Nurses' Perceptions of End-of-Life Care After Multiple Interventions for Improvement

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Background Nurses working in intensive care units may lack knowledge and skills in end-of-life care, find caring for dying patients and the patients' families stressful, and lack support to provide this care.

Objectives To describe nurses' perceptions of (1) knowledge and ability, (2) work environment, (3) support for staff, (4) support for patients and patients' families, and (5) stress related to specific work situations in the context of end-of-life care before (phase 1) and after (phase 2) implementation of approaches to improve end-of-life care. The approaches were a nurse-developed bereavement program for patients' families, use of a palliative medicine and comfort care team, preprinted orders for the withdrawal of life-sustaining treatment, hiring of a mental health clinical nurse specialist, and staff education in end-of-life care.

Methods Nurses in 4 intensive care units at a university medical center reported their perceptions of end-of-life care by using a 5-subscale tool consisting of 30 items scored on a 4-point Likert scale. The tool was completed by 91 nurses in phase 1 and 127 in phase 2.

Results Improvements in overall mean scores on the 5 subscales indicated that the approaches succeeded in improving nurses' perceptions. In phase 2, most of the subscale overall mean scores were higher than a desired criterion (<2.0, good). Analysis of variance indicated that some improvements occurred over time differently in the units; other improvements occurred uniformly.

Conclusions Continued practice development is needed in end-of-life care issues. (*American Journal of Critical Care.* 2009;18:263-272)

CE 1.0 Hour

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A closed-book, multiple-choice examination following this article tests your understanding of the following objectives:

1. Describe current trends used in handling end-of-life issues.
2. Recognize how moral distress is associated with nurses' inability to influence end-of-life decisions between nurses, physicians, and families.
3. Identify some key strategies that will help nurses with interventions when dealing with end-of-life decisions.

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Nurses who work in intensive care units (ICUs) have traditionally received little education and training in care of dying patients and the patients' families,[1-3] even though death often occurs in ICUs.[4,5] However, education is not the only need of critical care nurses. Other factors that may be as important for providing end-of-life care include a work environment with strong communication and collaboration between nurses and physicians,[6] use of palliative care services,[7] ready availability of ethics consultations,[8] and adequate support of patients, patients' families,[6] and staff.[9]

Review of the Literature

Knowledge of End-of-Life Care

Although efforts are being made to improve educational curricula and continuing professional education, practicing nurses still lack knowledge in providing end-of-life care[1,10] and have variable opportunities for continuing education to improve end-of-life care.[11] Critical care nurses not only lack knowledge about palliative care in general and management of signs and symptoms in particular,[12] but also lack knowledge about the process of withdrawing or withholding life-sustaining treatments,[13] providing support to and communicating with patients and patients' families,[14-18] cultural influences in the care of dying patients and patients' families from ethnic minority groups,[19] and the spiritual needs of patients and patients' families.[20]

Critical care nurses lack knowledge about palliative care in general and symptom management in particular.

Work Environment

Many aspects of critical care nurses' work environment present obstacles to providing quality end-of-life care. For example, disagreement and conflicts can occur between nurses and physicians[21] regarding different views on end-of-life issues, physicians' disregard of patients' wishes for care, avoidance of patients' families, giving false hope, not providing adequate orders for pain relief,[22] and level of aggressiveness of treatments.[21,23] Other areas known to influence quality end-of-life care are communication between nurses and physicians[24-26] and the different levels of professions in the hospital hierarchy that result in physicians' paying limited attention to nurses' input in end-of-life decision making.[21,27] Furthermore, ICUs are designed to care for acutely ill patients, not for dying patients and their families, and the highly technical and curative focus of the ICU may make fostering quality end-of-life care more difficult.[27]

Support for Staff

Although it has been defined as 1 of 7 quality end-of-life care domains to be used in ICUs, little is known about the domain of emotional and organizational support for critical care staff.[28] The domain may include support during the time staff provide care to dying patients and the patients' families before and after the patients' death and may include formal and informal mechanisms such as having a staff counselor, team meetings, debriefing sessions, peer support, and in-service sessions related to end-of-life care, loss, and grief.[10,15]

Provision of ongoing emotional and critical feedback to colleagues who are caring for dying patients and the patients' families when the feedback is needed, rather than at specific scheduled meetings, is important to critical care nurses.[29] However, formal scheduled debriefing sessions are also a need, particularly after life support has been withdrawn from patients.[30] In a survey of critical care nurses, Puntillo et al[26] found that unit-level meetings that focused on grief counseling and debriefing of staff after a patient had died rarely or never occurred. Kirchhoff et al[15] concluded in their study of critical care nurses' experiences with end-of-life care that staff support through education about and resources for end-of-life care would improve care of dying patients and their families.

