Identifying barriers to pain management in long-term care

Mary Egan and Nicola Cornally discuss to what extent patient, organisational and caregiver factors hamper the delivery of best practice

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Abstract

Aim The aim of this study was to identify barriers to optimal pain management in long-term care (LTC) from a nursing perspective.
Method A quantitative, cross-sectional, descriptive design was used.
Results Patient-related barriers were seen as interfering more often with optimal pain management than organisational-related or caregiver-related barriers. Difficulty assessing pain due to problems with cognition, older patients' inability to complete pain scales and communication difficulties as a result of sensory impairment were common barriers.
Conclusion A targeted approach to address the identified barriers would help improve pain management practices in LTC.

Keywords
Barriers to care, long-term care, pain management

THE PREVALENCE of chronic pain in long-term care (LTC) residents is between 45 per cent and 80 per cent (American Geriatrics Society (AGS) 2002, Tse *et al* 2005, van Herk *et al* 2009). Unresolved pain can have profound physical and psychosocial consequences for older people, such as depression and anxiety, loss of function, sleep disturbance and decreased socialisation (AGS 2002). This results in needless suffering and has a negative effect on quality of life (Zanocchi *et al* 2008). Effective pain management in LTC is, therefore, a critical issue. Currently, there is only partial application of best practice guidelines (Jablonski and Ersek 2009) because of several barriers, which can be categorised as caregiver, patient and organisational.

Literature review

Caregiver-related barriers Caregiver includes all healthcare personnel, such as doctors, nurses and healthcare assistants (HCAs), involved in caring for residents. Barriers can be knowledge deficits in pain management (Jones *et al* 2004, Tarzian and Hoffmann 2005), pain assessment (Kaasalainen *et al* 2010), and sub-optimal attitudes among informal carers and healthcare professionals.

Efforts to relieve pain can be influenced by staff perception of the validity of the resident's pain, which may be based on subjective opinion (Blomqvist 2003).

Caregivers being overly cautious about giving analgesic medications, in particular opioids, leads to their under use, which limits their ability to effectively manage pain (Kaasalainen *et al* 2007). A study by Jablonski and Ersek (2009) revealed that 78 per cent of residents with constant pain were either not prescribed opioids or prescribed inadequate doses.

Patient-related barriers Sub-optimal attitudes based on misconceptions and myths, such as pain not being amenable to treatment (Weiner and Rudy 2002) and an inevitable consequence of ageing (Martin *et al* 2005, Kaasalainen *et al* 2007, van Herk *et al* 2009), are prevalent among older people in LTC and impede optimal pain management. Fear of medications (Bernabei *et al* 1998, Clark *et al* 2004), concealing pain and not wanting to bother nurses (Clark *et al* 2004, Higgins *et al* 2004) contribute to residents under reporting their pain. In addition, residents with stoic attitudes, who are common in LTC (Bernabei *et al* 1998), are less likely to seek help (Cornally and McCarthy 2011) and are therefore at risk of not having their pain identified.

Patients' verbal descriptions and ratings of their pain are the gold standard in assessment

(McCaffery and Pasero 1999). When the ability to communicate effectively is compromised due to cognitive impairment or sensory deficits, pain assessment becomes more complex. Studies indicate that cognitive impairment is a major barrier to pain assessment and management (Martin *et al* 2005, Closs *et al* 2006, Kaasalainen *et al* 2007).

Organisational-related barriers Lack of access to policies (Allcock *et al* 2002) and clinical practice guidelines for pain management (Jones *et al* 2004), and deficient policies (Keeney *et al* 2008, Kaasalainen *et al* 2010) preclude implementation of optimal pain management practices.

There is inadequate commitment to providing appropriate education. Allcock *et al* (2002) reported that only 44 per cent of nursing homes provide education or training sessions on pain management for qualified nursing staff and 34 per cent provide training for HCAs.

