him some water to take his tablets with.

The time is 9:32 p.m. (Obs. 61)

In the following situation the nurse acknowledged the patient’s need for analgesic medication and reminded her about the other options for pain relief that were available to her overnight:

The nurse is going in to see the patient who has an intravenous tube. The nurse introduces herself to the patient and asks her how she is going. The patient asks for something for pain. She says, “You know it is not too early is it?” and the nurse says, “No,” that she has had something for pain this evening and it’s fine to have some pethidine now. So the nurse comes out to the satellite station gets the patient’s medication chart. . . . She is going in to see the patient. The nurse pulls the curtains around the patient. “OK, where would you like it? In the leg or in the bottom?” “Anywhere.” “OK, can you wriggle your toes for me. Big breath in and out.” The nurse marks the spot for the site of the injection, in the person’s buttocks, and she notes that the patient has lots of bruises. She gives the injection. The nurse says to the patient that she is also written up for some strict Panadol [acetaminophen] every 4 to 6 hours, so she will give that overnight. The patient asks whether she can have it as soluble Panadol. (Obs. 9)

In some cases, nurses also gave patients choices about which medication suited their current pain level, for example:

“I think his choices were Disprin Direct [aspirin], or Panadol [acetaminophen], or morphine, is that it?” the nurse asks a second nurse. “. . . And he chose morphine?” (Obs. 42)

Nurses also reminded patients to use their patient-controlled analgesia (PCA) and ask the nurse to adjust their intravenous rates to immediately respond to patient cues, for example:

She is asking him whether he has been in pain, and he says, “Yes.” He is saying he is still sore on the operation site, and she is asking him if he is any better since the infusion is on. . . . She then asks whether it has made any difference, and he has said “No.” So she is now changing the rate from 20 mL or 2 mg per hour to 25 mL, which is 2.5 mg per hour. She has increased the morphine rate. (Obs. 19)

Although nurses acted to manage pain effectively, at times their active response to pain cues were delayed by the need for more appropriate or new orders. When analgesic medication orders were required to be written up, observed nurses immediately noted the need for alternate orders, paged a doctor, and obtained a new order as soon as possible. Unfortunately, doctors were often not present in the ward because they attended to surgical cases in theatre or they were tending to patients in other wards (Table 2). As a result, there was often some delay in organizing changes to patients’ analgesic medications. There were also instances in which the multidisciplinary team worked together to achieve solutions to patients’ pain problems. The following situation involved collaboration among the patient, nurse, doctor, and anesthetist:

The patient has severe nausea unrelieved by metoclopramide and has some pain. The nurse reevaluates effectiveness and discovers that the patient is still nauseated and in some pain. She discusses the medication options with the doctor over the phone. She asks the patient if she would have a suppository for pain, and the patient agrees. The anesthetist arrives and then speaks with the patient and evaluates the nausea and pain. He discusses the situ-
ation with the nurse. A decision is made to administer tramadol. The drug is administered. The nurse goes back to recheck and evaluate whether the drug has alleviated the patient's pain. This is 2 hours after the initial complaint of pain. (Obs. 45)

Prioritizing Pain Experiences for Pain Management

Nurses prioritized activities that sometimes trivialized patients' pain experiences, making them seem unimportant. At times, nursing assessment identified pain as a relatively unimportant event, but when activities were prioritized, action was still taken to treat the pain, suggesting that the pain signal was not ignored. However, pain cues were often not prioritized highly and were considered unimportant compared with other activities. Examples of prioritized activities included the completion of medication rounds, the conduct of vital sign observations, and the completion of wound dressings. The following examples indicate the ways in which nurses prioritized pain compared with other activities.

