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Knowledge and perceived competence among nurses caring for the dying in long-term care homes

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Abstract

Background: The quality of care provided to dying long-term care (LTC) residents is often inadequate, which may be due to the lack of formal training that LTC staff receive in palliative care (PC). This cross-sectional study assessed PC knowledge and self-efficacy in ability to provide PC in a sample of registered nurses working in LTC homes. ***Method:*** A survey was conducted in four LTC homes in October 2009 to June 2010. Nursing staff knowledge of PC was evaluated using the Palliative Care Quiz for Nurses (PCQN). The Self-Efficacy in End-of-Life Care Survey (S-EOLC) was used to measure nursing staff confidence in their ability to provide PC. ***Findings:*** Close to 60% of the nursing staff participated (69 of 119). The participants did not score highly on the PCQN: the average correct score ranged from 52.50% to 63.41% across the homes. There were no significant differences between the homes for the mean number of correct responses on the PCQN (P=0.329) or mean scores for the three S-EOLC subscales. Rank ordering of the percentage of correct PCQN answers by item and LTC home demonstrated that similar misconceptions were held across homes. ***Conclusion:*** Despite their confidence in PC practice, the participants' PC knowledge gap reveals a need for PC training for staff working in LTC homes. The PC education and training provided should both include a gerontological perspective and address the expertise and knowledge already held by staff.

Key words: Long-term care homes ● Self-efficacy ● Palliative care knowledge ● Nursing

While national attention has focused on the inadequacies of terminal care in hospitals and the community, there is growing concern among service providers and researchers about the unique needs of terminally ill older adults in long-term care (LTC) homes (Oliver et al, 2004; Froggatt and Payne, 2006). Many older adults suffer chronic health problems or develop severe illnesses that progress to a terminal phase (National Advisory Committee, 2000). In Canada, 75% of all deaths occur in people over 65 years of age, and 75% of these deaths take place in hospitals and LTC homes (Subcommittee to Update 'Of Life and Death', 2000). Recent estimates for the USA reveal that approximately 20% of all deaths occur in nursing homes; it has been suggested that this number will climb to approximately 40% by 2020 (Carter and Chichin, 2003). Currently, there are approximately 500 000 Canadians living with dementia, and this number is expected to double within the next 30 years (Smetanin et al, 2009). Therefore, most residents in LTC homes lack decisional capacity (National Advisory Committee, 2000), which makes their participation in end-of-life care planning challenging.

Caring for residents in LTC homes until the end of their lives is a policy goal in a growing number of jurisdictions, but the available evidence indicates that the quality of care provided to dying residents in LTC is often inadequate (Ersek and Wilson, 2003; Miller et al, 2004; Oliver et al, 2004; Lo et al, 2010; Meier et al, 2010). In addition to inadequate care, including poor pain management, advance care planning is often not attempted or not completed comprehensively in LTC homes (Travis et al, 2001; Goddard et al, 2011). Inappropriate and unnecessary hospitalization is also a concern that has been identified by both LTC staff and families of LTC residents (Travis et al, 2001). Furthermore, educational gaps in the training of staff and communication problems among health-care providers, family members, and residents present major barriers to quality end-of-life care (Brazil et al, 2004; Whittaker et al, 2006; Kaasalainen et al, 2007; Jenull and Brunner, 2008; Lo et al, 2010). These care deficits in LTC homes are reflected in reports from bereaved family members whose perceptions of and satisfaction with the care provided in LTC homes are lower than those reported for people who received care in other settings (Teno et al, 2004).

This backdrop of concern has encouraged the implementation of a number of initiatives to increase the capacity of staff to provide quality care at the end of life. While staff in LTC homes have a lot of experience in dealing with death and dying, they lack formal training in palliative

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"...there is growing concern among service providers and researchers about the unique needs of terminally ill older adults in long-term care homes."

care (PC). PC is a specialized activity with its own set of principles and practices (Froggat, 2001). The need for PC training has been identified both nationally and internationally (Ersek and Wilson, 2003; Brazil and Vohra, 2005; Whittaker et al, 2006; Kaasalainen et al, 2007; Kortes-Miller et al, 2007; Jenull and Brunner, 2008; Lo et al, 2010). The purpose of the present cross-sectional study was to assess registered nurses' PC knowledge and confidence in their ability to provide PC in four LTC homes located in Ontario, Canada. It is anticipated that the results will contribute to the development of training strategies to improve the delivery of PC in LTC homes.