Inadequate time to adequately assess pain (Weiner and Rudy 2002, Martin *et al* 2005), provide emotional support to residents in pain (Fox *et al* 2004) and provide non-pharmacological pain-relieving strategies (Bernabei *et al* 1998) is a further organisational barrier. High staff turnover in LTC impedes implementation of pain improvement strategies (Baier *et al* 2004, Jones *et al* 2004).

In addition to inadequate staffing levels and high staff turnover, there also appears to be poor communication among staff working in LTC (Kaasalainen *et al* 2007). Numerous studies indicate that HCAs believe their opinion is not sufficiently valued by registered nurses when they report patient pain (Clark *et al* 2004, Fox *et al* 2004, Kaasalainen *et al* 2010), while communication problems between physicians and nurses cause delays in treating pain (Fox *et al* 2004). The absence of policies, inadequate education and staffing levels, high staff turnover and poor communication practices are major barriers to pain assessment and management at organisational level.

To improve pain management it is important to establish current practices and identify the most significant barriers from a nursing perspective. British and Irish research analysing pain management practices in LTC is limited. Many international studies explore perceptions, attitudes and knowledge of pain (Weiner and Rudy 2002, Blomqvist 2003, Kaasalainen *et al* 2007), while other studies focus on prevalence of pain and pain management practices mainly in the United States and Canada (Clark *et al* 2004, Tarzian and Hoffmann 2005, Reynolds *et al* 2008, Jablonski and Ersek 2009). Samples include HCAs, nurses, physicians, nursing home managers and residents. Further studies analyse the effectiveness of multifaceted interventions to improve pain management (Baier *et al* 2004, Jones *et al* 2004, Keeney *et al* 2008, Long 2011). Few studies have sought to measure exclusively the extent to which registered nurses (RNs) perceive that caregiver, patient and organisational-related barriers interfere with optimal pain management in LTC.

Aim

The aim of this study was to identify barriers to optimal pain management in LTC from a nursing perspective.

Method

A quantitative, cross-sectional, descriptive design was chosen for this study. The instrument that was used to collect the data was a self-report questionnaire. A questionnaire previously used by Coker *et al* (2010) to study nurses' perceived barriers to optimal pain management in older people on acute medical units was used, but modified for use with staff in an LTC setting. Part 1 of the questionnaire contained questions relating to barriers to pain management while part 2 included questions on respondents' demographic variables. To improve content validity, additional questions were added to reflect barriers specific to LTC alluded to in other studies.

All questions relating to barriers were multiple choice, with possible responses varying from 'never interferes' to 'always interferes'. Each possible response had a numerical value, which respondents chose using a seven-point Likert scale. Although three groups of barriers – caregiver, patient and organisational – were listed in the questionnaire the questions were not listed under any headings so as not to influence respondents.

Part 2 of the questionnaire contained eight questions to elicit respondents' demographic details and was adjusted to suit an Irish setting. Questions 1, 2, 3 and 8 were intended to collect data on employment status and nursing experience; questions 4 and 5 to collect data on age group and gender; and questions 6 and 7 to collect data on respondents' nursing qualifications and the type, if any, of education on pain management they had undertaken since graduating.

The target population for the study was all nurses working with older people in LTC. The accessible population was nurses working in two private and three public local LTC facilities, which had RNs on duty at all times and did not include assisted living facilities. A convenience sample was used, therefore,

for practical reasons. Multi-sites were used to reduce the risk of atypical values affecting the results of the study, increase the variation of respondents and enhance generalisability of the findings. Descriptive statistics, such as percentages, averages and standard deviations, were used to describe the data. Data analysis and statistical analysis were performed using Statistical Package for Social Sciences version 20.0 for Windows.

Ethical considerations Before starting the research, ethical approval was sought from, and given by, the clinical research ethics committee of the Cork Teaching Hospitals.