The patient has opened his eyes, and the nurse is introducing herself to him. She is asking the patient how he's feeling. Does he have any pain? She is asking him if he is able to take a nice deep breath. The patient has taken a deep breath, and he is pointing to his lower abdomen and saying that it catches there. She is asking him when he does have pain, can he rate it on a scale of 0 to 10. The patient gives a rating of 7. She is asking him if he has been able to cough. The patient is saying, “Yes.” He is just doing a cough for her now. She is asking if it hurts when he coughs. The patient is saying “No.” She is asking him if there is any niggling pains when he coughs, and he is saying “No.” She is just telling the patient that she is going to get him a spare pillow. She is going to leave it on the side of the bed and get the patient to support his lower abdomen with that when he does cough. She has just lifted his pajama top a little bit to have a look at his suture line. He has an abdominal suture line. The dressing is intact, and she is just having a look at his catheter again. She is asking the patient if he has been lying on his back for a while, while she is looking at the catheter tubing. And she is asking him now if he would like to turn onto his side. She is lowering the bed with the remote, just leaning across the patient. (Obs. 20)

In this example, the patient’s pain rating of 7 was trivialized and considered less important than the information that the patient seemed to be able to cough without pain. The nurse did not administer an analgesic.

In the following example, the nurse did not explore the patient’s knowledge of how and when to use the PCA device, effectiveness of the PCA dose to manage his pain, or whether there was a need for review of his current pain management. When nurses did not prioritize patients’ pain responses, the patients’ capacity to have their pain story heard was diminished.

The nurse has changed the flask over and put the old one in the bin. She is speaking to the patient and she is just telling the patient that he has a PCA pump and he is to press the button when he is in pain, and she is asking him to rate his pain. She is asking for the pain scale from 0 to 10, and he is saying 7 on rest, and 15 of 10 when he was moved. And she just laughed and said, “Are you pressing the button?” She is also checking the history on the PCA pump. (Obs. 15)

Missing Pain Cues for Pain Management

There was evidence that nurses missed pain cues in 27 cases. Such cues ranged from patients telling the nurse that something was “sore,” to moaning, groaning, and providing visual metaphors of strong pain. In some instances, such pain occurred during dressing changes, and in others, nurses asked if patients were in pain and were told that something was sore. In these latter cases, patients indicated ambiguously that they were not in pain but sore, “or only in pain when they move.” Pain cues were often missed when they were ambiguous, but also no attention was paid to unmistakable pain cues. For example:

The nurse is asking the patient to take a deep breath and saying “Is it painful?” The patient is moaning and having a cough. He is just giving his legs a little bit of a wriggle. She is pulling the pillow across his abdomen and asking him to rate his pain on a scale of 0 to 10, with 10 being the highest. She is helping him to hold the pillow on his abdomen and asking him to cough, and asking him to rate his pain, and the patient is saying “Seven out of ten.” She just pulled the covers down a little bit. She lifts up the patient’s gown and has a look at his abdominal wound. She covered him back up again and lifted the pillow back up on his abdomen. (Obs. 5)

In this situation, the nurse did not take any action and did not return to reevaluate whether the patient was still in pain. The morphine infusion was not adjusted to accommodate and decrease the high pain rating. The following example suggests that some pain was considered acceptable.

The nurse is asking the patient “Does it hurt when she is walking or is it more when she is breathing?” The patient is just saying there is a lot of stinging pain when she walks. The nurse is saying okay and continues to walk the patient. (Obs. 1)

Regulators and Enforcers of Pain Management

Nurses acted as enforcers of pain management regimens. Policing pain involved two aspects: ensuring
that routine medication was given on time to achieve pain prevention and making sure that analgesics were not given earlier than the routine time. Policing in the former situation had the advantage of facilitating pain prevention. In the latter, however, patients were kept waiting in pain until medications were due. In the following example, the nurse insisted that a nauseated patient should still take her preventative analgesic medication. The nurse did not foresee that taking tablets while feeling nauseated might not be appropriate.

The patient is just saying that she is feeling a bit sick, and could that be from the Panadol. The nurse is saying sometimes the narcotics can make you feel more sick than Panadol. She is saying that the doctors like patients to have it every 6 hours and that she give pethidine [meperidine] on top of Panadol [acetaminophen] for additional relief. The nurse has just told her that she will come in and see how she is doing. (Obs. 9)

In another situation, a patient who had stopped breastfeeding to undergo elective surgery was experiencing difficulties postoperatively in managing her pain. Only a limited number of analgesics were compatible with breastfeeding. The nurse did not explore other possibilities such as giving the medication earlier or having alternative breakthrough medication. She also did not examine other pain management interim strategies such as positioning, warmth, and movement.

