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Assessment of an Interprofessional Online Curriculum for Palliative Care Communication Training

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Abstract

Background: Curricular changes to palliative care communication training are needed in order to accommodate a variety of learners, especially in lieu of the projected national shortage of hospice and palliative medicine physicians and nurses.
Objective: This study assessed the utility of a palliative care communication curriculum offered through an online platform and also examined health care professionals' clinical communication experiences related to palliative care topics.
Design: Four of the seven modules of the COMFORT communication curriculum were made available online, and participant assessments and knowledge skills were measured.
Setting: Modules were completed and assessed by 177 participants, including 105 nurses, 25 physicians, and a category of 'other' disciplines totaling 47.
Measurements: Premodule surveys consisted of closed-ended items developed by the interdisciplinary research team. Postcurriculum evaluation and knowledge quizzes were used to assess program effectiveness.
Results: Among all participants, end-of-life care and recurrence of disease were considered the most challenging communication contexts and discussion about treatment options the least challenging. Mean responses to postcurriculum evaluation for all modules across nurse and physician participants was greater than 4 on a scale of 1 to 5.
Conclusions: This study identifies the COMFORT communication curriculum as an effective online curricular tool to teach multiple disciplines specific palliative care communication.

Introduction

The successful integration and implementation of palliative care across settings and systems can be impeded by a highly variable infrastructure and referral processes that rely on individual clinicians.[1] Dependent upon other health care professionals' ability to identify palliative appropriate patients, the referral process can include engaging patients and families about palliative care in order to ease the transition and introduction of a palliative care team.[2,3] Teaching palliative care communication skills to health care professionals fortifies the unique skill and ability of a palliative care team and teaches palliative topics.[3] In addition to growing the field vis-à-vis undergraduate medical education for interprofessional learners,[4,5] there is a need to educate clinicians who have had wide variation in their exposure to palliative care. For example, the Accreditation Council for Graduate Medical Education does not provide explicit educational requirements for palliative care to all areas of medicine that contribute to the care of palliative patients.[6] Structural changes to palliative care education are needed in order to accommodate a variety of learners, especially in lieu of the projected national shortage of hospice and palliative medicine physicians and nurses which limits the availability and expertise of palliative care educators.[3,6,7]

Online or Internet-based education is an innovative educational tool that has been successfully used to provide communication skills training and palliative care instruction.[6,8] Internet-based instruction focused on communication with patients has yielded positive learning outcomes,[9]

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including increased shared decision making skills and patient education,[8] as well as positive results for patients.[8] When compared to clinical observation instruction, residents who completed online modules and a face-to-face training session performed better on simulated code status discussions.[10] Recent work has demonstrated that students of all professions benefit from an online interprofessional palliative care curriculum, learning the roles of other professionals and the value of team collaboration.[11] As time, space, resources, and expertise available to conduct educational sessions remain limited, online palliative care education offers a low-cost alternative to reaching a broad audience with minimal time demands and wide acceptability.[8]

Among interprofessional learners, communication has been identified as the most useful aspect of palliative care education.[3] However, what remains unknown is the specific communication training needs among practicing clinicians and whether or not future curriculum needs in palliative care can be successfully met by online education. The purpose of this study was to examine health care professionals' clinical communication experiences related to palliative care topics and assess the utility of a palliative care communication curriculum offered through an online platform.

Methods

Design and content of the curriculum

The COMFORT communication curriculum comprises the seven basic principles designed to be taught and implemented in early palliative care communication.[12–16] These principles find their theoretical roots in patient-centered care and also in the narrative medicine movement. The COMFORT model is offered to assist health care professionals in their practice of narrative health care and patient-centered communication in palliative care. The principles of COMFORT are **C**ommunication; **O**rientation and Opportunity; **M**indful presence; **F**amily; **O**penings; **R**elating, and **T**eam.[17,18] These principles are not a linear guide or algorithm as most of the physician-based communication protocols are; rather, they are principles that should be used concurrently and reflectively among interprofessional clinicians who provide care for patients/families with life-limiting illness.

