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Provider Education: Palliative Care Scope of Practice & Communication Techniques

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PROVIDER EDUCATION: PALLIATIVE CARE

Provider Education:

Palliative Care Scope of Practice & Communication Techniques

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Abstract

Background: Referral tools and clustered symptom sets embedded in the electronic health record (EHR) that automatically prompt providers to screen their patients for palliative care consultation have been shown to generate earlier involvement of these vitally-important services. These constellations of patient complaints and characteristics are grouped together to permit pattern recognition within the EHR. The detection of these subgroups by the EHR subsequently triggers an alert for providers to consider consulting the recommendations of the palliative care service. However, many facilities lack these standardized screening triggers, and therefore the consultation of palliative care is based on the referring provider's understanding of this valuable resource. Providers' suboptimal knowledge of the palliative care scope of practice, combined with the absence of such standardized, institutional screening procedures, create barriers to the early initiation of palliative care involvement. *Purpose:* The following toolkit identifies current tools and approaches designed to guide providers in identifying which patients should be referred to palliative care. The current gaps in research are evaluated, highlighting the areas in which interventions for the recognition of patient populations who might benefit from palliative care services are lacking. *Method:* An education-based intervention is used to increase the overall uptake of palliative care services. By expanding referring providers' knowledge of and comfort with palliative care, project participants will be equipped to appropriately involve this resource without the benefit of an EHR-embedded referral trigger system. A pre- and post-intervention survey design is used to assess participants' comfort with and knowledge of palliative care concepts and

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goals of care communication. Following the pre-survey and subsequent intervention implementation, posteducation mentoring and support was provided for 8 weeks prior to the post-survey administration. *Results:* Pre- and post-survey comparisons depict an increase in both comfort and knowledge regarding palliative care concepts, recognition of patients appropriate for palliative care referral, and approaches to communication during goals of care conversations. *Conclusions:* Findings suggest that mid-level provider education on the palliative care scope of practice and communication techniques yields increased comfort with goals of care discussions and knowledge of palliative care concepts. *Implications for Practice:* Often the link between the patient, bedside nurse, and other members of a patient's care team, mid-level providers are optimally positioned to advocate for their patients. Increasing understanding of key palliative care components as well as comfort in communication of serious health concerns will aid in increasing the early involvement of palliative care where appropriate. *Key words:* Palliative care, referral tool, education, support, early intervention, end of life.

Provider Education:

Palliative Care Scope of Practice & Communication Techniques

Introduction and Background

Palliative care (PC) is the provision of specialized medical care and treatment with a focus on symptom and stress relief for both the patient and the family. This approach to disease management is observed in patients who are near end-of-life, or in those patients facing life-threatening illness, as well those who continue to receive disease-focused and curative treatments. It is widely accepted that PC improves patients' quality of life, and has been shown to improve symptomology and reduce depression while also incorporating the patient's family in its scope of care (IOM, 2014). However, many patients go without the valuable addition of PC recommendations despite a life-limiting diagnosis, or have PC services involved at a later than ideal stage of their disease.

An analysis of Medicare claims for the years 2000, 2005, and 2009 indicates that though PC and hospice utilization has increased over the past decade, there has not been an observed trend toward less aggressive care at the end-of-life (Teno et al., 2013). Patients continue to experience late or lack of referral to PC services, reducing the potential benefit of this type of care. A systematic review of the literature was conducted to better understand the tools available and those approaches currently in practice that facilitate and promote early referral to or consultation of palliative care services and teams. This review assessed current gaps in practice, and structured the implemented

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intervention to increase the PC knowledge of referring clinicians. This initiative provides the opportunity for a variety of patients to benefit from the early involvement of PC in their plan of care, increasing the attention to specific quality of life needs that might otherwise remain unmet.