Methods

Setting

Within the province of Ontario, LTC homes provide care and services to people whose needs cannot be met in the community. These homes are designed for people who need nursing care or daily assistance. LTC homes are subject to provincial standards with respect to care and services. Both nursing and personal care are paid for by the provincial government, while residents pay for their accommodation costs. Such facilities are historically known as 'nursing homes' and include both for-profit and not-for-profit facilities. All four of the homes that constituted the setting for the present study were medium-sized (120–220 bed) not-for-profit facilities. Two were located in Northwest Ontario (Thunder Bay) and two in Southern Ontario (Hamilton area).

Participants and procedure

The study subjects were registered nursing staff (i.e., registered nurses and registered practical nurses). To ensure that all eligible staff from the four homes (n=119) were provided with an opportunity to participate, the LTC homes were repeatedly visited by a research assistant over a 1-month period, covering all three staff shifts (days, evenings, and nights). The questionnaires were completed by consenting participants during their regular working shift in either a group or individual format, with a research assistant in attendance to answer any questions about the surveys. Data were collected from October 2009 to June 2010 using two questionnaires.

Ethical considerations

Ethics approval for the study was obtained from the institutional ethics review boards of both Lakehead University and McMaster University, as well as from the participating LTC homes. Steps were taken to ensure the privacy, security, and confidentiality of data. Participant names were erased from the study files and replaced with unique assigned identifiers. Access to the data was also restricted to the study investigators.

Measures

Palliative Care Quiz for Nurses (PCQN)

The PCQN is a 20-item test of knowledge that permits the responses 'true', 'false', and 'I don't know'. The content of the instrument includes: the philosophy and principles of PC, management of pain and other symptoms, and psychosocial aspects of care (Ross et al, 1996). Scores range from 0 (poor) to 20 (very good). The internal consistency of the PCQN is 0.78, and test–retest at 3 weeks identified no statistically significant differences (t=0.19, degrees of freedom (df)=27, P=0.99) (Ross et al, 1996).

Self-Efficacy in End-of-Life Care Survey (S-EOLC)

The S-EOLC comprises 23 items that measure confidence in ability to provide PC (Mason and Ellershaw, 2004). Each item is scored on a 7-point scale, ranging from 0 ('Cannot do at all') to 7 ('Certain can do'). The instrument provides scores on three subscales: patient management, communication, and multidisciplinary teamwork. Patient management examines respondents' perceived confidence in assessing physical, emotional, and spiritual needs, managing common PC symptoms, providing emotional support to both the resident and their family, and providing culturally sensitive care. The communication subscale includes items related to discussing the course of illness with the resident and family, discussing issues related to death and dying, and talking about specific resident concerns. The teamwork subscale examines respondents' ability to work with other professionals to provide PC and to refer residents to other providers and services. Cronbach's alphas range from 0.92 to 0.95 across the three subscales, suggesting high reliability for each one (Mason and Ellershaw, 2004).

Analysis

Data were analyzed in IBM SPSS Statistics version 19 (IBM, New York) using appropriate descriptive and inferential statistics. The results are presented as frequencies, means, and standard deviations (SD) unless otherwise indicated.

PCQN

The average percent correct score for the PCQN as a whole was calculated for each LTC home and compared using analysis of variance, in which score (cumulative number of items

correctly answered) was the dependent variable and LTC home was the independent variable. Item difficulty was also investigated by comparing differences in the number of correct responses for each item by LTC home. Items were then rank-ordered according to the number of correct responses and the distribution of the rank order among the LTC homes was examined using Kendall's W. These analyses served to compare the homes according to the most frequently held misconceptions about PC nursing.

S-EOLC

Scores for each subscale were calculated according to Mason and Ellershaw (2004). Internal consistency for each subscale was examined using Cronbach's alpha. LTC home dimension scores were compared using analysis of variance.

Results

Of 119 nurses invited to participate, 69 completed the surveys (58% participation rate). Staff participation in the individual LTC homes ranged from 45–75% (home A 62%, n=27; home B 75%, n=12; home C 53%, n=22; home D 45%, n=8). The average percent correct scores for the PCQN by LTC home were: home A 62.96%, home B 61.67%, home C 63.41%, and home D 52.50%. The LTC homes did not score as well as anticipated on the PCQN. There were no significant differences between the homes (F=1.168, df=3, P=0.329).