Setting

Four of the seven modules of the COMFORT communication curriculum were made available through CE Central, an online continuing education platform hosted by the University of Kentucky Healthcare (www.cecentral.com). Data was collected from March through December 2012. The University of Kentucky Institutional Review Board approved the study.

In the Communication module, learners were exposed to three foundational components for communication in palliative care practice, including task and relational communication, verbal clarity, and nonverbal immediacy. These three principles provide the tools to initiate and respond to difficult communication encounters. The Orientation and Opportunity module focused on health literacy and cultural theory. An overview of family communication patterns and a typology of family caregiver communication styles were provided in the Family module. Finally, the Team module presented an overview of team communication, focusing on interdisciplinary collaboration, reflective practice, collective ownership of goals, and warning against communication patterns that lead to deficient group processes.

Procedure

An e-mail announcement and link was sent to all current CE Central account holders as well as a member distribution list for individuals who completed an End-of-Life Nursing Education Consortium course. Participants accessed free modules through the CE Central website and were not required to complete all modules available. Each module was approximately 50 to 60 minutes in length. The need for written informed consent was waived as participation in the module included consent for study participation.

Modules began with an introduction of the COMFORT curriculum and the evidence base that informed its development. Next, a didactic was provided by three faculty members (coauthors of the curriculum) who introduced core communication concepts and skills for the module. A video clip of real-time interactions between hospice teams and caregivers from another study[19] were integrated into this portion of the module. Following the video segment was a roundtable discussion between the three faculty members. At this time, another real-time video encounter was shown and then discussed by faculty, who highlighted important communication concepts and strategies. Finally, one faculty member provided a summary and final video clip from a patient or caregiver to highlight the importance of clinical interaction and its impact on quality of care practices.

Assessment of the program

Prior to the start of the module, participants were prompted to report their current clinical communication experiences related to module content. Pre-module surveys consisted of closed-ended items developed by the interdisciplinary research team and based on prior communication assessment research.[20] Postcurriculum evaluation and knowledge quizzes were used to assess program effectiveness. Course evaluation items were in a format provided by CE Central, and the interdisciplinary research team created knowledge quizzes based on module content. Participants were also asked to identify the most useful communication skill or idea from the module that they might incorporate into their clinical practice.

Results

Overall, 292 modules were completed by 177 participants (range 1 to 4 modules each). Among the 177 clinicians who completed at least one online module, 105 were nurses, 25 identified as physicians, and 47 comprised the 'other' category, identifying themselves as emergency medicine technician ($n=1$), dental hygienist ($n=1$), health administrator ($n=5$), nonhealth care professional ($n=5$), occupational therapist ($n=1$), pharmacist ($n=4$), pharmacy technician ($n=2$), physician assistant ($n=3$), psychologist ($n=1$), respiratory therapist ($n=1$), social worker ($n=6$), and student ($n=7$). Nurses were APNs ($n=21$) and RNs ($n=84$). Tables 1, 2, and 3 provide an overview of participants' clinical communication experiences. Tables 4 and 5 summarize course

Table 1. Self-reported Confidence in Communication from Presurvey Data[a]

Confidence in communication	*Nurses* (n = *94*)	*Physicians* (n = *25*)	*Other*[b] (n = *40*)
(1) with patients about understanding the diagnosis	4.5	5.0	4.4
(2) with families about understanding the treatment	4.6	4.8	4.4
(3) with the health care team	4.9	4.7	4.6
(4) with patient/family about pain/symptoms	4.9	4.8	4.3
(5) attempt to recognize the individuality of a patient	5.0	4.9	4.5
(6) attempt to understand the patient's life prior to the visit	4.7	4.4	4.3
(7) attempt to focus on communication with patient beyond medical information	4.6	4.7	4.6
Most challenging communication context			
Initial diagnosis	17.0%	8.0%	20.0%
Treatment options	9.6%	8.0%	5.0%
Remission	7.4%	8.0%	12.5%
Recurrence of disease	23.4%	32.0%	17.5%
End-of-life care	38.3%	44.0%	45.0%
No answer	4.3%		
Least challenging communication context			
Initial diagnosis	10.6%	16.0%	30.0%
Treatment options	40.4%	32.0%	32.5%
Remission	18.1%	24.0%	20.0%
Recurrence of disease	5.3%	4.0%	2.5%
End-of-life care	25.5%	24.0%	15.0%