Problem Statement

The risk of diminished quality of life among adults with life-limiting illness is indicated by the under-utilization of palliative care, and results from lack of referral by inpatient, mid-level providers to palliative care services. By providing a concise education session developed in collaboration with palliative care providers of the same institution, the knowledge of mid-level providers surrounding the scope of practice of palliative care will be expanded, translating to an increase in the referral of appropriate patients to palliative care services. Approaches to communication with patients and families regarding the involvement of palliative care will be included in this education initiative, as a lack of confidence in conducting these conversations also contributes to missed opportunities to involve palliative care.

Organizational Analysis of Project Site

There is a growing body of high-quality research supporting the positive impact of palliative care referral tools on the uptake of PC services. Designed to guide providers in their identification of patients appropriate for PC referral, these tools relieve providers of the guesswork in determining which patients are appropriate candidates for PC involvement, establishing a standard on which to base their decision to refer a patient for palliative care consultation. A gap is identified in the form of practice settings, such as an

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inpatient critical care unit in a downtown Chicago, Illinois tertiary care facility (hereafter referred to as “practice setting”), that lack EHR-embedded instruments designed to streamline the provider's decision to involve PC in a patient's management. When coupled with providers’ professed inadequate knowledge of the PC approach to management, the observed end result is patients whose symptomatic and quality of life needs go unmet.

Currently, there are five mid-level, inpatient providers who staff the practice setting in conjunction with their physician colleagues, working a rotation of three 12-hour day and night shifts totalling a 36-hour work week. These providers, which include two advanced practice nurses (APNs) and three physician assistants (PAs), receive minimal education on the scope and function of PC services at the practice setting during their initial employment orientation. Current referral practices in this practice setting are outlined for these new providers during this preliminary orientation, which are not standardized and are instead at the discretion of the provider. Following this brief exposure, these clinicians gradually acquire what they perceive to be a suboptimal understanding of this valuable resource through intermittent, by-chance exposure in the practice setting. The patient population in the practice setting consists of critically ill patients hospitalized for any number of insults that can occur to the brain and/or spinal cord. While some of these patients have particularly poor prognoses, many have simply been disabled by some form of injury to their nervous system, and returning to a different, though still meaningful level of function remains a possibility. Patients in both categories could be provided with an improved quality of life via the involvement of palliative care. However, these patients and their families are at risk for being denied this

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beneficial addition to their management secondary to the consult of PC services being in the hands of mid-level clinicians who lack an optimal understanding of the PC scope of practice.

In the practice setting, the involvement of palliative care is not currently determined by a standardized set of criteria that would trigger consideration of PC involvement, but is instead left up to provider discretion. As observed by the DNP student as well as project participants, provider misunderstanding or lack of education surrounding the scope and role of PC specialists leads to difficulty determining which patients are appropriate for timely PC involvement, resulting in missed opportunities to address patients' unmet needs. Providing additional direct education to these clinicians on the role and scope of PC practice via this proposed intervention will not only provide institution-specific information regarding the practice setting PC department referral processes, but will aid in developing the knowledge base necessary for determining which patients are appropriate to refer to this adjunct interdisciplinary component of inpatient care.

Review of the Literature

A comprehensive search for high-quality evidence regarding valid and efficacious tools to guide palliative care referral included the following databases: PubMed of the National Library of Medicine and Cumulative Index of Nursing and Allied Health Literature. The following Medical Subject Headings terms were used for both databases: *palliative care, referral, consultation, tool, trigger, and intervention*. Eighty-eight articles were retrieved using this approach. Articles published within the last ten years (after

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2006), full-text and in the English language, and focused on the analysis of an intervention involving the use of a palliative care referral tool or trigger were the inclusion criteria. This narrowed the search results to ten articles appropriate for this synthesis and discussion (see Appendix).

The ten studies selected included four retrospective medical record audits, one case-vignette design, and five before-after interventional trials. Of the four medical record reviews, two evaluated the use of a tool based on patient and family needs, and two evaluated the use of a tool based on patients' disease presentations. The case-vignette design also evaluated the use of a tool based on patients' disease presentations. Of the five interventional trials, one evaluated a physician-social worker combination for PC referral tool application, two evaluated bedside nursing-administered PC screenings, and two assessed physician applied PC consultation tool.