One of the goals of the PCQN is to identify the most frequently held misconceptions about PC nursing. Therefore, a rank ordering of the percentage of correct answers by item and LTC home was performed (*Table 1*). Kendall's coefficient of concordance revealed a statistically significant yet weak-to-moderate level of concordance among LTC homes with respect to the rank order of the items (Kendall's W=0.35, df=3, P<0.001). For example, item 8 ('Individuals who are taking opioids should also follow a bowel regime') was ranked first in LTC homes B, C, and D, and second in LTC home A; while item 12 ('The philosophy of palliative care is compatible with that of aggressive treatment') was ranked lowest for all homes (i.e., it had the highest number of incorrect answers).

The three S-EOLC subscales were examined: Cronbach's alpha was 0.866 for communication (8 items), 0.877 for patient management (10 items), and 0.887 for multidisciplinary teamwork (7 items). *Table 2* presents the mean scores for the three S-EOLC subscales for each LTC home. The mean subscale scores across all LTC homes were 6.12 (SD 0.67) for patient management, 5.64 (SD 0.93) for communication, and 5.62 (SD 1.11) for multidisciplinary teamwork. These scores suggest high levels of perceived self-efficacy. No significant differences in average subscale scores among the homes were found (patient management F=0.22, df=3, P=0.88; communication F=0.46, df=3, P=0.71; multidisciplinary teamwork F=0.24, df=3, P=0.87).

Discussion

As the role of LTC homes as a location of care for the dying older adult expands, providers in these facilities will be challenged to meet expectations for quality care at the end of life. While many factors have been identified as contributing to difficulties in providing PC (Brazil et al, 2004; Kaasalainen et al, 2007; Meier et al, 2010), the present study concentrated on perceived knowledge and skills in PC among licensed nursing staff. Staff competence in the provision of PC is viewed as a major determinant in assuring quality care at the end of life.

This study highlighted specific knowledge gaps among licensed nurses, particularly related to managing pain for a resident who is dying. This result is consistent with findings from other studies (Takai et al, 2010). Pain management can be challenging in LTC homes owing to the high prevalence of cognitive impairment and the lack of appropriate tools for its assessment. Without adequate knowledge and skills, nurses struggle to manage both pain and other PC symptoms effectively.

While education is viewed as a substantive need in LTC homes, care must be taken with regard to how the educational materials and topics are developed for these facilities. Identifying misconceptions specific to the LTC home is a challenge for educators. Using the PCQN to identify the most frequently held misconceptions about PC nursing, the present study found that although many misconceptions were similar across LTC homes, each home may also require supplementary information to address their unique knowledge gaps.

In addition to the educational needs identified in the present study, the survey respondents also identified high self-efficacy for skills in three palliative care practice domains: communication, patient-management, and teamwork. These findings may be reflective of the sustained, daily interaction that occurs between LTC home nursing staff and residents. Relationships between formal caregivers and residents in LTC homes are unique to the particular setting. The typical long-term, daily contact between staff and residents allows staff to note clinical changes and understand

'Promoting palliative care in long-term care homes requires an understanding of the existing culture of care. Without this understanding, transfer of the principles ... will not succeed.'