Support for Patients and Their Families

Investigators who explored critical care nurses' perceptions of the end-of-life care that nurses provide to patients and patients' families found that management of patients' physical signs and symp-

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toms is done systematically and efficiently, whereas less attention is given to providing psychological support to patients[29,31] and patients' families.[12] Essential psychological support includes providing ongoing information, support, and bereavement care for families of patients who die in ICUs.[32,33] Azoulay et al[33] found that insufficient information and death in the ICU were associated with posttraumatic stress symptoms in families of ICU patients. Kirchhoff and Beckstrand[22] asked critical care nurses to rate obstacles and helps in providing end-of-life care to dying patients and the patients' families. Of the top 10 obstacles, 6 were associated with issues related to patients' families. Of the top 10 helps, 8 were related to how to ease patients' death for the patients' families. Kirchhoff and Beckstrand[22] concluded that nurses need assistance in caring for patients' families during this stressful time and that the assistance could take a number of forms: training in crisis, grieving and bereavement management and use of pastoral and spiritual care, social workers, and psychiatric liaisons.

Stress of Nurses

Issues related to end-of-life care and decision making have led critical care nurses to describe feelings such as stress, frustration, anger, sadness, helplessness, and moral distress.[34,35] Moral distress is associated with an inability of nurses to influence end-of-life decisions and decision-making processes,[34] aggressive care provided to patients who are not benefiting from such care,[9,36] and conflicts within patients' families and the families' indecisiveness about terminating treatments.[36] Moral distress also has been associated with nurses' inability to take the correct course of action because of institutional constraints.[37,38]

Moral distress is a serious problem for nurses who practice in ICUs, not just when providing end-of-life care to patients and patients' families, but in general.[9] Such distress may lead to burnout,[38] job dissatisfaction, and leaving the work environment.[9] In one study,[9] critical care nurses reported that moral distress affected their job satisfaction, physical and psychological well- being, self-image, spirituality, and decisions about their own health.

Purpose of the Study

We suspected that caring for dying patients and their families without sufficient education, an adequate practice environment, or emotional and instrumental support could influence critical care nurses' experiences in providing end-of-life care. The quality improvement initiative we describe in this article was designed to examine how use of multiple interventions could improve nurses' experience of end-of-life care in 5 areas: knowledge and ability, work environment, support for staff, support for patients and patients' families, and work stress related to specific end-of-life situations.

Methods

Setting

After approval was received from the institutional review board, the project was conducted in 4 adult ICUs at a medical center. Registered nurses were asked to participate anonymously by completing an investigator-designed tool. The tool was distributed twice to all currently employed nurses in the ICUs, before and after implementation of multiple interventions to improve perceptions of end-of-life care.

The critical care environment presents obstacles to providing quality end-of-life care.

Sample

In phase 1, fall 2003, the tool was distributed to 270 nurses; 91 returned data that were usable, for a response rate of 34%. In phase 2, spring 2005, the tool was distributed to 271 nurses; 127 returned data that were usable, for a response rate of 47%.

Tool

A 5-subscale tool consisting of 30 items (Table 1) was developed on the basis of the literature. The 5 domains were knowledge and ability, work environment, support for staff, support for patients and patients' families, and work stress related to specific end-of-life situations, such as overaggressive or underaggressive treatments, indecision by patients' families, and disagreement within the health care team regarding the goals of care. The items were scored on a 4-point Likert scale, ranging from very good (1) to poor (4). Higher scores indicated more negative perceptions. The knowledge and ability subscale had 8 items; the work environment, support for patients and patients' families, and work stress subscales consisted of 6 items each; and the support for staff subscale had 4 items. The tool included a single open-ended question soliciting qualitative data from participants.