Medical Record Reviews

Begum (2013) performed a prospective and retrospective chart audit on medical records of oncology patients from 2008-2011, applying a PC referral tool based on international best practice recommendations supplied by PC experts. This tool consisted of a checklist relating to patient and family needs, including physical components such as neuropathic pain or a history of substance abuse, along with psychosocial components such as financial strain or family discord. Data reflected the opportunity for an increase in PC utilization using this scoring tool. Likewise, Slaven, Wylie, Fitzgerald, Henderson, and Taylor (2007) assessed the needs of both the patient and family as triggers for a PC consult via the Hamilton Chart Audit Tool (H-CAT). Of over 200 inpatients studied, 69%

would have received benefit from palliative care involvement based on H-CAT scores, a significant missed opportunity to have improved the symptom management and quality of life of these individuals and/or their families (Slaven et al., 2007). The most common missed referrals were in the setting of caregiver strain or family support, which accounted for over 20% of missed referrals (Slaven et al., 2007).

Also assessing the potential unmet PC needs of both the patient and the family, a group of 213 emergency department (ED) physicians applied the Palliative Care and Rapid Emergency Screening (P-CaRES) tool to a series of case vignettes detailing potential ED scenarios (Bowman, 2016). The results indicated that not only were the providers able to utilize the tool with over 88% accuracy in recognizing unmet PC needs, but >75% of these clinicians self-reported that without this screening they estimate their referral of patients with unmet PC needs to be less than 10% of the time.

Of the retrospective reviews assessing disease-status triggers for PC referral, ED physicians using a PC trigger tool found 32% of their 207-patient cohort was suited for a PC consult during their admission, but per their medical records not all of these patients received this aspect of care during their hospital stay (Ouchi et al., 2017). Similarly, using data from Project IMPACT, a database of ICU admissions from 2001 – 2008, Hua, Li, Blinderman, and Wunsch (2013) found as many as one in seven intensive care unit patients triggered a PC referral based on a tool intended for use within the first 72-hours of hospital admission, though many of these patients went the duration of their hospitalization without this adjunct management. The subsequent stage for examining these PC referral tools is their implementation in an inpatient setting for further research, and transitioning paper and pencil tools to EHR-embedded instruments.

Interventional Trials

Both nursing-administered interventional trials focused on the Palliative Performance Scale version 2 (PPSv2), a tool designed to assess a patient's functional status. Both studies yielded similar results, indicating use of this tool not only recognized the PC needs of intensive care unit patients that might have otherwise been overlooked, but that it was also well-received by the associated critical care nursing departments (Jenko et al., 2016; Fedel, Joosse, & Jeske, 2014).

An interventional trial based on physician-social worker collaboration was analyzed by Glajchen et al. (2011). In this two-phase intervention, a social worker first identified patients diagnosed with a life-limiting illness, followed by a physician evaluation for PC referral. While at its peak the project accounted for close to half of the referrals to the palliative care service, it is heavily dependent upon the social worker involved, making long-term feasibility of this intervention questionable.

A physician-utilized, one-page instrument was pilot tested as a screening tool to guide clinician judgement in identifying patients appropriate for PC referral (Trout, Kirsh, & Peppin, 2012). The sample size consisted of 74 patients experiencing fatigue, nausea, or pain, or a combination of these three symptoms. Though the results suggest the trigger for consulting the PC service may have been too high for optimal use, data reflected that PC referrals were increased while the guide was in use. Braus et al. (2016) describe similar results in their physician-driven palliative care rounding intervention study. This daily rounding resulted in earlier PC involvement, which translated to earlier family meetings and less aggressive care at end-of-life. However, this study did not measure the family-focused components of family rated quality of dying, family

satisfaction, or family psychological burden before and after implementation. Likewise, it did not measure the impact of earlier PC involvement on the patients themselves.