[a]Respondents indicated how well they communicated on a 1 (*not well*) to 6 (*very well*) scale.
[b]Includes dental hygienist ($n = 1$) EMT ($n = 1$), health administrator ($n = 3$), nonhealth care professional ($n = 3$), occupational therapist ($n = 1$), respiratory therapist ($n = 1$), pharmacist/pharmacy technician ($n = 6$), physician assistant ($n = 3$), psychologist ($n = 1$), social worker ($n = 6$), student ($n = 7$).

evaluations and knowledge scores. As participants varied in the number of modules they completed, data reflect the number of responses by module.

Clinical communication experiences

Participants reported their confidence in communication, as summarized in Table 1. Nurses reported the greatest confidence in communication that attempted to recognize the individuality of patients (mean = 5.0), with least confidence in talking with patients and families about treatment (mean = 4.6) and with information beyond medical information (mean = 4.6). Physicians had greatest confidence in their ability to help patients understand diagnoses (mean = 5.0) and were least confident in understanding the patient's life prior to the visit (mean = 4.4). Clinicians falling into the 'other' category were less confident overall, particularly in discussions about pain and symptoms and understanding the patient's life (mean = 4.3). Among all participants, end-of-life care and recurrence of disease were considered the most challenging communication contexts, and discussion about treatment options the least challenging.

Table 2 summarizes cultural differences and health literacy in clinical communication. The majority of physicians (80%) reported that cultural differences with patients and families reduce the quality of care they deliver, with more than one-third of nurses (47.6%) and 'other' clinicians (42.9%) reporting similarly. Half of all nurses observed conflict caused by cultural differences between patients and clinicians occurring 50% of the time or more, with 40% of physicians reporting these observations. More than half of all participants reported that they assess the patient and family for health literacy level. Communication with family members, as summarized in Table 3, was most common for physicians interacting with patients. The majority of participants reported that they attend meetings with family

Table 2. Cultural Differences and Literacy in Communication from Presurvey Data

	Nurses (n = *42*)	*Physicians* (n = *10*)	*Other*[a] (n = *7*)
Do you feel that cultural differences between you and patients/families reduce the quality of care you deliver?[b]	47.6%	80.0%	42.9%
Do you assess patients/families for their health literacy level?	73.8%	60.0%	71.4%
How often do you observe conflict that is caused by cultural differences between health care professionals and patients/families?[c]	50.0%	40.0%	28.6%

[a]Includes EMT ($n = 1$), pharmacist ($n = 1$), physician assistant ($n = 1$), social worker ($n = 1$), student ($n = 2$), other ($n = 1$).
[b]Participants responding yes.
[c]Participants responding 50% of the time or greater.

Table 3. Communication with Family Members from Presurvey Data

	Nurses (n = 28)	*Physicians* (n = 8)	*Other*[a] (n = 7)
How often are family members present when you interact with patients?[b]	35.7%	50.0%	28.6%
How often do differences within families cause conflict in patient care?[b]	17.8%	0%	14.3%
How often are you involved in structured meetings with staff and family members (also known as family meetings)?[c]	67.9%	75.0%	71.4%
What is the most common subject of your communication with family members?Teaching specific skills (e.g., pain management)	14.3%	37.5%	14.3%
Educating about illness (explaining illness)	10.7%	12.5%	28.6%
Dealing with decision making (treatment plan)	28.6%	37.5%	42.9%
Supporting emotional and psychological issues (depression and anxiety)	46.4%	12.5%	14.3%

[a]Includes nonhealth care professional ($n = 1$), pharmacist ($n = 1$), physician assistant ($n = 1$), social worker ($n = 1$), other ($n = 3$).
[b]Participants answering 75% or more of the time.
[c]Participants answering 25% of the time.

members about 25% of the time. Primary communication between physicians and family members involved teaching and decision making, while the majority of nurses (46.4%) reported that communication with family members is primarily psychosocial in nature.

