

R Fielding  
MG Irwin

# The knowledge and perceptions of nurses and interns regarding acute pain and postoperative pain control

## Key Messages

1. Formalise pain assessment and require updates on pain control education for all nurses and interns.
2. Provide patients with pre-operative information pamphlets explaining pain control.
3. Introduce a rigorous policy for assessment and documentation of pain as the basis for good postoperative care.
4. Assess patient knowledge and perceptions of postoperative pain and analgesia and correct as necessary.
5. Rigorously assess the implementation of pain management policies.

## Introduction

Acute postoperative (post-op) pain control is sub-optimal.<sup>1</sup> Communication skills, particularly in nurses, reflect knowledge deficits and perceptual barriers and patient rather than practitioner characteristics are cited as barriers to good post-op analgesia.<sup>2</sup> Patients under-report pain and refuse opioids. In Hong Kong, fear of addiction to opioid side-effects were also cited as barriers to pain control.<sup>3</sup> Careful nursing assessment and documentation help organise pain management and improve analgesia.<sup>4</sup> To retain accreditation, US health-care settings must now manage pain according to standards issued by the Joint Commission on Accreditation of Healthcare Organizations. Foremost is formalised pain assessment.

US pharmacist, medical and nursing staff have poor pain and analgesia knowledge and most educational strategies have not significantly improved staff knowledge of pain management or their care practices.<sup>5</sup> Staff perceive patients who tend to endure pain as “good” and patients who demand pain relief as “troublesome” or “difficult”.<sup>6</sup> Hong Kong nurses may underestimate patients’ pain levels by up to a factor of six.<sup>3</sup>

## Aims and objectives

To assess pain control knowledge among Hong Kong interns and nurses with acute surgical care experience and explore staff perceptions of barriers to acute post-op pain control.

## Methods

This study was conducted from December 1999 to July 2002. All registered nurses working on adult and paediatric surgical, orthopaedic, and obstetrics and gynaecology units at selected hospitals in Hong Kong formed the sampling frame. All interns on rotation to any surgical or obstetrics and gynaecology unit during the study period were eligible.

An anonymous 60-item questionnaire exploring pain knowledge and obtaining information on age, work experience, and pain control education was completed by the interns and nurses. Semi-structured qualitative interviews based on a standard format were completed by 30 respondents.

Interns (n=25) were randomly selected for qualitative interview. Nurses were offered a HK\$500 lucky draw prize to entice participants. We recruited 10 nurses, who were interviewed either one-to-one or in pairs. Interviews were audio taped, transcribed in English, and read repeatedly to identify response trends. These were then consolidated, and after removing redundancy were seen to identify responses.

## Results

In total 38/40 (95%) interns and 95/128 (74%) eligible nurses completed the knowledge questions and 10/25 (40%) nurses and 20/25 (80%) interns completed the interview. Maximum possible knowledge scores were 59 for nurses and 60 for interns.

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University of Hong Kong:  
Department of Community Medicine and  
Unit for Behavioural Sciences  
R Fielding  
Department of Anaesthesiology  
MG Irwin

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Principal applicant and corresponding author:  
R Fielding  
Dept of Community Medicine and Unit for  
Behavioural Sciences  
5/F William MW Mong Block  
Faculty of Medicine  
The University of Hong Kong  
21 Sassoon Road  
Hong Kong SAR, China  
Tel: (852) 2819 9288  
Fax: (852) 2855 9528  
E-mail: fielding@hkusua.hku.hk

### Knowledge scores

Higher knowledge scores were associated with attendance at the pain control course. Interns scores ranged between 32-51 (53-85%; median, 40.5%). Pain knowledge did not differ by duration of surgical experience or any other factor. Nurses, having more varied age and experience, gave knowledge scores ranging from 18-46 (30-77%; median, 36%). The 23% of nurses with scores below 30 were younger and more junior; one third had at least 2 year's surgical nursing experience. Only one nurse had taken a pain control course. Having taken a pain control course was the only factor differentiating low from high knowledge nurses in regression analysis.

### Qualitative interviews

Nurses estimated that 20-90% of patients experienced some post-op pain. Two major themes emerged from analysis of the nurses' interviews. First, there was a general desire for more and better training in post-op pain assessment and control. Most pain control education occurred in nursing school during general training, often many years earlier. This training emphasised drug use, but not pain management per se and was brief.

