Multi-disciplinary interpretations of pain in older patients on medical units

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Summary The aim of this study was to assess the knowledge and attitudes of the health care team caring for older patients on acute medical wards. Pain is probably the most distressing symptom experienced by hospital patients. Pain management has traditionally been seen as part of the anaesthetist's role, within the UK, establishment of acute pain teams was a response to the report 'pain after surgery' which cemented the link between pain and surgery. However, in 2004–2005, 63% of admissions to general medicine in the UK were individuals in the 60+ age group suggesting that older people are significant users of general medicine services. Treatment of pain is multi-disciplinary and effective pain management should be a universal response by health care professionals and non-professionals. A questionnaire was distributed to all nurses; registered and non-registered, junior doctors who worked on the acute medical wards, all physiotherapists and all pharmacists in the hospital. There were varying levels of pain management education identified across the professional groups and, whilst there is a reasonable level of pain knowledge both general and specific to the older person, there is still a need to improve the knowledge and attitudes of all health care professional groups caring for older patients in pain on acute medical wards.

KEYWORDS
Education;
Pain management;
Older people;
Medical units

Introduction

Pain is a universal phenomenon and is probably the most distressing symptom experienced by hospital patients (Gloth, 2001). Treatment of pain is multi-disciplinary and effective pain management should be a universal response by health care professionals (Brown et al., 1999). The public assumes that nurses and physicians possess a comprehensive knowledge of pain management that is readily used in practice. However pain management deficits occur in clinical practice and shortfalls in knowledge
of pain and its management is often cited as the reason for this (Coyne et al., 1999). It has been argued that the single most important tool for improving the management of pain is education (Lander, 1990). Historically a minimum amount of time has been spent on education around pain management, both at the training and post qualifying stage across all health care professions. These inadequacies contribute to fears and misconceptions of pain therapies (Ferrell et al., 1993). Lack of training, inadequate pain assessment and a reluctance to prescribe opioids are consistently offered as reasons for poor pain management (Gloth, 2001). In an era of multi-disciplinary approaches to health care these deficiencies must be seen as a cause for concern and one that requires greater exploration.

Therefore this study was carried out with the intention of assessing the knowledge and attitudes of the health care team caring for older patients on acute medical wards at a District General Hospital (DGH) in the United Kingdom. A questionnaire was designed and used to provide an overview of fundamental pain knowledge, beliefs and practices of a number of health care staff. The sample included medical staff, physiotherapists, pharmacists, registered nurses and non-registered nurses with the aim of examining any differences in knowledge and attitudes between the health care groups. It was anticipated that this information would help to establish the educational requirements of the multi-disciplinary team thereby improving the management of pain for older patients cared for within acute medical wards.

Background

The cornerstone of pain management is a strong clinical knowledge base composed of three general areas; pain assessment, pharmacological therapy and non-pharmacological therapy (Coyne et al., 1999). Unrelieved acute pain increases the risk of complications; these are life threatening in older patients with pre-existing medical conditions. The management of pain is essential for humanitarian reasons, ethical accountability, and cost effectiveness and as an indicator of quality care (Briggs, 2002).

Previous studies have concentrated on the management of pain within surgical and oncology areas of hospitals. The extent of poor pain management is unknown in non-surgical areas (Maxwell et al., 1999). There is an assumption that many patients with non-surgical pain are ineffectively managed, although there is little published information on the subject (Vickers, 2000). Globally, pain management has traditionally been seen as part of the anaesthetist’s role. Within the UK, the primary impetus for the establishment of acute pain teams came from the report ‘pain after surgery’ (Royal College of Surgeons and College of Anaesthetists, 1990), cementing the link between pain and surgery to the detriment of other areas of health care. Nonetheless, Dix et al. (2003) found 43% of medical patients in hospital had experienced pain with 12% reporting unbearable pain. Strategies such as, pain assessment, education and specific prescribing/management guidance would reduce the number of patients experiencing unbearable pain in the medical setting.

Pain assessment is the first step in the pain management decision-making process; inadequate assessment is thought to be a source of errors in clinical decision-making for managing pain (Dols et al., 1998). Pain management decisions are inexplicably linked with accurate assessment of patients pain and is fundamental to pain management and the care of patients in pain (Lawler, 1997). The lack of consistency in pain assessment is due to lack of knowledge of assessment infrastructure across disciplines and a reliance on attitudes, judgments and beliefs about pain (Haigh, 2001).