Formal scheduled debriefing sessions are needed after withdrawal of life support.

Face validity of the tool was examined by a team of 8 experts in end-of-life care from within the medical center. The tool was pilot tested in the ICUs by 33 nurses. On the basis of the results, 15 items

Table 1
Questionnaire: domains and items

Domain	Items
Knowledge and ability	Provide end-of-life care Titrate medications to control dyspnea Use nonpharmacological interventions for comfort Support patients and their families through the end-of-life experience Withdraw life-sustaining treatments Discuss goals for care with family members when the outcome is uncertain Assist patients and their families in being able to complete rituals at the end of life Include ethnic/cultural aspects in the plan of care
Work environment	I am able to support patients and their families in developing a plan to meet their goals I am able to adjust my patient assignments related to end-of-life care Team members interact well in developing a plan of care Team members know the goals of patients and patients' families, including advanced directives Transition from aggressive medical care to comfort care occurs in a timely manner Values about treatment decisions are discussed openly and honestly
Support for staff	Staff debriefings Clinical consultations (pain, comfort, ethics) Ethics consultation Resources to plan care
Support for patients and their families	Social work support/access Case management Comfort care team Ethics consultation Space (waiting/conference room, patient's room) Information about procedures, bereavement, dying process
Work stress	Treatments not aggressive enough to meet patients' goals Treatments overly aggressive considering prognosis Prognosis incompatible with patient's goals Indecisiveness or lack of agreement about goals of care among patients' family members Disagreement about goals of care between patients' family members and providers Disagreement within the team about goals of care

were considered redundant and were deleted. On the basis of the scores in phase 1, a mean overall score of 2 (good) was selected as an achievable target indicator of improved quality of end-of-life care in the ICUs for phase 2. A rating of 2 (good) or 1 (very good) was considered an indicator of quality end-of-life care and did not exclude potential for continued improvement.

Interventions

The multiple interventions were implemented after the first survey in 4 adult ICUs: medical (MICU), surgical (SICU), cardiac, and trauma-neurosurgical. The interventions were a nursing-developed bereavement program for patients' families, a palliative medicine and comfort care team, use of preprinted orders for the withdrawal of life-sustaining treatment, hiring of a mental health clinical nurse specialist, and staff education in end-of-life care.

Nurses working in the 4 ICUs developed the bereavement program to support patients' families. The program was based on nurses' knowledge of programs in other ICUs, the current support for families of patients who died in the ICUs, and a goal to provide patients' family members with mementos the members could take with them after the patients died. The bereavement materials include a memory box, an envelope for a lock of hair, music compact discs, materials for making a print of the dying person's hand, a journal, a quilt, a door card, resource materials for family members after the death, and a sympathy card. The sympathy card is signed by staff who cared for the dying patient and is mailed to the patient's family 2 to 4 weeks after the death.

The palliative medicine and comfort care team consists of a full-time clinical nurse specialist and a part-time physician. When use of the team was started, the 2 team members attended nursing and medical staff meetings and described their services. The services primarily include managing pain and signs and symptoms; addressing prognosis and goals of care; supporting patients, patients' families, and staff; planning for discharge; and facilitating comfort care in the last days of life. Preprinted orders for the withdrawal of life-sustaining treatment were developed by a critical care fellow on the basis of a review of the literature and were reviewed by a team of registered nurses, respiratory therapists, and members of the palliative care team. The orders addressed withdrawal of support, including management of signs and symptoms during the withdrawal. The orders and the bereavement materials have been included in the standards of nursing care of the medical center.

A mental health clinical nurse specialist was hired to help with the care and management of patients who experienced psychiatric symptoms. Staff education in end-of-life care included multiple in-service presentations on the bereavement program, a 4-hour introduction course on end-of-life care, and a 4-hour course on management of pain and signs and symptoms at the end of life. Continuing education credits were offered as an incentive for nurses to attend the course on management of pain and signs and symptoms.

The multiple interventions were phased in during a period of 18 months. The bereavement program for patients' families and the comfort care team were implemented in the autumn of 2003. The mental

health clinical nurse specialist began working with the team in the winter of 2004. Staff education was offered in the autumn of 2004. Preprinted orders for the withdrawal of life-sustaining treatments were implemented in the spring of 2005. All of the interventions are still being used at the medical center.