Table 1 (part 1). PCQN item difficulty breakdown by long-term care home

	Home A		Home B		Home C		Home D	
	Response (%)	Rank	Response (%)	Rank	Response (%)	Rank	Response (%)	Rank
1. PC is only appropriate in situations where there is evidence of downhill trajectory								
True	22.2		33.3		18.2		50.0	
False *	70.4	6	66.7	5	81.8	3	50.0	4
DK	7.4		0.0		0.0		0.0	
2. Morphine is the standard used to compare the analgesic effect of other opioids								
True *	74.1	5	58.3	6	36.4	9	50.0	4
False	14.8		16.7		54.5		25.0	
DK	11.1		25.0		9.1		25.0	
3. The extent of the disease determines the method of pain treatment								
True	66.7		41.7		33.3		37.5	
False *	33.3	13	50.0	7	61.9	6	62.5	3
DK	0.0		8.3		4.8		0.0	
4. Adjuvant therapies are important in managing pain								
True *	84.6	3	91.7	2	86.4	2	37.5	5
False	7.7		0.0		0.0		0.0	
DK	7.7		8.3		13.6		62.5	
5. It is crucial for family members to remain at the bedside until death occurs								
True	11.1		16.7		9.1		12.5	
False *	81.5	3	75.0	4	90.9	1	75.0	2
DK	7.4		8.3		0.0		12.5	
6. During the last days of life, drowsiness associated with electrolyte imbalance may decrease the need for sedation								
True *	33.3	13	50.0	7	27.3	10	25.0	6
False	63.0		33.3		63.6		37.5	
DK	3.7		16.7		9.1		37.5	
7. Drug addiction is a major problem when morphine is used on a long-term basis for the management of pain								
True	7.4		33.3		9.1		62.5	
False *	92.6	1	50.0	7	90.9	1	37.5	5
DK	0.0		16.7		0.0		0.0	
8. Individuals who are taking opioids should also follow a bowel regime								
True*	88.9	2	100.0	1	90.9	1	87.5	1
False	11.1		0.0		4.5		12.5	
DK	0.0		0.0		4.5		0.0	
9. The provision of palliative care requires emotional detachment								
True	11.1		0.0		13.6		0.0	
False *	88.9	2	91.7	2	86.4	2	87.5	1
DK	0.0		8.3		0.0		12.5	
10. During the terminal stages of an illness, drugs that can cause respiratory depression are appropriate for the treatment of severe dyspnoea								
True *	56.0	10	33.3	9	66.7	5	87.5	1
False	36.0		58.3		19.0		12.5	
DK	8.0		8.3		14.3		0.0	

*Indicates correct response to item. DK, don't know; PC, palliative care; PCQN, Palliative Care Quiz for Nurses.

residents' preferences for care at the end of life (Ersek and Wilson, 2003). While the intimate relationship between staff and residents represents a unique strength of the LTC environment, clinicians and researchers have also encouraged the integration of mandated assessment and care

Table 1 (part 2). PCQN item difficulty breakdown by long-term care home

	Home A		Home B		Home C		Home D	
	Response (%)	Rank	Response (%)	Rank	Response (%)	Rank	Response (%)	Rank
11. Men generally reconcile their grief more quickly than women								
True	7.4		8.3		9.1		0.0	
False *	74.1	5	66.7	5	59.1	6	50.0	4
DK	18.5		25.0		31.8		50.0	
12. The philosophy of PC is compatible with that of aggressive treatment								
True *	7.4	14	9.1	10	13.6	11	0.0	8
False	74.1		45.5		59.1		75.0	
DK	18.5		45.5		27.3		25.0	
13. The use of placebo is appropriate in the treatment of some types of pain								
True	22.2		0.0		9.1		12.5	
False*	66.7	7	72.7	5	59.1	6	75.0	2
DK	11.1		27.3		31.8		12.5	
14. In high doses, codeine causes more nausea and vomiting than morphine								
True *	48.1	11	41.7	8	63.6	5	50.0	4
False	25.9		8.3		22.7		0.0	
DK	25.9		50.0		13.6		50.0	
15. Suffering and physical pain are synonymous								
True	38.5		50.0		18.2		42.9	
False *	53.8	10	41.7	8	68.2	4	42.9	5
DK	7.7		8.3		13.6		14.3	
16. Demerol is not an effective analgesic for the control of chronic pain								
True *	70.4	6	58.3	6	45.5	7	50.0	4
False	22.2		16.7		36.4		25.0	
DK	7.4		25.0		18.2		25.0	
17. The accumulation of losses renders burn-out inevitable for those who work in palliative care								
True	18.5		25.0		18.2		75.0	
False *	59.3	9	66.7	5	59.1	6	12.5	7
DK	22.2		8.3		22.7		12.5	
18. The manifestations of chronic pain are different from those of acute pain								
True *	77.8	4	72.7	5	81.8	3	87.5	1
False	14.8		18.2		9.1		0.0	
DK	7.4		9.1		9.1		12.5	
19. The loss of a distant or contentious relationship is easier to resolve than the loss of one that is close or intimate								
True	29.6		16.7		18.2		25.0	
False *	63.0	8	83.3	3	63.6	5	50.0	4
DK	7.4		0.0		18.2		25.0	
20. Pain threshold is lowered by fatigue or anxiety								
True *	44.4	12	66.7	5	40.9	8	37.5	5
False	51.9		33.3		50.0		25.0	
DK	3.7		0.0		9.1		37.5	

*Indicates correct response to item. DK, don't know; PC, palliative care; PCQN, Palliative Care Quiz for Nurses.

protocols within this caring relationship to ensure appropriate end-of-life care (Brazil et al, 2006).