Results

Respondent characteristics Five LTC facilities – three public and two private – took part in this study. A total of 138 questionnaires were distributed and 60 per cent (n=83) were returned. Responses from the five study sites varied from 15 per cent to 91 per cent. Table 1 shows the demographic profile of the respondents. They were predominantly female (95 per cent) and most of them were employed as staff nurses (n=62). More than one fifth (n=18) were clinical nurse managers (CNMs). In Ireland, the titles senior ward sister and junior ward sister have been replaced by CNM2 and CNM1 respectively.

Caregiver-related barriers The overall mean score for caregiver-related barriers was M=2.72. Table 2 (page 28) contains a summary of these 13 barriers in order of perceived importance. In this category, the variable that nurses perceived as interfering most often was 'antipsychotics are considered before pain medications in agitated patients' (M=3.44). The second greatest barrier was 'physicians' reluctance to prescribe adequate pain relief in older patients for fear of overmedicating those with dementia or delirium' (M=3.39). Overall, caregiver-related barriers were rated lower in importance, with six of the nine lowest-rated barriers out of the total 44 barriers in the questionnaire being caregiver related.

Patient-related barriers These had the highest overall mean score of M=3.77 and 12 out of the 13 patient-related barriers had a mean score of greater than three. Patient-related barriers are shown in Table 3 (page 29). The highest mean score (4.90) was for 'difficulty assessing pain in older people due to problems with cognition (delirium, dementia)', with 56 per cent (n=47) of respondents reporting that this 'frequently', 'very frequently' or 'always' interferes with optimal pain management.

Table 1	Demographic variables (n=83)	
	Count (n)	**Percentage (valid %)**
Gender		
Male	4	5
Female	79	95
Employment status*		
Full-time	52	63
Regular part-time	27	33
Occasional part-time	3	4
Present position*		
Staff nurse	62	78
Clinical nurse manager 1	10	13
Clinical nurse manager 2	8	10
Highest education*		
Certificate	23	29
Diploma	24	30
Degree	19	24
Postgraduate diploma	11	14
MSc in diploma	2	3
Pain management education*		
Yes	44	72
No	17	28
Age group*		
20-29	7	9
30-39	15	19
40-49	27	33
50-59	26	32
60+	6	7
Long-term facility		
A	50	60
B	10	12
C	8	10
D	11	13
E	4	5

*Missing data: not all respondents completed all questions, percentages are calculated based on the number of respondents who answered that particular question.

Table 2	Caregiver-related barriers		
	Barrier	Mean	Standard deviation
1.	Antipsychotics are considered before pain medications in agitated patients.	3.44	1.59
2.	Physicians' reluctance to prescribe adequate pain relief in older patients for fear of overmedicating those with dementia or delirium.	3.39	1.54
3.	Difficulty believing pain reports by older patients because they are inconsistent from one time to the next, and do not match their non-verbal behaviour.	3.12	1.53
4.	Uncertainty about how best to time the administration of 'as-required' pain medications when they are ordered along with scheduled pain medications in older patients.	3.12	1.26
5.	Not knowing how much pain is acceptable to each older patient (pain tolerance, discomfort level).	3.00	1.58
6.	Concentrating on administering regularly scheduled medications and not checking for, and offering, as-required pain relief unless the patient requests it.	2.86	1.51
7.	Lack of clinical confidence in assessing a variety of types of pain in older patients.	2.78	1.43
8.	Not knowing whether to believe the older patient's pain report or the family's perception of the person's pain instead.	2.77	1.35
9.	Physicians' lack of knowledge and experience with prescribing pain medications.	2.67	1.25
10.	Not expecting pain in older patients on our unit unless the diagnosis provides a clue to pain as a potential symptom.	2.66	1.49
11.	Reluctance to give pain medication to older patients for fear of overmedicating.	2.21	1.23
12.	The 'older person is dying anyway' attitude among colleagues on the unit.	1.69	1.18
13.	Belief that pain is a normal part of ageing.	1.67	1.18

The second highest mean score (M=4.77) was for 'older patients' difficulty with completing pain scales'.