“Can I have something for pain?” the patient asked. The nurse counted off the number of hours since her last Panadeine Forte [acetaminophen and codeine combination tablet] and said that it was not due until 10:45 a.m. “This means there is another 40 minutes to go.” The nurse states that if she takes pethidine she will need to keep off the breastfeeding for another day or so. If it was okay, she would ask her to wait until 10:45 a.m. and then she would give her some more Panadeine Forte. (Obs. 27)

Preventing Pain
Preventing pain referred to situations in which nurses took proactive measures to ensure that patients did not experience pain, in contrast with managing pain once it occurred or was evident. In 35 pain activities (11% of total pain activities) data were coded in the theme of preventing pain. Some of the observed nurses said things to patients that indicated they were working toward preventing pain in various ways. These ways included administering routine medications whether pain was present or absent at the time that medications were due to be given and administering medications before patients were in pain. Alternative strategies for pain prevention such as comfort measures, positioning, and exercise were rarely observed. Pain prevention frequently involved inviting patients to let the nurse know if they had any discomfort so that it can be treated as quickly as possible. This approach was not strictly proactive management in that patients experienced some discomfort before advising the nurse of their need for action, but it did minimize the level to which pain escalated before action was taken to treat it. To prevent pain, nurses advised patients to administer some pain relief from their PCA before a potentially painful procedure or before daily activities such as showering or walking. For example:

The nurse is just telling the patient that she will be coming back to take out his drain tube and to get him up out of bed. The patient has a PCA going, and she says that she will give him some Panadol [acetaminophen] but it might be worth his while to give himself a bolus from his PCA before she takes out his drain tube. She says that most people find that removal of the drain tube stings a little bit but that it is fairly fast. She tells the patient that she will be back in about 20 minutes. The patient has given himself a bolus. (Obs. 11)

One of the most important activities nurses engaged in to prevent pain was the administration of analgesics before undertaking wound dressings. In some situations preventive medication was powerful, whereas for others, preventive medication was ineffective for acute pain associated with dressing changes. The following observation excerpt demonstrates effective use of analgesics to prevent pain:

The patient is just looking on—she looks quite comfortable. She is not even wincing. The patient has Endone [oxycodone] at 4 p.m.; she gets 20 mg every 6 hours and tramadol every 6 hours. She is getting all of it regularly. She does not have any kind of pain at the moment. The nurse is cleaning around the pin sites and pulling off the little scabby bits and stuff around it. She is still continuing to do that, and they are just having a talk while she is doing it as well. (Obs. 72)

Reactive Management of Pain
In 65 of 120 cases in which analgesic medication was observed to be administered, nurses managed painful activities in a reactive manner; that is, analgesic medications were not administered before a painful procedure but rather offered after the procedure was completed. Painful events included ambulation and completion of wound dressing procedures. In the following example, the nurse attempted to remove a dressing using copious saline solution to moisten the wound, but no premedication was administered before the dressing. Analgesic medication was offered after the dressing:

The nurse is waiting for the dressing to lift off. There are
a couple of donor site dressings on the left thigh. The patient seems to be in a fair amount of pain. She is gritting her teeth and taking a deep breath as the nurse is trying to lift the dressing, and the nurse is asking her whether she would like something for pain after they are done, and she says yes. (Obs. 39)

In the following situation the nurse clarified with the patient about the importance of having regular pain relief to ensure that he did not experience pain. Unfortunately the analgesic remained by the bedside table while the physiotherapist took him for a walk. Eventually the analgesic was taken after multiple distractions and various patient activities. No evaluation was done on the level of pain experienced during the walk with the physiotherapist or on pain relief obtained after the analgesic was finally taken. For example:

The nurse is asking the patient if he has pain. He says no; he has no pain. She is telling him she will give him regular Panadol [acetaminophen] anyway to make sure that he does not get pain. The nurse is asking the patient to make sure that he can drink the Panadol when it finishes bubbling. It is just dissolving in the cup. [One hour later] the patient who has just been for a walk is sitting out of bed now. This is the man who has had the anterior perineal resection. His Panadol is sitting on the bedside table, and he has not drunk that. So the nurse has just prompted him to drink that now. The nurse has come out of the room into the passage, and she is going off for her tea break. (Obs. 3)

**DISCUSSION**

The findings from this study advance our understanding of how nurses manage patients’ postoperative pain in the actual clinical setting. Several key issues were evident. First, the study highlighted the critical nature of communication between clinicians and patients and among clinicians. Second, the findings demonstrated the influence of time on management strategies. Third, it was possible to examine the relative importance that nurses place on nonpharmacologic measures in actual practice.

Effective communication, between both patients and clinicians, and among clinicians, has been highlighted in the literature for many years as being beneficial to clinical relationships and patient outcomes (Archibald, 2003; Costa, 2001; Twycross, 2002). More recently with increasing consumer access to health care information, patients are more knowledgeable and demand greater involvement in clinical decisions. Risk-management strategies encourage full disclosure to patients of treatment risks to prevent legal issues arising at a later date. Yet the difficulty for clinicians is in determining the capacity of the patient to understand when treatment decisions may be very complex. Even with full disclosure, patient preferences may change over time and could depend on the influences of their environment (Pierce & Hicks, 2001). Furthermore, a clinician has to recognize the potential influences on an individual patient’s decision making and be cognizant of the time needed to explain the different aspects of treatment when other priorities may be present. Occasionally nurses listened carefully to what patients said about their pain experience and took these stories into account when making decisions about pain management.

This research demonstrated that nurses used strategies to engage patients in pain decision making, which involved self-administering analgesia, educating patients to proactively inform nurses when analgesia was required, offering patients’ choices between analgesia, offering alternative or adjunctive strategies that are likely to be successful, and evaluating the effectiveness of analgesia. Similarly, the research demonstrated that a collaborative relationship between clinicians improved communication to address complex pain management decisions. Collaboration was also found to facilitate the timeliness of treatment in nurses who responded quickly to patient calls for alternative forms of pain management. It is suggested that the problem with pain management does not lie with finding new strategies to manage pain but rather having health professionals use current scientific knowledge in their daily practice and communicate this knowledge effectively with other members of the health care team (Landers, 1990; Mac Lellan, 2004).

In contrast, ineffective communication was shown to be a hindrance to pain management. There was evidence to suggest that ambiguous pain cues or even overt cues like moaning and groaning were less likely to be treated by clinicians than when clear articulation of pain communication styles were used by patients. This finding has implications for a large number of patients who may be cognitively impaired, unable to communicate, or of a non-English speaking background. A large number of studies support this finding (Blomqvist, 2003; Ferrell, 2000; Ferrell, Ferrell & Rivera, 1995; Gibson & Helm, 2000; Herr, Mobily, Kohout & Wagenaar, 1998; LaChapelle, Hadjistavropoulos, & Craig, 1999; Puntillo & Neighbor, 1997; Weiner, Peterson, & Keefe, 1999). By using specific pain assessment methods adapted for sensory and cognitive impairment, and language difficulties, pain can be managed effectively for most patients.