Data Collection and Analysis

For phase 1, the tool was distributed as a hard copy 1 time only. For phase 2, the tool was distributed online 2 times. In both phases, nurses were asked to participate by anonymously completing the tool.

Data were analyzed by using SPSS, versions 13.0 and 14.0 (SPSS Inc, Chicago, Illinois). Because of the differences in sample sizes and composition and the inability to match respondents across phases 1 and 2, repeated-measures analysis of variance could not be used. A 2-way analysis of variance was used with nursing unit (ICU) and phase as the between-subjects factors. Differences in sample characteristics between phases 1 and 2 were determined by using Pearson χ^2 analysis for categorical variables and *t* tests for continuous variables.

Results

Characteristics of the Sample

Although the ICU samples were composed of different responding nurses at phases 1 and 2, few differences in demographic variables occurred (Table 2). The only significant difference was in educational preparation. Some nurses completed the tool in both phases, but the exact degree of overlap between the respondents in the 2 samples was not measured. Because of staff turnover and the need to maintain anonymity, we cannot be certain who responded in each phase.

Reliability of the Tool

Acceptable internal consistency reliability of the tool in phase 1 provided preliminary support for the reliability of the tool. Cronbach α coefficients ranged from 0.71 (work environment) to 0.93 (knowledge and ability). An internal consistency reliability coefficient of 0.70 is considered adequate for a new instrument,[39] although 0.80 or greater is more desirable, and 2 of 5 subscales met this criterion. In phase 2, Cronbach α coefficients ranged from 0.76 (support for staff) to 0.91 (knowledge and ability). In this phase, 3 of 5 subscale internal consistency reliability coefficients were greater than 0.80.

Quantitative Data

Table 3 contains descriptive data for the 5 subscales. The work stress subscale was recoded so that all 5 subscale scores were congruent, with low scores indicating more favorable responses and higher scores indicating less favorable responses.

Work environment ($F_{3,1} = 5.9$; $P = .016$), staff support ($F_{3,1} = 14.7$; $P < .001$), patient and family support ($F_{3,1} = 16.1$; $P < .001$), and work stress ($F_{3,1} = 173.2$; $P < .001$) all improved over time. Overall knowledge and ability scores did not differ significantly over time, but interaction between unit and phase was significant ($F_{3,1} = 4.18$; $P = .007$); the knowledge and ability scores of the SICU nurses worsened and the scores of the other 3 groups showed improvement over time. The units differed significantly in work environment scores ($F_{3,1} = 6.2$; $P < .001$) and patient and family support ($F_{3,1} = 3.0$; $P = .03$).

Characteristics of nurses in relation to subscale scores were calculated on the combined data set from phases 1 and 2. Nurses with national critical care certification did not differ significantly from noncertified nurses on any of the 5 subscales. Although when the Mann-Whitney test was used, $P = .06$ for knowledge and ability, more years of ICU nursing experience was the only nurse characteristic correlated with greater perceived knowledge and ability in end-of-life care (Spearman $\rho = -0.19$; $P = .007$).

> Nurses with greater ICU experience had greater perceived knowledge and ability in end-of-life care.

Qualitative Analysis

In phase 2, in addition to filling out the tool, 38 (30%) of the respondents provided written qualitative comments on improvements in end-of-life care.

Table 2
Characteristics of the sample[a]

Characteristic	Phase 1 (n = 91)	Phase 2 (n = 127)	Tests of difference (*P*)
Sex			Pearson $\chi^2 = 0.21$ (.65)
Women	73 (80)	71 (56)	
Men	10 (11)	12 (9)	
No answer	8 (9)	44 (35)	
Age, mean (SD), range, y	35.8 (8.3) 24-58	37.4 (8.6) 23-64	*t* = -1.29 (.20)
Years in intensive care unit, mean (SD)	7.5 (6.8)	7.3 (6.2)	*t* = 0.193 (.85)
Educational preparation			Pearson $\chi^2 = 16.26$ (.006)
Associate degree	10 (11)	27 (21)	
Baccalaureate degree	61 (67)	83 (65)	
Master's degree	3 (3)	10 (8)	
Doctoral degree	0 (0)	5 (4)	
No answer	17 (19)	12 (9)	
Specialty certification	17 (19)	16 (13)	Pearson $\chi^2 = 1.6$ (.20)

[a] Values are reported as number of respondents (%) unless otherwise indicated.