Postcurriculum evaluation

With the exception of 'other' disciplines reporting low evaluation for the module on orientation and opportunity (mean = 1.6), mean responses to postcurriculum evaluation for all modules and across all disciplines was greater than 4 on a scale of 1 to 5. Nurses provided the highest evaluation scores overall (mean = 4.53), followed by physicians (mean = 4.39) and then other disciplines (mean = 3.94). The mean evaluation score for each item in the three groups (nurses, physicians, others) was compared. Using SPSS 22.0 (IBM, Armonk, NY) statistical software, the nonparametric Kruskal-Wallis test was conducted to ascertain specific group of difference at item level. Table 4 shows statistically significant differences between professional groups. Although the 'other' disciplines category averaged 68% in the Orientation and Opportunity module, participants in all modules scored 70% or better on knowledge quizzes completed after the curriculum (see Table 5). Nurses performed best on the Communication module (86%), with other disciplines performing best on the knowledge quiz for the Family Communication module (89%), and physicians scoring highest on the Team Communication module (average score 92%).

Open-ended responses in which participants were asked to identify the most useful communication skill or idea introduced in each module were categorized by identifying and combining patterns of similar responses. In the Communication module, nurses ($n = 58$) and other disciplines ($n = 33$) highlighted learning about a comprehensive narrative approach and active listening techniques, while physicians provided no response. Nurses ($n = 32$), physicians ($n = 8$), and

Table 4. Comparison of Mean Likert Score Response to Evaluation Items on Postworkshop Questionnaire for All Modules by Profession

Evaluation item	*Profession*	*Total*	*Mean score*	*Mean rank*	*Kruskal Wallis p values*
1. The objectives for this activity were achieved.	Nurse	125	4.58	91.78	0.068
	Physician	28	4.36	71.43	
	Other	24	4.63	95.00	
2. The objectives for this activity were relevant/useful to my practice.	Nurse	125	4.55	93.88	0.008**
	Physician	28	4.21	65.00	
	Other	24	4.54	91.58	
3. The teaching and learning methods were effective.	Nurse	125	4.57	92.54	0.001**
	Physician	28	4.18	57.54	
	Other	24	4.75	107.02	
4. The faculty member presented the material clearly.	Nurse	125	4.62	92.62	0.036*
	Physician	28	4.36	69.43	
	Other	24	4.63	93.00	
5. The faculty member was knowledgeable about the subject.	Nurse	125	4.66	93.34	0.004**
	Physician	28	4.32	63.96	
	Other	24	4.63	90.38	

Likert response categories range from 1 (*strongly disagree*) to 5 (*strongly agree*).
*$p < 0.05$
**$p < 0.01$

Table 5. Average Percent Correct On Posttest Knowledge Quiz

	Nurses	*Physicians*	*Other*[a]
Communication module	86% (n=64)	84% (n=18)	78% (n=21)
Orientation/Opportunity module	70% (n=36)	77% (n=8)	68% (n=7)
Family Communication module	83% (n=23)	82% (n=8)	89% (n=4)
Team Communication module	80% (n=15)	92% (n=6)	76% (n=5)

[a]Includes EMT (n=2), pharmacist (n=8), physician assistant (n=5), psychologist (n=1), occupational therapist (n=1), respiratory therapist (n=1), social worker (n=4), student (n=7), other (n=8).

others (n=5) reported that ''cultural inclusion'' and the ''importance of accommodation'' were learned in the Opportunity/Orientation module. One nurse noted that ''even if a patient is educated they still may have difficulty understanding all the options.'' Similarly, a physician assistant reported that the module encouraged ''self-reflection of clinical communication.''