In addition to communication influencing pain management strategies, having the time to undertake pain relief strategies was also shown to be crucial.
There has been significant discussion in the literature about the influence of workloads on nurses’ decision-making (Hoffman & Scott, 2003; McCaughan, Thompson, Cullum, Sheldon, & Thompson, 2002; Norrish & Rundall, 2001). In this study, it was evident that the ward environments had a high level of activity and that nurses were often interrupted or distracted from pain activities. Nurses seemed to pay little attention to pain cues, and the belief that some pain was bearable was a view held by both nurses and patients. Situations in which nurses ignored pain cues suggest that the busyness of nursing work was overwhelming and that nurses lost focus on patients’ pain needs. Some researchers have advocated for pain to become the fifth vital sign to elevate the importance of treating it (American Geriatrics Society Panel on Persistent Pain in Older Persons, 2002; Federwisch, 1999; National Pharmaceutical Council & Joint Commission on Accreditation of Healthcare Organizations, 2001). In this study, nurses prioritized other activities that in essence trivialized patients’ pain experiences, making them seem less important. Other nurse-initiated activities such as completing wound dressings, conducting vital sign observations, and checking wound sites and drainage tubes were perceived to be more important albeit painful. Nurses also appeared to accept pain as a normal component of the postoperative experience.

This research showed that adopting a policing attitude toward patients to confirm that routine medications were given at specified times played a role in preventing pain. Nevertheless, nurses need knowledge and awareness of when and how the timing of medication can be shifted toward ensuring that patients’ pain levels are kept to a minimum and not allowing the pain to peak because medications are held until the exact time of the doctors’ orders.

Effective pain management was observed to occur in only 12% of the observed cases (\( n = 28 \)). It involved rapid assessment of patient pain cues, obtaining appropriate medications to alleviate pain, and evaluating the effectiveness within an adequate time course. There was no differentiation in nurses’ level of experience or qualifications and whether they delivered effective pain management. In some cases, nurses were able to preempt when patients needed medications and were very proactive in providing patients with choices about the types of analgesic medications they could have.

Previous studies have focused on nurses’ pain management strategies through interviews and surveys, which may not necessarily reflect what happens in practice (Dahlman, Dykes, & Elander, 1999; Schafeutle et al., 2001). Similarly, determination of the patients’ perceptions of their pain experiences through self-reported surveys and interviews, especially if completed retrospectively or away from the clinical environment, may not accurately identify what they are feeling (Sherwood, Adams-McNeill, Starck, Nieto, & Thompson, 2000). This research, which portrays what happens in actual clinical practice, has facilitated the identification of new data that may not have occurred using other research methods.

**Limitations**

Nurses who participated in this study may have had an increased awareness of their pain management strategies as a result of being observed (Bucknall, 2000). The results demonstrated that in more than half of the cases involving analgesic administration, medications were administered in a reactive rather than proactive manner and that very few nonpharmacologic therapies were used. It is therefore unlikely that nurses changed their behavior for the purpose of the study. Another potential limitation is that the findings were obtained from two surgical units within a hospital, which may not be generalizable to other units. Nevertheless, it comprises a large-scale observational study involving 74 observations conducted on at least 12 occasions at six designated times. Therefore, nurses in a variety of hospital settings can use the findings to challenge their own strategies for managing postoperative pain.

**Implications for Pain Management and Future Directions**

This study addressed how contextual issues impacted the strategies used by nurses to manage patients’ pain in the postoperative setting. Previous studies have focused on pain management in isolation of the context, which includes communication with health professionals and patients, the organization of care, and competing pressures during a working shift. This study found that nurses accepted pain as a normal component of postoperative experience. Although effective pain management was observed to occur on a small number of occasions, nurses prioritized other clinical activities and tended to underestimate patients’ pain experiences. Therefore, clinicians who care for postoperative patients need to be cognizant of how competing responsibilities impact their ability to provide effective pain management. They also should be open to initiating diverse pharmacologic and nonpharmacologic pain management strategies, which are informed by proactive negotiations with the patient.

Future research could target specific times during the working shift to examine accurately the effect of communication on nurses’ pain-management strategies. In delineating the deficiencies associated with
communication, an intervention aimed at improving how information is conveyed could facilitate better pain treatment. Work is also needed on helping nurses to understand and challenge the impact of their competing activities on pain management. A greater understanding of the complexities of the actual clinical setting is needed to further empower patients as active partners in the management of their pain.

REFERENCES


Puntillo, K. A., & Neighbor, M. L. (1997). Two methods...