Table 3
Phase 1 and phase 2 subscale scores[a]

	Intensive care unit				
Phase 1	Medical (n = 26)	Surgical (n = 17)	Trauma-neurosurgical (n = 18)	Cardiac (n = 30)	All (n = 91)
Knowledge and ability	2.12 (0.68)	1.77 (0.62)	2.29 (0.64)	2.18 (0.71)	2.11 (0.68)
Current work situation	2.51 (0.47)	2.42 (0.54)	2.18 (0.48)	2.73 (0.50)	2.50 (0.53)
Support for staff	3.10 (0.57)	3.01 (0.81)	3.18 (0.68)	2.88 (0.64)	3.10 (0.69)
Support for patient/family	2.48 (0.64)	2.54 (0.54)	2.68 (0.60)	2.77 (0.59)	2.62 (0.60)
Work stress	3.17 (0.54)	3.35 (0.49)	3.18 (0.40)	3.30 (0.46)	3.25 (0.48)
Phase 2	**(n = 33)**	**(n = 23)**	**(n = 44)**	**(n = 25)**	**(n = 125)**
Knowledge and ability	1.84 (0.56)	2.16 (0.76)	1.74 (0.56)	1.98 (0.57)	1.88 (0.62)
Current work situation	2.19 (0.59)	2.40 (0.75)	1.96 (0.54)	2.38 (0.64)	2.18 (0.64)
Support for staff	2.65 (0.67)	2.65 (0.79)	2.72 (0.52)	2.83 (0.56)	2.70 (0.62)
Support for patient/family	2.07 (0.58)	2.25 (0.75)	2.16 (0.44)	2.40 (0.53)	2.21 (0.57)
Work stress	2.22 (0.55)	2.10 (0.50)	2.34 (0.54)	2.04 (0.69)	2.21 (0.58)

[a] Values are reported as mean (SD). Range of responses is 1-4; higher scores indicate more negative perceptions.

Qualitative description[40] was used to analyze the responses to the open-ended item, "Please share anything that you think is important for us to consider in building a supportive environment for end-of-life care." Two of us (L.H. and T.T.G.) read the transcripts, coded them independently, and then discussed the coding until agreement was reached. A total of 14 preliminary categories were collapsed into 8 major categories by mutual agreement. The number and percentage of statements pertaining to each category are shown in Table 4. The qualitative remarks and the coding scheme were reviewed and agreed to by one of us (MD.S.) after the analysis was completed.

Better communication among nurses, physicians, and families was the most frequent remark made.

The most common type of remark concerned the need for better communication among nurses, physicians, and patients' families. Included in the communication category were requests for more frequent palliative care rounds and family conferences, including conferences with a patient's physicians present. The second most frequent category was education. These remarks referred to a need for additional physicians, nurses, and family education, such as providing patients' families with written materials on the dying process.

Suggestions for a written protocol for nursing management of pain, dyspnea, and comfort also were mentioned. Although prewritten orders existed, some nurses desired further direction, for example, on titration of opioids. The theme patient and family wishes referred to nurses' dissatisfaction with the timeliness and degree to which the wishes of patients and patients' families concerning end-of-life were elicited and followed.

Several nurses expressed appreciation that the interventions were effective in improving end-of-life care. This category was called improvements noted. The following is a quotation illustrating both communication and improvements noted:

> I believe that end-of-life care has greatly improved over the last year. I do believe that communication between teams of physicians is an area that causes prolonged discomfort for patients who have a poor prognosis. . . . The preprinted orders for the withdrawal of care have been incredibly helpful especially for new interns, both MDs and RNs.

Lack of spiritual support was a concern cited by some respondents. The limited chaplaincy service at the medical center serves patients and families on weekdays but is available only on an on-call basis on weekends and nights.