The evidence collected as the result of this literature review illustrates how a significant proportion of patients' palliative care needs consistently remain unmet. Demonstrated via both retrospective audits as well as interventional approaches, this review of literature supports the potential for early involvement of palliative care services in the management of applicable patients' health care via the use of validated, trigger-based, EHR-embedded referral tools as clinician aids in identifying appropriate patients.

Evidence Based Practice: Verification of Chosen Option

An education seminar targeting the mid-level providers of the practice setting is implemented. The goal of this quality improvement initiative is to increase the providers' knowledge of the palliative care scope of practice. This approach will equip participants to identify patients eligible for palliative care involvement or consult in a setting that lacks a standardized, trigger-based referral tool. Utilizing the knowledge gained from the included review of literature, highlighting both physical and mental features, as well as spiritual concerns and family needs will be emphasized as prompts for PC referral. Further, communication techniques appropriate for use in the initiation and maintenance of goals of care conversations with patients and their families is included in this education seminar.

Theoretical Framework/Evidence Based Practice Model

The theoretical framework that underpins this capstone project is the TLC Model of Palliative Care for Elderly Patients (see Appendix A). Ramanayake, Dilanka, and

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Premasiri (2016) suggest that while designed to target elderly patients, the TLC model emphasizes the importance of prompt referral, promotes evolution of the balance of disease-modifying and palliative measures over time, and incorporates the patient's family or support network in decision-making; all of which are principles that are applicable to any adult patient diagnosed with a life-limiting illness.

The "T" in the title of the selected model represents the importance of two core palliative care beliefs: timeliness of palliative care involvement to avoid prolonged, unnecessary suffering, and team-oriented, to achieve a contiguous, healing environment for both the patient and family. A pillar of palliative care essential for the target audience to grasp is the idea that palliative care is a longitudinal process, and not a terminal event. This concept is represented by the "L" in the TLC acronym. Further, a lack of shared decision-making can be the source of much distress to a person suffering from a life-limiting illness and their support network. It is for this reason that the "C" in the title model represents the idea of a collaboration between providers, patients and their families. Preserving the patient's social role and maintaining their dignity throughout the palliative care process is the responsibility of all team members, and is most effectively achieved via shared information and perspectives (Ramanayake et al., 2016).

Overall, the theory behind the TLC model is that the palliative care system should be perceived as integrated with the medical goals of care, not as a parallel service. The palliative care ideas represented by this model are the core concepts of the education seminar that is presented to the target audience, emphasizing a team oriented and collaborative approach to creating optimal palliative care over time.

Goals, Objectives, and Expected Outcomes

The goals of the DNP project are to increase mid-level provider knowledge of palliative care principles and communication techniques, resulting in improved participant-reported level of confidence in this subject. See Table 1 for further discussion of objectives and expected outcomes.

Table 1 *Project Goal, Objective, and Expected Outcomes*

Goal	Objective	Expected Outcomes
Providers will have an increased knowledge of the role-specific palliative care scope of practice, and increased comfort with communication techniques for collaboration with patients/families regarding the involvement of PC in their plan of care.	A knowledge/comfort assessment will be administered before and after an educational intervention. (See Appendix B)	100% of providers will report an aspect of PC referral that they were not aware of prior to this intervention. 100% of providers will report an aspect of communication with patients/families regarding PC involvement that they learned from the intervention.

Project Design and Methods

This project is an education-based initiative designed to improve the ability of providers to promote proactive referral of appropriate patients to palliative care services. Developed to include the perspective and knowledge of current palliative care providers at the same facility, education sessions will be held for the participating mid-level providers during a designated lunch break. Employing previously validated questions retrieved from the Palliative Care Quiz for Nurses (PCQN) (Ross, McDonald, &

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McGuinness, 1996) and the PPSv2 comfort survey (Fedel et al., 2014), a before-after survey developed by the DNP student will be utilized to compare pre- and post-intervention level of participant understanding and evaluate for progression of comfort regarding the utilization of palliative care services. The two key concepts addressed in this initial self-report are level of understanding of the role of palliative care and participant comfort in initiating and maintaining dialogue with patients and their families regarding palliative care involvement in patient management.