The greatest hurdle to overcome remains the education of health care professionals (HCP’s) to make what’s known about pain management accessible and used by HCP’s (Simmons, 2002). Education is the first step to good pain management as well as offering an empathetic approach (Hiscock, 1993). Pain exists across all specialties; pain teams must educate and develop skills among direct care givers (Schofield and Dunham, 2003). There has been a lack of pain assessment education in doctor and nurses training (Sjostrom et al., 1997). Lander (1990) recommended education as the most important tool to improve pain management. It seems necessary that nurses’ should be taught more about pain assessment whilst in training and following registration to improve the treatment of pain (Thorn, 1997). Education on technique and responsibility can reduce misconceptions about pain assessment (Young et al., 2006). Ongoing, planned education is necessary to improve and support pain management practice and documentation (Mac Donald and Hilton, 2001).

Pain management cannot be planned without knowledge of the nature and severity of the pain. Communication and interpretation of behaviour are skills identified as prerequisites of pain assessment (Lawler, 1997). The greatest impact on the clinical process of pain management is nurses’ knowledge (Barnaston et al., 1998). Following par-
Participation in continuing education nurses will use the knowledge and develop skills to improve health care (Camp-Sorrell and O’Sullivan, 1991).

Educating nurses is necessary as research shows that they have inadequate knowledge about pain evaluation techniques and pain treatments (De Rond et al., 1999). Discrepancies often exist between the nurses’ perception of a patient’s pain and the patients’ experience; nurses attitudes suggested that they frequently do not belief patients (Thorn, 1997).

Real improvements in pain management is only likely when a range of professionals are brought together to share their knowledge and expertise (Carr et al., 2003). Irajpour et al. (2006) recommend a more holistic approach to inter professional education and pain management.

Scott (1992) found that 52% (n = 53) of the registered nurses surveyed were reluctant to believe patient’s description of their own pain even whilst acknowledging that good pain assessment is reliant on the individual description of nature and intensity of pain. Forty-one percent (n = 21) of the nurses felt the patient should suffer pain although 69% (n = 36) found the use of pain scales helpful. The most common scale used was a numerical (0–10) scale. Lloyd (1994) also used a questionnaire survey of surgical nurses finding 7% expected patients to suffer pain and 83% had used a pain scale to assess patients’ pain. These attitudes are replicated and enhanced when dealing with older people.

Older people are more likely to have painful conditions, for example arthritis is twice as prevalent in people over 65 years. Expectation of pain with age inhibits patients reporting their pain. Talking about pain is seen as complaining and generally older patients prefer to remain stoic (American Geriatric Society, 2002). There is strong evidence that older people receive different treatment to that of younger people and do not get adequate pain management (Bruce and Kopp, 2001). The tendency to stereotype the older person leads to poor pain management, despite the importance of effective pain management in achieving satisfactory patient outcomes (Ardery et al., 2003). Factors leading to inadequate management of pain by health professionals in older people include: difficulty in assessment, lack of knowledge of pharmacology, misconceptions and attitudes towards the elderly (Gagliese and Melzack, 1997). Furthermore, attitudes and beliefs about ageing and death and how these influence delivery of care to older people also impact upon pain management in this patient group (Ferrell, 1996).

There are many misconceptions and exaggerated fears of opioid use in the older person, with doses of analgesia often started too low and administered on an as required basis although pain should be prevented rather than chased (Gloth, 2001). Sloman et al. (2001) surveyed nurses as they provide direct interventions for pain relief and found significant deficits. There has been a lack of sensitivity to the problem of pain and its sequelae in older people contribution to the under recognition and under treatment of pain (American Geriatric Society, 2002).

There has been extensive assessment of knowledge and attitudes to pain management, almost exclusively in the nursing profession (see, for example Coyne et al., 1999). The knowledge and skills to manage pain are seen as key skills for nurses. Recommendations for educational programmes to increase nurse’s knowledge of pain assessment, pharmacology of analgesia and the management of pain have long been mooted. The majority of studies have concentrated on the effectiveness of education on increasing nurses’ theoretical knowledge of pain management measured by a self-report survey (for example, Coyne et al., 1999; McCaffery and Ferrell, 1997).

Although, in hospitals, the central role for pain relief lies with the ward based nurses, nurses do not work in isolation when caring for patients in pain. If the patient’s pain is unacceptable, a review by medical staff is required, with pharmacists to provide advice and information on the different analgesia available. Physiotherapists can provide assistance with non-pharmacological pain relief. Pain management therefore involves the multi-disciplinary team responsible for the individual patient (Brown et al., 1999). In short, collaboration improves pain relief.