The other 2 categories, physician behaviors and availability of services, had the fewest number of remarks but still provided insight on nurses' perceptions of continuing barriers to effective end-of-life care. Concerns about physicians' behaviors centered on 4 specific behaviors: "disappearing," "practicing skills," "conveying unrealistic expectations," and "not listening to nurses." Availability of services referred to the absence of a palliative care team on nights and weekends.

Discussion

End-of-life training is not usually mandatory for critical care nurses, even though death often occurs in ICUs. Critical care nurses are acknowledged experts in physical care for critically ill patients. The nurses are certified in various courses such as Advanced Cardiac Life Support and follow algorithms, protocols, and procedures to stabilize patients' conditions and treat the patients. However, few algorithms, protocols, and procedures are available to guide the care of patients and patients' families at the end of life.[2,41]

We postulated that caring for dying patients and their families without sufficient education, an adequate practice environment, or emotional and instrumental support could influence critical care nurses' perceptions of providing end-of-life care. Improvements in the mean scores of the 5 subscales indicated that the use of multiple interventions improved nurses' perceptions of knowledge and ability in end-of-life care, support provided for staff, support for dying patients and the patients' families, work environment, and work stress.

Unexpectedly, one finding from the survey at phase 2 was that the knowledge and ability subscale scores of SICU nurses worsened, whereas the scores of nurses in the other 3 ICUs improved. This finding may have several explanations. One explanation could be higher nurse turnover in the SICU, leaving newly hired nurses with less exposure to the multiple interventions before they completed the tool at phase 2. Another explanation could be limited exposure to end-of-life care because of differences in the number of deaths in each ICU. Table 5 shows numbers of deaths in the 4 ICUs during a 1-year period. Although relatively few deaths occurred in the SICU, the number of deaths in the cardiac ICU was lower still. Another explanation could be that the nurses in the SICU in phase 2 had fewer years of ICU experience than did the SICU nurses in the phase I sample. A 1-way analysis of variance showed no significant difference between the samples, however ($F = 0.21$; $P = .65$).

Not unexpectedly, nurses with more years of ICU experience scored higher in knowledge and ability. End-of-life care skills traditionally have been taught to critical care nurses on the job, and providing specific skills training and education for new nurses may help in the challenging transition from novice to skilled critical care nurse when helping dying patients and the patients' families.

The differences among ICUs in patient and family support may have several explanations. Nurses working in the 4 ICUs developed the bereavement program to support patients' families, but the program was first implemented in the MICU. The MICU was the unit with the highest number of deaths, which was particularly challenging to the nurses, who felt their support of families was inadequate at that time. As with any program, considerable ongoing support by nurses and administration is needed for a bereavement program to succeed.[42] As suggested by Kirchhoff and Beckstrand,[22] bereavement management and psychiatric liaisons are ways nurses can be assisted in their care of patients' families during the families' time of loss; both of these interventions were implemented at the medical center. Implementation of the palliative medicine and comfort care team may also have added to the improvement in patient and family support scores at phase 2. Palliative care has become increasingly important in ICUs and may have much to offer staff to help provide quality care to dying patients and the patients' families.[43,44]

Work stress related to specific end-of-life situations significantly improved over time in the 4 units. This change is consistent with nurses' increased confidence in providing end-of-life nursing care and accessing resources necessary for effective end-of-life care. The frequent calls for improvements in communication within the health care team and with patients' families in the narrative comments solicited with the phase 2 survey reflect this finding.

The second most frequent category in the comments was education. Although end-of-life care has

Table 4
Categories extracted by qualitative description from remarks

Theme	No. (%) of respondents
Communication	14 (37)
Education	11 (29)
Protocol	7 (18)
Patient and family wishes	6 (16)
Improvements noted	5 (13)
Lack of spiritual support	5 (13)
Physician behaviors	4 (11)
Availability of services	3 (8)

Table 5
Numbers of deaths in the intensive care units

Type of unit	No. of deaths 2004-2005
Medical	118
Trauma-neurosurgical	102
Surgical	24
Cardiac	5

been a focus of staff education, the need for education of physicians, nurses, and patients' families continues. The categories patient and family wishes and physician behaviors include descriptions that support similar findings in the literature.[22] The category availability of services is an area for improvement in the medical center.