Project Site and Population

This quality improvement project will be implemented at the practice setting, an 800-bed, academic healthcare facility, in downtown Chicago, Illinois. The participating staff will be educated on current referral practices, and will be provided with a summary of key teaching points.

The practice setting is staffed by five mid-level providers, including two APNs and three PAs, who are responsible for the patients managed by the critical care team in the twenty-three bed practice setting; typical patient admission patterns result in approximately ten to seventeen patients at any given time. Two female APNs, two female PAs and one male PA will be the participants educated on the palliative care scope of practice and recommended communication techniques for discussing PC involvement with patients and families. All participants have been employed only by the practice setting in their current role, and have only worked in the inpatient, critical care setting. All three PAs and one APN have approximately one year of experience in their role, with the remaining APN having three years of experience in advanced practice with the added experience of having been employed as a bedside nurse in the inpatient critical care environment. All

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participants received their higher education within the state of Illinois. Four participants are White, and one participant is Asian. Within the facility, the practice setting provides the necessary treatments and therapies for any and all neurological pathologies, and is a designated Comprehensive Stroke Center. The patient population is comprised of both insured and uninsured individuals.

Setting Facilitators and barriers. Resources include the support of the facility Nursing Research Committee surrounding the development of nursing-led quality improvement initiatives. Additionally, the facility Department of Palliative Care has verbalized support of this project and is assisting in the development of the education that will be disseminated to the participating practice setting mid-level providers. Primary barriers include lack of clinician time to participate in this intervention, which will be addressed by applying the pre-intervention survey and education intervention during a designated lunch break. A further barrier is patient/ family perception that palliative care equates to the primary medical team relinquishing hope and effort regarding the patient's health. Included in the education session are communication techniques supported by current palliative care providers, increasing the confidence of participants in compassionately modifying patient misunderstanding of palliative care involvement.

Implementation Plan

The DNP student discussed with the APN (also a participant) responsible for determining her colleagues' work schedules an ideal day for implementation during a predetermined lunch break. Following this decision, an email was sent to the participating providers with the date, time and location details of the education session. The facility

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palliative care provider overseeing the DNP student's development of the education session assisted in the overview of the content prior to dissemination, providing an expert opinion.

Measurement Instruments In order to measure the outcomes of this DNP Project the following instrument was used: a survey developed by the DNP student by utilizing a total of seven previously validated questions retrieved from the Palliative Care Quiz for Nurses (PCQN) (Ross, McDonald, & McGuinness, 1996) and the PPSv2 comfort survey (Fedel et al., 2014). The survey includes four questions designed to assess participants' confidence level as well as three questions designed to investigate their knowledge level related to palliative care concepts.

To investigate confidence level, four questions adopted from the PPSv2 comfort survey ask participants' comfort in identifying patients' with decreased functional status and in assessing the need for palliative care (Fedel et al., 2014). A Likert scale was used to assess comfort level, with 1 as not comfortable and 5 as comfortable. To assess knowledge level, three questions retrieved from the PCQN are asked based on when palliative care should be initiated and the services provided (Ross et al., 1996). The survey was administered to providers pre-intervention to establish a self-reported baseline, and subsequently collected prior to the start of the session. Approximately 8 weeks post-education, the same survey was administered to quantify providers' post-intervention self-reported level of understanding and comfort with the educational content as well as to identify additional learning needs.

Data Collection Procedures

Approval of the project by the University occurred in October 2017, and a waiver was obtained from the University to apply for IRB approval from the project site. Project proposal was submitted to the practice setting facility in August 2017, with approval for project implementation within the practice setting by the facility being obtained in October 2017. Approval of the project concept by the practice setting manager was received.