Methods

Aim

The aim of this study was to assess the knowledge and attitudes of health care professionals and non-professionals caring for older patients on acute medical wards at a District General Hospital (DGH) in the United Kingdom. The method utilised was a survey approach to 407 individuals across five disciplines.

Tools

The questionnaire used was composed of four sections: section A focused upon demographic and pain management education information. Section
B comprised of general pain management knowledge and attitudes adapted from the validated tool of McCaffery and Ferrell (1997). Since this adaptation focused solely upon the differences in language between the US and the UK permission was not sought from the originators of the tool. Questions included knowledge of pain assessment, analgesia and attitudes to patients in pain. Section C contained questions on the pain management and older people based on a validated questionnaire used by Sloman et al. (2001). Section D consisted of a list of pain assessment scales requesting the respondents to indicate their experience of their use.

A total of 407 questionnaires were distributed via internal mail to all disciplines, with a deadline of two weeks for return. At the end of the two weeks a further global reminder was sent to all potential participants. A total of 89 questionnaires were returned giving a response rate of 21.8%. Templeton et al. (1997) note that, as long as potential responder bias is acknowledged a low response rate need not affect the validity of data.

**Ethics**

The study was submitted to the Local Research Ethics Committee (LREC) for approval and was also scrutinised by the ethical review body of the University of Salford. Data collection did not start until the approval of both bodies had been obtained.

**Sample**

The questionnaire was distributed to all the nurses; registered (192) and non-registered (101), the junior doctors (36) who work on the acute medical wards, all the physiotherapists (58) and pharmacists (20) in the hospital (total sent was 407).

The professions; registered nurse, doctor, physiotherapist and pharmacists were included as they are the group who take responsibility for the management of pain in the clinical setting. However, the reliance upon non-registered health care assistants in providing bedside care (McKenna et al., 2004) meant that the ability of this group to recognise and understand the pain that their patients may be reported was also seen as important. Thus, although not ‘professionals’ in the strictest interpretation of the term their input was seen as a useful contribution.

**Analysis**

Given the small sample size, analysis was restricted to simple descriptive statistics. A reliability test was carried out on the questionnaire, providing a Cronbach’s alpha coefficient on standardised items of .831, within the acceptable range of values, .7–.8 (Field, 2005). However, as different elements of the questionnaire related to different attitudes and knowledge these sets were also subjected to reliability checking which Field (2005) suggests is good practice.

**Results**

Table 1 shows the response rates for each of the disciplines surveyed in this study (Section A of the questionnaire). It can be seen that the best response rates were those of the pharmacists and physiotherapists (40% \( n = 8 \) and 39.6% \( n = 23 \), respectively). The lowest rate of response was from the non-registered nursing staff and this may reflect the amount of input that this group has in the management of pain or may be due to a lack of interest in the topic or a poor knowledge of the topic. Openheim (1992) warns of the potential for bias when using a questionnaire on disparate occupational groups. The respondents who have an interest and potentially better knowledge of pain management may be more likely to respond to the questionnaire (Oppenheim, 1992).

Table 2 outlines the years of experience which respondents from each discipline had in clinical practice. The group which had the most years’ experience (over 16 years) was the registered nurses.

We also asked respondents about the amount and type of pain management education they had

<table>
<thead>
<tr>
<th>Professional group</th>
<th>No. of responses (%)</th>
<th>Gender</th>
</tr>
</thead>
<tbody>
<tr>
<td>Registered nurses</td>
<td>42 (22%)</td>
<td>2 male and 40 female</td>
</tr>
<tr>
<td>Non-registered nurses</td>
<td>10 (9.9%)</td>
<td>2 male and 8 female</td>
</tr>
<tr>
<td>Doctors</td>
<td>6 (16.6%)</td>
<td>3 male and 3 female</td>
</tr>
<tr>
<td>Pharmacists</td>
<td>8 (40%)</td>
<td>1 male and 7 female</td>
</tr>
<tr>
<td>Physiotherapists</td>
<td>23 (39.6%)</td>
<td>2 male and 21 female</td>
</tr>
</tbody>
</table>
received. The group that had had the most attendance at educational sessions were the Physiotherapists with 48% (11) of respondents having had ‘extra’ pain management training. Fifteen registered nurses (36%) had also attended additional pain management training. The majority of the sessions were short in-house training events and none of the respondents indicated that they had any formal qualification in pain management.