Implications

The multiple interventions implemented to improve end-of-life care in the ICUs had a modest influence on the nurses' perceptions of (1) knowledge and ability, (2) work environment, (3) support for staff, (4) support for patients and patients' families, and (5) work stress related to specific end-of-life situations, and our results indicate areas in need of further attention. With the improvements in phase 2, most of the subscale overall means were higher than our desired criterion of less than 2.0 (good). This finding indicates a need for continued practice development in end-of-life care across all 4 ICUs and in specific targeted areas identified through individual scale items and narrative comments. Other researchers, critical care clinicians, and end-of-life practitioners may wish to replicate the study by using our tool to plan enhancements of end-of-life care at their individual institutions, including further evaluation of the reliability and validity of the tool.

Limitations

One limitation of the study was the moderate response rate, although in the pilot phase the tool consistently took less than 12 minutes to complete (mean, 9 minutes). A higher response rate combined with less variability in the sample between phase 1 and phase 2 would have improved the project's internal validity. Because of staff turnover between the 2 phases, we cannot be certain that the independence-of-observations assumption of analysis of variance was fully met. However, for descriptive purposes, the results remain useful. Although *P* values are reported, these results should be interpreted cautiously. In future studies, tracking the nurses who responded in both phases vs just phase 1 would be useful.

Additionally, the investigator-designed tool requires further validation. Although we have preliminary evidence of internal consistency reliability, other methods to evaluate reliability and validity should be completed.

We cannot be certain that improvements in nurses' perceptions of end-of-life care translated into improved quality of care. We evaluated nurses' perceptions before and after implementation of the multiple interventions because the problem was first identified by practicing nurses in the MICU. Further study should include an evaluation of the congruence between nurses' perceptions, objective measures of quality of care, and perceptions of patients' families of end-of-life care. Such studies should be expanded to include critical care nurses working in pediatric ICUs.

Conclusions

This study provided information that helped guide improvements and continues to guide improvements in end-of-life care in 4 adult ICUs at the medical center. The study is an example of how an institution identified its own problems with delivering end-of-life care and tailored approaches to remedy the problems. The tool may also be useful to other institutions with interest in improving nurses' perceptions of end-of-life care.

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CE Test

Test ID A0918033: Nurses' Perceptions of End-of-Life Care After Multiple Interventions for Improvement. *Learning objectives:* 1. Describe current trends used in handling end-of-life issues. 2. Recognize how moral distress is associated with nurses' inability to influence end-of-life decisions between nurses, physicians, and families. 3. Identify some key strategies that will help nurses with interventions when dealing with end-of-life decisions.

1. Factors identified as important for providing end-of-life care include which of the following?
a. Strong communication and collaboration between nurses and physicians, the use of palliative care service, and adequate support for patients, families, and staff.
b. A strong communication program for patients and families, the use of a mental health psychologist, and a standard end-of-life policy that is followed for all patients.
c. Use of a palliative care service, adequate support for staff only, and utilization of a mental health clinical nurse specialist for all end-of-life patients and families.
d. The ready availability of ethics consultations, education for patients and families on end-of-life issues, and strong communication and collaboration between health care providers, patients, and patients' families

2. In relation to the work environment, which of the following best describes identified obstacles to providing quality end-of-life care?
a. Conflict with one's own personal beliefs and values, giving hope for families, and physicians' disregard for nursing input
b. Physicians' disregard for patients' wishes for care, lack of education of nursing staff in providing end-of-life care, and minimal organizational support for nursing and physicians
c. Disagreement and conflict regarding differing views of nurses and physicians, avoidance of patients' families, and giving false hope
d. Disagreement and conflict on aggressive treatment, giving hope for families and nursing staff, and nurses' disregard for patients' wishes for care

3. In the study by Puntillo et al, unit level meetings that focused on grief counseling and debriefing were found to do which of the following?
a. Occur after every patient death
b. Occur once per month to discuss all the deaths that occurred
c. Rarely or never occur after a patient died
d. Occur biweekly to debrief on all patients who died the week before

4. In the study by Kirchhoff and Beckstrand, of the 10 obstacles rated by critical care nurses, which of the following were identified?
a. Six were associated with issues related to nursing decisions and support.
b. Six were associated with issues related to patients' families.
c. Eight were associated with how to ease patients' death for the patients' families.
d. Six were associated with issues related to patients' death for the patients' families.