Recruitment. Following approval by both the facility and the University, the DNP student collaborated with the APN overseeing scheduling of the participating mid-level providers' to determine the specific date within November 2017 for implementation of the intervention. The five described mid-level providers had previously verbalized their support and agreement to participate in this quality improvement study. Two additional mid-level providers, both White, female, APNs from another inpatient, critical care practice setting within the same facility have also agreed to participate, bringing the total number of project participants to seven.

Intervention Implementation. In November 2017, three education seminars were administered as the participating providers have varying schedules. During these sessions, the pre-intervention survey was administered, followed by the presentation of the educational material. Lunch was provided to participants during the seminars. Seminars lasted an average of approximately 30 minutes, utilizing powerpoint slides to visually augment information delivered by the DNP student. Three participants attended

the first session, followed by two participants attending the subsequent sessions to account for all seven participants receiving the education.

Data Collection Procedures. In January 2018, following an eight week period during which the providers were exposed to opportunities to apply their newly gained knowledge, post-education mentoring occurred consisting of the DNP student remaining available to participants both in person and via email to clarify points of confusion or to serve as a knowledge resource. The post-intervention survey was then administered to participants. This survey administration did not require a meeting, as the content of the survey is brief and should required no more than five minutes of time to complete.

Evaluation. In February 2018, data were analyzed by comparing the pre-intervention surveys with the post-intervention surveys. The areas in which the participating providers felt they had increased competency and identifying those areas where further learning needs exist was evaluated. Results were then compiled and reported in March and April 2018.

Data Analysis/Statistical Analysis Plan or Procedures

The DNP student provided the planned education to the study participants, and administered the pre- and post-intervention surveys. Progression of provider self-reported level of understanding and comfort in addressing PC with patients and their families, as well as identified aspects of PC that were unknown to the participants prior to the education session were assessed by comparing the pre- and post-survey responses. Individual items' numerical ratings were examined, and to determine if a difference resulted between pre-intervention and post-intervention participant responses secondary

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to the provided education intervention, a matched pairs sample t-test using SPSS statistical software was employed to evaluate this data. All seven providers completed both before and after surveys that were included in data analyses, resulting in no missingness in the data.

Cost-Benefit Analysis/Budget

The concern being addressed by this proposed quality improvement project was the area for improvement in the quality-of-life of patients diagnosed with a life-limiting illness or debilitation. The benefits to the providers participating in this intervention include an increase in knowledge of the palliative care scope of practice and what this specialty is equipped to offer the patient population of the practice setting. Future patients will benefit from the care provided by these mid-level clinicians secondary to the incorporation of PC in their plan of care where and when appropriate. Earlier referral to PC for applicable patients provides the opportunity for improved quality of life, and decreases the risk for unwanted, aggressive end-of-life care. Further, reduction of the use of practice setting resources without changing mortality by increasing the involvement of PC specialists for patients and families in need has the potential to decrease healthcare costs as well (Nelson et al., 2013). Overall, the participant and patient benefits of this quality improvement project far outweigh the anticipated cost of implementation as evidenced by improved participant comfort and understanding with material, which positioned these providers to deliver more comprehensive, improved patient care. PC referrals per provider were not examined during this project, however it may be inferred that by promoting advanced care planning and palliative care interventions via this education intervention, the average patient ICU length of stay was decreased, thereby

reducing healthcare costs (Khandelwal et al., 2015). See Appendix C (Table 2) for project cost.

Timeline

The DNP student obtained project approval in October 2017, and implementation began in November 2017. The data was collected and analyzed in January and February 2018, and the final report and results concluded in March and April 2018. Refer to Appendix D (Table 3) for simplified project timeline.