Table 3 shows the response to the section of the questionnaire which was concerned with general pain management knowledge. A reliability test was run upon this set of questions providing a Cronbach’s alpha coefficient of .588. with an inter-item of .788. The medical staff showed the best general pain knowledge with an overall mean score of 82.5% correct responses. Given that the non-registered nurses probably spent the most time with patients it was of some concern that 80% of this group relied upon vital signs to corroborate patient reports of pain.

Table 4 shows the responses to the questions that were concerned particularly with pain management in older people. A reliability test on this data set provided a Cronbach’s alpha coefficient of .981 and internal item correlation of .886 rendering the subsequent data highly reliable. Only the physiotherapists felt that pain was a natural adjunct to the ageing process and only 35% of responding physiotherapists felt that to be pain free was an achievable goal in older people, compared to 100% of doctors and pharmacists. Doctors were the only professional group who did not have concerns about respiratory depression when using opioids in older people.

All the physiotherapists, doctors, pharmacists, registered nurses feel that assessing pain is important; 90% non-registered nurses felt it was important. Forty percent of non-registered nurses have never used a pain scale. As shown in Table 5 the assessment tools of choice seemed to be a verbal descriptor scale (76% of the respondents), a numerical score (0–10) (72% of all respondents) and a numerical verbal scale (55% of all respondents). Ninety-six percent of the physiotherapists had used a visual analogue scale or VAS, 4 although only 9.5% (n = 4) of the nurses had. The Cronbach’s alpha coefficient for this set of data was .531 and the inter-item correlation was .513.
Discussion

This discussion section is organised as three subcategories: assessment, pharmacological, pain in older people and pain assessment to reflect with multi-focus nature of the questionnaire.

Assessment

Pain assessment severity must be assessed through the patients report rather than external factors (Bucknall et al., 2001) such as vital signs and behaviour. A wide range of responses was obtained

<table>
<thead>
<tr>
<th>Table 4</th>
<th>Pain in older people</th>
</tr>
</thead>
<tbody>
<tr>
<td>RN</td>
<td>Non-RN</td>
</tr>
<tr>
<td>Pain is a natural accompaniment of the aging process</td>
<td>7% n = 3</td>
</tr>
<tr>
<td>Older people experience pain less intensely</td>
<td>13% n = 5</td>
</tr>
<tr>
<td>Older people report pain more often</td>
<td>15% n = 6</td>
</tr>
<tr>
<td>Literature suggests pain is under treated in the elderly</td>
<td>98% n = 41</td>
</tr>
<tr>
<td>Pain free goal</td>
<td>90% n = 38</td>
</tr>
<tr>
<td>Avoid opioids due to risk of respiratory depression</td>
<td>36% n = 15</td>
</tr>
<tr>
<td>Analgesia more effective in younger people</td>
<td>15% n = 6</td>
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<tr>
<th>Table 5</th>
<th>Experience of pain assessment scales</th>
</tr>
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<tbody>
<tr>
<td>RN</td>
<td>Non-RN</td>
</tr>
<tr>
<td>Descriptive or verbal rating scale, asked which word best described the pain, for example, no pain, mild pain moderate pain or severe pain</td>
<td>79% n = 33</td>
</tr>
<tr>
<td>Descriptive numerical scale, asked to rate the pain as above but this is then given a numerical ranking for example, no pain = 0, mild pain = 1 moderate pain = 2 and severe pain = 3</td>
<td>71% n = 30</td>
</tr>
<tr>
<td>Numerical rating scale, asked to rate the pain between 0 and 10: 0 being no pain and 10 the worse pain imaginable</td>
<td>71% n = 30</td>
</tr>
<tr>
<td>Visual analogue scale, asked to mark on a 10 cm along line the pain with 0 at one end 10 at the other end, the line can be vertical or horizontal</td>
<td>9.5% n = 4</td>
</tr>
<tr>
<td>Body outlines, asked to mark on the body the location and type of pain</td>
<td>26% n = 11</td>
</tr>
<tr>
<td>McGill Questionnaire, asked to describe their pain from lists of descriptive words such as agonizing, burning annoying etc.</td>
<td>26% n = 11</td>
</tr>
<tr>
<td>Other: please describe</td>
<td>2% n = 1</td>
</tr>
</tbody>
</table>
tors, RN’s and Physiotherapists had experience of both verbal descriptor scores and numerical scores. Few RN’s pharmacists and non-registered nurses had experience of visual analogue scale, but all the doctors and 91% of the physiotherapists had. Body outlines had been used by physiotherapists, but few of the other professional groups. Although the respondents are aware that assessment of pain is important, the clinical area does not currently reflect this, documentation of pain score is poor. None of the respondents chose to comment on the appropriateness or otherwise of the pain scales in dealing with older people and pain despite the previous section of the questionnaire dealing specifically with older people in pain.