Listening was highlighted again in the module on Family Communication, with physicians (n=9) identifying the need to ''understand conversation patterns'' and nurses (n=23) and other colleagues (n=4) reporting the need to listen ''for cues that will give me more information about the family dynamics.'' Knowing what to listen for when interacting with family members was considered one new tool for learning about family dynamics. An APN nurse responded, ''continually assessing/reassessing communication patterns and individual family member needs'' was the most useful communication skill obtained from the module. Finally, nurses (n=15), physicians (n=6), and other colleagues (n=5) shared that the Team Communication module taught them to communicate better within their team. A nurse revealed the need to ''make myself available to other team members for discussion.'' Other nurses reported learning to ''be more assertive in my role as a nurse with new education'' and ''ask other team members for their input.'' In referring to the content in the Team module, a male participant from the 'other disciplines' described that he had learned to ''be confident in what I have to bring to the table as far as all my knowledge and interactions with the patient.''

Discussion

This paper reports on the successful implementation of an online palliative care communication curriculum for interdisciplinary health professionals. While interprofessional education has been proffered to meet the educational demands in hospice and palliative care, institutions struggle to find the support and time to introduce interprofessional coursework and opportunities into an already overextended curriculum.[21] Findings from this study support the value and practicality of online communication training for improved palliative care practice and suggest that the COMFORT communication curriculum can successfully be offered to interprofessional colleagues who will require introductory palliative care education.

The profound need for palliative care communication training is notably established in the reported communication experiences of participants. Not surprisingly, end-of-life communication was considered most challenging across all disciplines. Especially during diagnosis of advanced, progressive disease, caregivers want more while patients want less,[22] and clinicians face the challenge of meeting both of these needs simultaneously. There has been much research on the need to provide communication skills training for clinicians, and recent programs have been developed to meet these needs.[23] However, it is interesting to note that communication about recurrence was considered more challenging than initial diagnosis. Communication about recurrence has been reported as challenging,[24] with recurrence communication often consisting of ambiguous communication about prognosis. Future communication curriculum is needed to help clinicians from all disciplines address recurrence and follow-up plans of care.

Findings from participants' clinical communication experiences provide direction for the development of future communication curriculum. Similar to other research findings, more research is needed to ascertain quality communication instruction that enables discussions that are sensitive to cultural and religious considerations.[25] The absence of nurses and other disciplines during communication with family is also concerning, as family meetings require multidisciplinary clinical approaches to ensure holistic care.[26] Reported experiences in this study demonstrate the ongoing need for communication training.

While the study found that the curriculum and format are innovative in addressing palliative care communication education for practicing clinicians, several limitations exist. Evaluation excluded participant demographics, consisting of participant self-report only, and did not account for actual enactment of communication skills. Thus, only knowledge of communication concepts and skills can be considered for program assessment. Further, it is not clear if participants had prior experiences working in a palliative care setting that may have influenced their evaluation of the curriculum and topics. A minimal understanding of the communication challenges and needs of chaplains and social workers remain, as the study sample primarily consisted of nurses and physicians.

Treating communication as a formalized component of palliative care practice has always been viewed as a priority in the field.[27] The online technological component of training for health care professionals allows for content delivery that is asynchronous and focused. Training programs in palliative and end-of-life care are successful in reception as well as knowledge retention and application in the real-world context.[28–30] These studies and others address the powerful benefits of online curricula, but also emphasize the needed integration with inperson multifaceted education to integrate new knowledge skills into practice.[31]

Although there are benefits to online education, we caution that this should not replace face-to-face instruction of

communication skills, which is necessary to facilitate development and attainment of new clinical skills as well as to provide a place to practice these skills. Research is needed to assess the effectiveness of the COMFORT curriculum across professions and across settings. Future work on the COMFORT curriculum will include a comparative trial to compare face-to-face versus online communication skills training. Still, these findings are a meaningful milestone in the development and distribution of communication training in palliative care that is evidence-based, theory driven, and nonprescriptive in its skill components. The four modules tested in this paper are foundational to the larger seven-module COMFORT curriculum. This program assessment indicates that participant perception was positive and educational learning objectives were achieved. This follows positive findings from a variety of COMFORT educational studies, in which the content and execution of the curriculum were found to be useful, relevant, grounded in credible research and content, and exigent.[13,32] Pilot studies will establish the impact of COMFORT communication training and significant improvement in attitudes and self-efficacy.[33] Future work on the curriculum will include evaluation instruments for observed interactions with standardized patients.

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