Ethics and Human Subjects Protection

The University's Human Research Protection Office determined that this project was more appropriate to be reviewed by the project site IRB. An approval letter from the project site indicating that this project did not meet the definition of "Human Subjects Research" for the purposes of Federal regulation and was approved for implementation was received and is included in this document as Appendix E. Provider privacy was protected by numbering the pre- and post-education surveys, omitting personal identifiers such as names, and participants placed completed surveys in a sealed box so that the DNP student was blind to the identity of respondents. All information collected as part of evaluating the impact of this project was data from project participants and did not include any potential patient identifiers.

Results

Seven mid-level providers participated in this project, returning both the pre-survey and post-survey, resulting in seven matched pairs of participants. A paired sample

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t-test was used to evaluate each comfort question from the surveys. The correlating *p*-value for each question is reported in Table 4. The third question, ‘How comfortable are you in assessing that a patient needs a palliative care consult?’, was the only item to indicate a statistically significant improvement in participant comfort following the education intervention (*p*-value = <0.005). Figure 1 depicts these results in graph format, showing that per pre-survey results 43% of participants were somewhat uncomfortable with assessing that a patient needs a palliative care consult, a figure that improved to 100% of participants feeling either somewhat comfortable or comfortable with this item per post-intervention survey results.

The remaining comfort items did not show significant improvement between pre- and post-intervention. Questions 1 and 2, ‘How comfortable are you in identifying which patients have chronic illness with limited treatment options?’ and ‘How comfortable are you in identifying which patients have decreased functional ability?’ respectively, did not improve following this education, indicating that the understanding of which patients may have limited treatment options or recognizing those with decreased functional ability may be based on knowledge and/or comfort with material other than that related to palliative care and communication. Likewise, the results of question 4, ‘How comfortable are you in requesting a palliative care consult’ also displays a lack of significant improvement between pre-intervention and post-intervention results, indicating that barriers to requesting a palliative care consult may have less to do with the participants’ knowledge level and degree of comfort with this material, and perhaps more to do with interprofessional dynamics.

Table 4 Matched pairs sample t-test for comfort questions

Survey Question	p-value
How comfortable are you in identifying which patients have chronic illness with limited treatment options?	.356
How comfortable are you in identifying which patients have decreased functional ability?	.078
How comfortable are you in assessing that a patient needs a palliative care consult?	.003
How comfortable are you in requesting a palliative care consult?	.078

Figure 1 How comfortable are you in assessing that a patient needs a palliative care consult?