Organisational-related barriers The overall mean score for these was M=3.02. Seven barriers in this scale had a mean score of more than three. The greatest organisational-related barrier was 'lack of opportunity to discuss an older patient's pain management directly with palliative care team' (M=3.74). The second greatest barrier in this group was 'inadequate time for health teaching with older patients (as-required medication, drug order, alternatives, addiction)' (M=3.71). Barriers of least significance were related to a disorganised system of care, and a lack of policies and procedures. These barriers are shown in order of significance according to their mean score in Table 4 (page 30).

In summary, the mean for patient-related barriers was highest (M=3.77), organisational-related barriers came second (M=3.02) and caregiver-related barriers ranked lowest (M=2.72).

Demographic variables versus nurse perception

Years worked in LTC and as RN The association between years worked in LTC and patient-related barriers was significant, since R_s=-0.28, $P<0.01$. This association seems to indicate that the more years a respondent worked in LTC, the lower he or she rated the importance of patient-related barriers.

Full-time versus part-time workers The variable measuring employment status was split into two values: non full-time nurses (n=30) and full-time nurses (n=52). Although full-time nurses rated caregiver-related and organisational-related barriers higher than part-time nurses, and conversely rated patient-related barriers lower, the differences were not significant, for example, M diff=0.18 for patient-related barriers.

CNMs versus staff nurses Comparisons of the perceptions of the various barriers among staff nurses (n=62) and CNMs (n=18) were also calculated by combining the data from CNM1s and CNM2s and comparing with the data from staff nurses using the parametric t-test and the Mann-Whitney U test. No significant differences were found, but it is interesting that CNMs perceived that organisational barriers interfere less with optimal pain management than did staff nurses (M diff=0.24).

Level of education An analysis of variance (ANOVA) was used to test for differences between respondents with four different levels of education: certificate, diploma, degree and postgraduate. The overall differences between the four groups were not significant. For example, the scores for patient-related barriers (M=3.77) for respondents who had only certificates are nearly the same as those for postgraduates (M=3.78), and any expected linear trend is absent for all three barrier categories.

Pain management education Respondents who had pain education perceived caregiver-related and organisational-related barriers to interfere less frequently, but the difference was not statistically significant. However, education did significantly affect nurses' perception of patient-related barriers, whereby perception of patient-related barriers was higher among those who had pain management education.

Discussion

The results should be interpreted with caution as their generalisability is limited. This was a small-scale study using one method of data collection. A convenience sample was used and thus may not be representative of the population under investigation. However, respondents were from five different LTC facilities, which increases the heterogeneity of the study sample and therefore the generalisability of the results. The response rate was 60 per cent, which is favourable. However, not all eligible respondents completed the questionnaire, which introduced sample bias. Respondents in this study comprised RNs including CNMs who are in an ideal position to identify barriers to optimal pain management in LTC.

Caregiver-related barriers The most prevalent caregiver-related barrier was 'antipsychotics are considered before pain medications in agitated patients'. This is consistent with Kaasalainen *et al*'s study (2007), which reports that staff may attribute the behaviours of residents with dementia to causes other than pain, which can lead to inappropriate prescribing of antipsychotics (Martin *et al* 2005). Poor communication between physicians and nurses was cited in previous studies (Fox *et al* 2004, Kaasalainen *et al* 2007) as being problematic, but in this study barriers relating to communicating with the physician had a mean score of less than three.

Similarly, although poor communication with HCAs was highlighted in previous studies (Clark *et al* 2004, Fox *et al* 2004, Kaasalainen *et al* 2010) as a barrier, it was not perceived as a significant barrier in this study. The disparity in findings may be due to the high ratio of nurses to HCAs in the study setting, which means nurses have close patient contact and are in a pivotal position to assess pain on an ongoing basis.