...Do you have any training in pain theory?

*Less than four hours*

Is the information adequate?

*(Laughs) Um, actually the information is just provided for drug information, that's not about...pain control.*

(B)

The second major thematic issue emerged in relation to assessment of pain.

*...Most important difficulties...I think...um...I think may be due to patients don't complain of pain, and the nurses are not aware even though they (the patients) (have) got complaints.* (C)

Some nurses reported using standardised pain assessment tools, such as 10 cm analogue measures, but this was not universal. Often assessment was outdated and infrequent.

...Do you make any formal assessment of patients' pain levels?

*... We don't have a formal chart to do it. We will assess their pain level.* (G)

*We don't deliberately make a formal assessment. Only through observation or from patients' complaints or whether they tolerate the pain.* (J)

Patients who complain excessively or seek attention interfere with a nurse's ability to judge "true" from "false" alarms, based on patient facial expression and verbal complaints.

*In some patients, actually, (there) is not too much pain. They seek...attention...so there is a problem (when) we assess the patient.* (D)

*...Sometimes, if the patients...always complain of pain, the objective data of the observations not really so painful, the doctors or nurses may think that the*

*patient is lying, and sometimes we would observe their facial expressions or frequency of request to determine whether she is in pain or not.*

Good pain control was seen as important by nurses, principally because it can affect patient mobility and hence recovery, but not because pain hurts and can be avoided.

*...I think it (effective pain control) will help recovery. And early ambulation can be done if the pain control is adequate to prevent other complications of the operation.* (A)

*...Because pain is...stress. If pain relief is much better, the stress will decrease.* (C)

*...pain control allows patient's comfort, (it) is most (more) important...(than other aspects of patient care).* (J)

Nurses expected patients to tolerate some pain after surgery, and there was almost universal agreement that males were more tolerant of pain than were females. There was recognition by some nurses of the importance of psychological factors in pain and the particular difficulties in assessing the needs of children who have had surgery.

Lack of time was mentioned by a number of nurses who felt that workload contributed to poor pain control.

*...If there is more manpower, the job can be done better. Relatively more time can be paid to patient.* (E)

Nurses cited patient anxieties of analgesic addictiveness and refusal of intramuscular (IM) analgesia. Patient requests for intravenous (IV) injection were often rejected because they are anxious about the risk of respiratory depression from IV opioids. As a result, opioids are withheld and pain relief is sometimes inadequate.

*...when we ask the patient to have some intramuscular injection (of opioids), they refuse because they are afraid of the shot...they prefer something... intravenously. And from the nursing side, we are afraid intravenous opioids will cause respiratory depression, then we will hold the IV opioids.* (C)

One nurse raised an important procedural point regarding teaching patients to use patient-controlled analgesia (PCA).

*...they are not given enough education pre-op, (to) teach them how to use PCA. But (if we) do this post-op when patients are uncomfortable, I don't believe the effectiveness is good. But in clinical (settings) (this) is very common. In pre-op, few patients ... had enough education...(on) how to use PCA. After O(perating) T(heatre) when they are sleeping, in drowsy condition, they will be taught how to press the button, such and such, how they can reduce pain, not to press more... In that condition, can the patient perceive well? I believe it cannot be.* (E)

There is knowledge of methods other than positioning to

help pain control, but these were seldom used, except for distraction in children.

Interns also identified barriers to effective pain control. Poor communication caused problems. For example, analgesia prescribed PRN may not be administered by nurses due to patients not informing nurses of their pain.

*...I think the most important barrier is... If you give analgesic PRN the patient has to ask the nurse for it and many of them think they cause trouble to others so they don't tell us they need (analgesia). The most important barrier is the communication area. (A)*

*...there is inadequate communication between the nurses and the patients...when we prescribe analgesia to the patients, sometimes we find that the patients did not take any analgesics at all from the chart. We know that the patients did not take any, but the patients still complained about pain. And we told the patients that we had already prescribed the analgesics, why didn't they take it? Patients might say to me that because the nurses did not give the drugs to them. Maybe the nurses think that the patients were not (in) intense (pain), they did not give analgesia to them. Because when we prescribe, we say that it is not regularly. The nurses give the drugs to the patients when the patients are in pain. (D)*

Interns also felt they often did not have time to spend with patients as much as they would have liked.