5. Feelings of anger, frustration, stress, and helplessness best describe which of the following?
a. Social distress
b. Recognition distress
c. Moral distress
d. Frustration distress

6. Which of the following best identifies the purpose of the study?
a. To examine how the use of multiple interventions could improve nurses' experience in end-of-life care in 5 areas
b. To examine how the use of multiple interventions could improve patients' families' experiences in end-of-life care in 5 areas
c. To examine how the use of multiple interventions could improve nurses' and physicians' experience in end-of-life care in 5 areas
d. To examine how the use of multiple interventions could improve nurses' experience in end-of-life care in 8 areas

7. Which of the following identifies the 5 domains of the tool used in the study?
a. Skill mix, experience, communication, work environment, and life stress related to specific end-of-life situations
b. Nurse to physician communications, knowledge and ability, work environment, life stress related to specific end-of-life situations, and patients' choices in health care decisions
c. Work environment, nurse to physician communications, support for nursing and ancillary staff, skill mix, and work stress related to specific end-of-life situations
d. Work environment, knowledge and ability, support for staff, support for patients and patients' families, and work stress related to specific end-of-life decisions

8. Which of the following best identifies the implemented interventions done after the first survey was completed?
a. Nursing developed bereavement program for nurses and staff, use of preprinted orders for withdrawal of life-sustaining treatment, and family education program for end-of-life care issues
b. Nursing developed bereavement program for patients' families, use of preprinted orders for withdrawal of life-sustaining treatment, and hiring of a mental health clinical nurse specialist
c. Palliative and comfort care team, staff education on moral distress associated with end-of-life care issues, and use of preprinted orders to continue treatment based on family requests
d. Palliative and comfort care team, physician education on nurses' moral distress associated with end-of-life care issues, and communication and collaboration teams between nurses and physicians

9. Pain management, addressing prognosis and goals of care, and planning for discharge are identified as which of the following team's services?
a. Palliative medicine and comfort care team
b. Crisis intervention and comfort care team
c. Ethics committee and nursing care team
d. Spiritual and comfort care team

10. Which of the following were identified as the 2 most common remarks of the analysis?
a. Need for better communication among nurses, physicians, and patients' families and education
b. Need for better clarification on preprinted orders for withdrawal of treatment and family education on end-of-life care processes
c. Education on stages of death and dying, and more support of clinical management when dealing with end-of-life issues
d. Need for better communication of care rounds, education, and withdrawal of care; support from clinical management teams; and use of mental health counselors for staff

11. Findings of the survey identified worsened *knowledge and ability* scores among SICU nursing staff versus those in the other 3 types of ICUs. Which of the following identifies a possible explanation for this?
a. New graduate nurses with less than 1 year of experience
b. Concerns with physicians' behaviors and inability to clearly define treatment measures
c. Higher turnover in the SICU, leaving newly hired nurses with less exposure to the multiple interventions before they completed the tool at phase 2
d. Higher turnover in the SICU, leaving newly hired nurses with more exposure to the multiple interventions before they completed the tool at phase 2

12. What was the conclusion identified by the study in the implementation of end-of-life care issues?
a. All interventions applied were developed and implemented without the need for a change.
b. The findings indicate a need for continued practice development in end-of-life care as identified through individual scale items and narrative comments.
c. Nurses felt there were no further needs for practice development as they had been addressed extensively.
d. The findings did not indicate a need for continued practice development in end-of-life care situations through individual scale items and narrative comments.

Test ID: A0918033 Contact hours: 1.0 Form expires: May 1, 2011. **Test Answers:** Mark only one box for your answer to each question. You may photocopy this form.

1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.
❑a	❑a	❑a	❑a	❑a	❑a	❑a	❑a	❑a	❑a	❑a	❑a
❑b	❑b	❑b	❑b	❑b	❑b	❑b	❑b	❑b	❑b	❑b	❑b
❑c	❑c	❑c	❑c	❑c	❑c	❑c	❑c	❑c	❑c	❑c	❑c
❑d	❑d	❑d	❑d	❑d	❑d	❑d	❑d	❑d	❑d	❑d	❑d

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