Correlations between years worked in LTC settings and the barrier scales indicate that the more years worked have a negative effect on all barrier scales, but only the correlation with patient-related barriers was statistically significant. Years registered as a nurse also had a negative impact on nurses' perception

Table 3	Patient-related barriers		
	Barrier	Mean	Standard deviation
1.	Difficulty assessing pain in older people due to problems with cognition (delirium, dementia).	4.90	1.28
2.	Older patients' difficulty with completing pain scales (such as 0-10).	4.77	1.16
3.	Difficulty assessing pain in older people due to sensory problems (hearing deficits, vision deficits).	4.35	1.54
4.	Difficulty assessing pain in older people due to alterations in mood (depression).	4.18	1.21
5.	Older patients' willingness to put up with chronic pain as part of ageing.	3.84	1.52
6.	Older people not verbalising their pain or denying the existence of pain.	3.83	1.59
7.	Older patients' reluctance to take pain medications because of side effects (constipation, how it makes them feel).	3.55	1.48
8.	Older people believing that pain cannot be resolved.	3.55	1.48
9.	Older patients not wanting to bother the nurses.	3.45	1.27
10.	Patients reporting their pain to the doctor but not to the nurse.	3.43	1.63
11.	Older patients denying their disease process by denying pain.	3.33	1.26
12.	Difficulty assessing pain in older people due to language barriers.	3.01	1.51
13.	Older patients' reluctance to take pain medication for fear of addiction.	2.76	1.28

of barrier scales, and organisational-related and patient-related barriers had the strongest correlation. Both of these correlations were statistically significant. Nurses who had education on pain perceived patient-related barriers as interfering more often with pain management and this was also statistically significant.

Patient-related barriers Previous studies have indicated that cognitive impairment presents one of the greatest barriers to pain assessment and management (Martin *et al* 2005, Close *et al* 2006, Kaasalainen *et al* 2007, Reynolds *et al* 2008), and results from this study support this finding. This research also highlights that nurses rated patients' inability to communicate due to sensory impairment as a significant barrier to pain management. Any

Table 4	Organisational-related barriers		
	Barrier	Mean	Standard deviation
1.	Lack of opportunity to discuss an older patient's pain management directly with palliative care team.	3.74	1.86
2.	Inadequate time for health teaching with older patients (as-required medication, drug order, alternatives, addiction).	3.71	1.64
3.	Inconsistent practices around giving as-required medications for an older patient (because the decision to administer pain medication is up to the assigned nurse, and varies from one to another).	3.69	1.47
4.	Inadequate time to deliver non-pharmacologic pain-relief measures.	3.52	1.76
5.	The tendency to document only if pain relief is not achieved or if the patient refuses pain medication.	3.12	1.57
6.	Not having a consistent way of assessing pain, from one time to the next, in each older patient.	3.11	1.71
7.	Not having a documented pain treatment plan for each older patient.	3.06	1.61
8.	Unavailable comfort measures as alternatives/ supplements to pain medications in older patients (for example, hot/cold packs, mattresses, chairs).	2.99	1.65
9.	Lack of opportunity to consult with clinical pharmacist about pain relief in older patients.	2.98	1.64
10.	Not having a consistent way of receiving tips from nurses on previous shifts about pain assessment and management strategies for each of my older patients.	2.91	1.37
11.	Difficulty contacting or communicating with physicians to discuss treatment of pain in older patients.	2.83	1.47
12.	Not having a documented approach to pain assessment for each older patient.	2.80	1.46
13.	Physicians' lack of trust in the nursing assessment of pain in older patients.	2.78	1.48
14.	Difficulty contacting or communicating with physicians to discuss pain assessment findings in older patients.	2.78	1.42
15.	Not knowing older patients' pain levels due to inadequate time spent with them.	2.78	1.42
16.	Poor communication between doctors, nurses and healthcare assistants.	2.68	1.39
17.	Not having policies/procedures/guidelines that contribute to knowledge of acceptable best practices around pain assessment and management in older adults.	2.49	1.48
18.	Disorganised system of care (having to hunt for narcotic keys, obtain co-signatures, find drugs).	2.41	1.65

situation that compromises patients' capacity to communicate effectively about their pain is a problem because patients with cognitive impairment (Reynolds *et al* 2008) or sensory impairment (Kehayia *et al* 1997) are at risk of receiving sub-optimal treatment. This continues to be a challenging aspect of care in LTC settings, although pain-observational tools such as the Abbey pain scale (Abbey *et al* 2004) can aid nurses assessing patients' pain in LTC settings.