*...Sometimes if we really have to look after a lot of patients we have not much time we cannot assess her thoroughly and we may not meet her ... we may not understand her need for analgesic we just prescribe some simple analgesic for her. And that may not achieve the pain control well. (E)*

Some interns felt poorly equipped to assess patient pain levels and sometimes showed a rather limited concept of what constitutes pain.

*...May be the problem is how should I formally assess patients' level of pain, and also...how to differentiate physical...from psychological pain. (G)*

Though some interns recognised the theoretical value of preparatory information for pain control, they seldom use these methods.

*...Umm, I think the other most important method is to warn the patients, give information and decrease their anxiety level, for example by information and by other family support...*

What kind of information? (a) pamphlet or...?

*Usually verbal just explaining to them the procedure, the operation, they expect pain after operation.*

Have you used these kinds of...methods to help the patient to reduce their pain?

*Um, sometimes. Not very much. (Laughs) (A)*

*...Reassurance sometimes but other (methods) are difficult in a hospital setting in Hong Kong. (B)*

Doctor and patient anxieties about analgesia dependency seem to be an important limitation on analgesia use and may limit therapeutics:

*...sometimes we (use) some analgesic but we cannot totally decrease their symptoms and if we use some more potent ones (analgesics) that may cause addiction. The main concern is about this.*

*Yes. Because some doctors tend to give higher doses of analgesia and sometimes it may lead to dependency of some patients. (E)*

*...Sometimes (the drugs have problems) eg if patients need morphine, they may get addicted. (F)*

Interns also expressed anxieties about other risks arising from analgesia use:

*...Do you have any anxiety about...analgesics post-op?*

*Yes, sometimes, yes. Like some kinds of drugs have certain side-effects, eg respiratory depression. (D)*

*...Yes. Because I am afraid sometimes the use of analgesics causes the decrease in pain sensation and masks the important signs of symptoms. (F)*

*...Yes. Sometimes if we talk of dose of opioid, I will be anxious and hesitated, fear of any complications from those opioid. (G)*

*...Do...patients have anxiety about post-op analgesia?*

*Yes. Because their concept is that the analgesia is bad for them. They worry about the side-effects. (H)*

*...some patients think they are addicted. Some... think the analgesic is no good, is useless. They try to use it as little amount as possible. They try to refuse the analgesia. (B)*

*...Are patients ever unwilling to accept analgesia?*

*Sometimes. For fear of side-effects usually.*

## Discussion

Both quantitative and qualitative data identified knowledge deficits perceived by both interns and nurses. However, there was considerable variation in knowledge, with some nurses having particularly poor knowledge of pain control. These nurses tended to be younger and inexperienced.

Both nurses and interns expressed a need for more training in pain theory and management. Non-pharmacological methods of pain control were seldom used. Nurses and some interns identified problems in the assessment of pain—use of visual analogue scales was not universal and many seemed to rely on their judgement of patient expression and complaints to guide pain management. Anxiety about opioid side-effects was frequently mentioned as a reason for withholding analgesia. Patients also expressed anxiety about the discomfort of IM injections and the risk of addiction and this appears to be a major barrier to effective acute pain control.

## Implications

1. Inadequate communications were exemplified by most of the findings.

2. Updates on pain control, particularly using non-pharmacological methods and the value of counselling surgical patients, particularly those with life-threatening illness could be considered. However, the literature suggests that additional education alone is insufficient to change practice.
3. Rigorous formal pain assessment policies, using structured pain assessment tools should be mandatory in care practice and their effectiveness evaluated.
4. Before surgery, patients should receive information pamphlets on post-op pain control. These should include, as a minimum, clear statements that post-op analgesia will not cause addiction, explanations of the different types of pain control that might be used (eg analgesia, positioning, muscular relaxation) and if PCA is to be used, a preoperative demonstration given by a nurse of how to use the syringe driver.
5. Nurses should assess patient knowledge and attitudes to post-op pain prior to surgery. Any anxieties about pain or analgesics should be identified and resolved, with information provided as necessary. Wards can be provided with audio deep muscular relaxation tapes and personal tape players for patient use.

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