Pharmacological

Pharmacological pain control knowledge is an important aspect of RN’s, doctors and pharmacists role in the management of pain. The results from this questionnaire demonstrate a varied knowledge of analgesia. Over 70% of the doctors pharmacists and RN’s aware of the CNS action of opioids, however fewer indicated that they would increase the dose of morphine to improve pain relief. All of the respondents had a low awareness, 38% and below, that Ibuprofen acted peripherally.

In previous studies using a similar questionnaire by Mc Caffery and Ferrell (1997) a score of 75–80% has been considered acceptable. The RN’s on the acute medical wards in this study produced a mean score of 72.6% (range 20–100%) putting them just below the accepted score. We can speculate that, if the respondents (22% of the RN surveyed) have an interest and potentially better knowledge, the non-respondents could have a lower knowledge suggesting a need for more or better education to improve knowledge and attitudes within this professional group (Templeton et al., 1997). In our study, the doctors had an acceptable mean score (82.5%), physiotherapists and pharmacists had a mean score below the accepted 75–80% as set by previous authors. This again suggests a need for multi-disciplinary education to improve knowledge and attitudes in managing pain as recommended by Brown et al. (1999).

Pain in older people

Twenty-five percent of the physiotherapists agree that pain is a natural accompaniment of the ageing process. Closs (1996) found 33% of the nurses responding to the survey did feel pain was a natural part of ageing. This attitude could lead to neglect in the management of this group of patients pain. The goal of a pain free state was indicated by all the doctors and pharmacists responding to the questionnaire, 90% of RN’s and 80% of non-registered nurses compared to 35% of the physiotherapists, again this may reflect the different focus of each of the participating disciplines.

Elderly patients do not experience less pain than younger patients (Fine, 2001) although 17% of the doctors and 13% of the RN’s feel they do. Older patients are less likely to report pain although in our sample up to 37.5% pharmacists, 22% physiotherapists, 15% of nurses and 16.6% of the doctors felt that they actually report more pain than younger adults.

When opioids are used to control pain in older people there is a low risk of respiratory depression compared to other drug reactions and side effects. Lower doses are prescribed to this age group. None of the doctors indicated concern with respiratory depression, but 36% of RN’s and 56% of the physiotherapists agree that opioids should be avoided in the frail elderly. If the doctor has prescribed an opioid over a third of the RN’s would be reluctant to administer it and non-registered nurses would discourage its use also as 80% indicated that opioids should be avoided. Opioids provide a powerful tool to make a huge difference to the lives of those with severe pain (Fine, 2001). Fifty percent of the doctors and 15% of RN’s feel that analgesia is more effective in younger people, leading to lower doses being prescribed for the older client with an even lower dose administered by the RN.

Conclusion

It is acknowledged that the poor response rate means that any insights provided by this study must be treated with caution. However, it must also be emphasised that this work provides new knowledge which will contribute to a previously under researched area of education. Chalmers (2006) noted that ‘study findings should be communicated, regardless of outcome for the benefit of the community at large’. The results from this survey do indicate a range of knowledge and attitudes to pain and its management, within and across the professional and non-professional groups surveyed. Literature suggests that an increased knowledge of pain assessment and management will lead to improved patient comfort. The respondents to the survey do indicated that they had minimal educational input. The continued lack of training, inadequate assessment of pain and reluctance to prescribe and
administer opioids appears to continue to be factors in pain management inadequacies. Specific knowledge of commonly used analgesia was lower than expected from RN’s and pharmacists, the doctors appeared better informed generally. The physiotherapy group do appear to have different attitudes to pain than the other groups. They indicate they use a wide range of assessment scales compared to other professionals and have a relatively negative attitude to older people in pain. The results of the survey suggest a need to improve the knowledge and attitudes of all health care professional groups caring for older patients in pain on acute medical wards and suggest fruitful directions for the development of training programmes and professional education events.

References

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