In this study, patients' attitudes, such as stoicism and the need to hide their pain from others, were perceived to be a significant barrier. This correlates with findings from other studies (Bernabei *et al* 1998) that several factors contribute to residents under reporting their pain. It is therefore essential that patients are encouraged to verbalise their pain to family and care staff.

Organisational-related barriers The most prevalent organisational-related barrier was 'lack of opportunity to discuss an older patient's pain management directly with palliative care team', which had a mean score of 3.74. In the current climate, palliative care teams are stretched and tend to focus specifically on cancer-related pain, yet patients in LTC settings would benefit greatly from the expertise of specialist teams in the management of chronic pain. Time constraints were often cited in the literature as a barrier to pain management (Weiner and Rudy 2002, Kaasalainen *et al* 2007, 2010). Equally, in this study, 'inadequate time for health teaching with older patients (as-required medication, drug order, alternatives, addiction)' was rated as the second most frequent organisational-related barrier, and inadequate time to deliver non-pharmacologic pain-relief measures was the fourth barrier, which concurs with Bernabei *et al*'s (1998) findings.

Implications for practice
Pain is a complex phenomenon and requires a multifaceted approach to improve practice so all barriers can be targeted. Ongoing education on pain should be provided for all caregivers working in LTC, with particular emphasis on strategies to address barriers identified in this and previous studies.

Difficulty assessing pain in older people with cognitive impairment was the most significant barrier and the majority of respondents in this study work in facilities using observational tools such as the Abbey pain scale (Abbey *et al* 2004). Therefore, education should focus on the practical application of assessment tools in this cohort.

National guidelines (Royal College of Physicians (RCP) *et al* 2007) include an algorithm for assessment

of pain in older people. However, they state that no one scale can be recommended for widespread use in assessing pain in residents with severe cognitive impairment. Herr *et al* (2006) reiterate this in their review of pain assessment tools for non-verbal older people with dementia. They also question the validity of observational tools that measure pain intensity. Pasero (2009) states that a behaviour tool helps to detect the existence of pain but cannot accurately rate the intensity of pain. For all residents, serial pain assessments using the same instrument should be undertaken to evaluate effectiveness of any intervention (RCP *et al* 2007).

Directors of nursing (DONs) in LTC facilities should aim to ameliorate organisational barriers such as high staff turnover and inadequate staffing that interfere with nurses' capacity to use non-pharmacological methods to relieve pain. Non-pharmacological pain-relieving strategies suggested by the AGS (2002) include a physical activity programme, patient education, cognitive behaviour therapy for residents with persistent pain, application of heat or cold, massage, acupuncture and transcutaneous electrical nerve stimulation.

DONs should also promote collaboration with GPs and the palliative care community team in managing pain in residents with cancer and non-cancer pain. The AGS (2002) highlights the need for the physician to work with pain specialists and palliative care providers in caring for residents with persistent pain. Speech and language therapists, and services such as optician and audiology, can help to improve communication in residents with sensory impairment, which would enhance pain assessment.

Conclusion

Unresolved pain has major physical and psychosocial consequences for older people (AGS 2002). Identifying barriers to optimal pain management is paramount. Many of the findings in this study concur with results from larger studies, which increases validity of its findings. Patient-related barriers were perceived as interfering more often with optimal care than organisational-related or caregiver-related barriers. Difficulty assessing pain in this group due to problems with cognition, older patients' difficulty in completing pain scales and communication problems were the most prevalent barriers. Factors that contributed to patients under reporting their pain, time constraints and inadequate communication with the palliative care team were also perceived as significant barriers.

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Conflict of interest
None declared

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