Providing continuing education in LTC homes can be a major challenge. The nursing leadership has identified numerous constraints, including small or non-existent continuing education budgets and minimal staff coverage prohibiting the release of staff to attend educational opportunities

Table 2. S-EOLC survey* subscale results by long-term care home

	Home A	Home B	Home C	Home D
	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)
Patient management	6.18 (0.55)	6.11 (0.66)	6.12 (0.81)	5.96 (0.71)
Communication	5.70 (0.81)	5.56 (1.09)	5.73 (0.93)	5.31 (1.12)
Multidisciplinary teamwork	5.73 (0.80)	5.67 (1.36)	5.52 (1.31)	5.38 (1.32)

*Based on a 7-point scale ranging from 0 ('Cannot do at all') to 7 ('Certain can do'). SD, standard deviation; S-EOLC survey, Self-Efficacy in End-of-Life Care survey.

(Brazil and Vohra, 2005). Stolee et al (2005) identified additional factors that affect the effectiveness of continuing education programmes, including a changing resident population, staff resistance to change, workforce educational background, management support, and available resources.

Acknowledging the factors that influence the effectiveness of continuing education promotes a whole-system approach to develop the capacity of LTC homes to provide quality end-of-life care (Froggatt et al, 2011). While education and training are important considerations, other levels of organizational change are required. As most care in LTC homes is provided in a team-based environment, strategies that reinforce collaborative team-based practice can be enablers in improving the skills of the individual care provider (Froggatt et al, 2011). However, any efforts around education and team-based care will be limited without support from the institutional leadership. Institutional leadership is required to support individual providers and teams to be effective in their practice.

The assessment of staff confidence and knowledge reported in this paper was embedded in a larger, multi-level initiative that assessed organizational policy and infrastructure support, in addition to staff attitudes and knowledge. This broad assessment led to the development of integrated, multi-level strategies to promote organizational processes and collaborative arrangements with local organizations to support end-of-life care practices in the LTC homes that participated in this project. Inclusion of staff participation and direction in the assessment facilitated the development of these strategies, which included individual staff training and team-based collaborative learning.

Limitations

While this study did assess knowledge through the use of the PCQN, some caution in interpretation may be required. The PCQN was selected for this study on the strength of its psychometric development, which to the authors' knowledge is not present to the same degree for other competency-based assessment tools specific to PC. However, the PCQN was not designed to be specific to the LTC home setting; given the unique context of PC in LTC homes and the nature of the residents (frail, with chronic conditions, presence of comorbidities, etc), it may not reflect the key areas of knowledge and skill for this population. This consideration may explain the discrepancy between the knowledge scores and the perceived competency scores of the staff. Another potential limitation to this study is the inability to distinguish levels of PC knowledge and perceived competence between registered nurses and registered practical nurses. The small number of registered nurses in the participating homes strongly suggested the need for anonymity, to the extent that the local research ethics committee advised that analyses distinguishing between the two groups should not be performed. Finally, assessing perceived competency represents a proxy for actual competency. Knowledge and confidence do not always translate into behaviour, making it notoriously difficult to assess competence in the provider–patient interaction.

Conclusion

Promoting PC in LTC homes requires an understanding of the existing culture of care. Without this understanding, transfer of the principles of PC to LTC homes will not succeed. Froggatt (2001) has argued that the educational contents of PC interventions have typically had their origins in specialist PC, which historically has focused on the needs of individuals dying from cancer. Thus, the nature of educational content for LTC homes should be reflective of the care needs of the resident population and should emphasize the importance of understanding the chronic disease trajectory as well as a care culture that is different from that of a hospital or hospice setting. Further, the expertise and knowledge already held by staff need to be explicitly acknowledged. IJPN

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