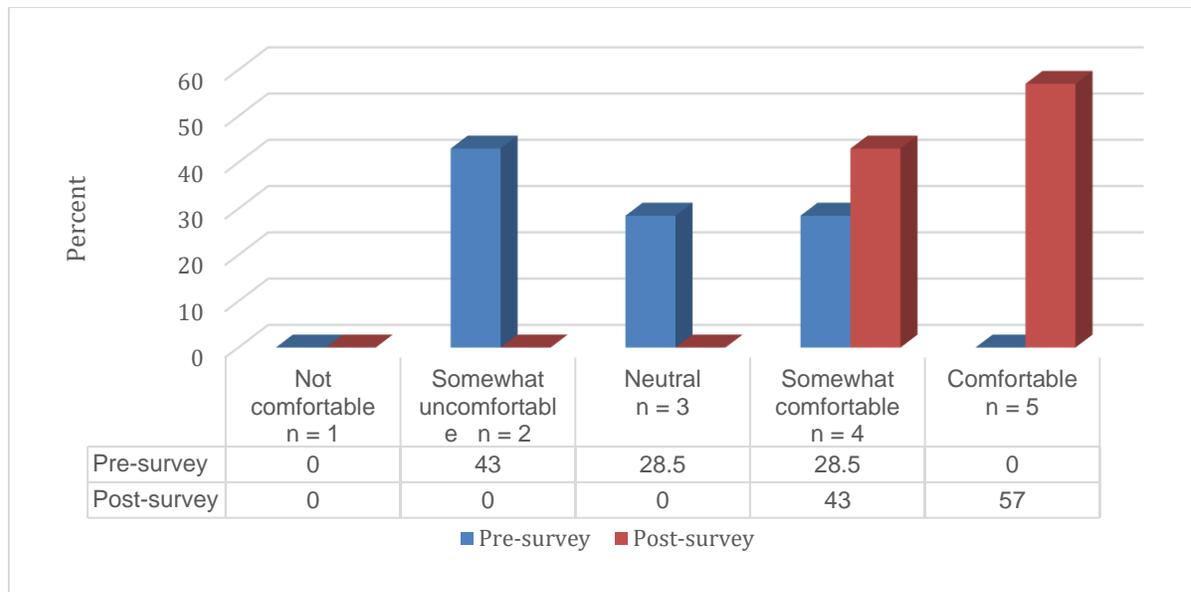


Table 5 displays the response rate of the best answer to each knowledge question retrieved from both pre- and post-intervention survey results.

Table 5 Knowledge questions matched pairs sample t-test

Survey question	Best answer pre-survey		Best answer post-survey	
	Number	%	Number	%
Palliative care is only appropriate in situations where there is evidence of a downhill trajectory or deterioration. (<i>False</i>)	5	71.4	7	100
The philosophy of palliative care is compatible with that of aggressive treatment. (<i>True</i>)	4	57	5	71.4
Palliative care should only be provided to patients who have no curative treatments available. (<i>False</i>)	7	100	7	100

In the first question, ‘Palliative care is only appropriate in situations where there is evidence of a downhill trajectory or deterioration’, participant selection of the best response improved from 71.4% pre-intervention to 100% post-intervention. Question 3, ‘Palliative care should only be provided to patients who have no curative treatments available’, was answered correctly by 100% of participants both before and after the provided education, indicating the intervention confirmed pre-existing participant knowledge of this concept. However, question 2 ‘The philosophy of palliative care is compatible with that of aggressive treatment’ showed minimal improvement between pre- and post-intervention selection of the best response, indicating a need for more comprehensive education on this principle.

Discussion

The purpose of this quality improvement intervention was to evaluate whether an education-based intervention would improve the comfort with and/or knowledge of palliative care in mid-level providers practicing in a critical care environment. In measuring comfort level, the only item that showed statistically significant improvement in participants' comfort post-intervention was question 3 'How comfortable are you in assessing that a patient needs a palliative care consult?' (p-value = <0.005). As one of the goals of this project was to increase participants' comfort in assessing that a patient needs a palliative care consult, this finding indicates that an education-based intervention is a successful quality improvement measure. However, the post-intervention results of the remaining comfort questions indicate that barriers still exist regarding many factors that contribute to facilitating palliative care referral. Lack of increased comfort post-intervention in 'requesting a palliative care consult' (question 4), speaks to a potential barrier related to interprofessional dynamics; lack of increased comfort in 'determining which patients have limited treatment options' and/or 'decreased functional status' (questions 1 and 2, respectively) may indicate a barrier related to gaps in knowledge and/or comfort with information and concepts regarding the pathophysiology of disease rather than that of palliative care or communication techniques. These barriers translate to a need for further intervention with participants on disease processes as well as interprofessional collaboration in order to optimally facilitate prompt palliative care referral.

While it is encouraging to observe the improvement in knowledge demonstrated by post-intervention selection of the best response by 100% of participants on question 1,

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‘Palliative care is only appropriate in situations where there is evidence of a downhill trajectory or deterioration’, it is evident that misunderstanding still exists regarding the possibility of ‘palliative care compatibility with aggressive treatment’ (question 2), in which 28.5% of participants did not identify the correct answer post-intervention. This finding highlights a particularly significant barrier to palliative care consultation, as if mid-level providers lack understanding of this basic palliative care principle, they will continue to under-identify patients who could benefit from palliative care involvement. While the perspective exists that PC referral should occur at the time of initial diagnosis (Temel et al., 2017), patient acuity and/or the status of patient diagnosis at the time of the patient’s admission to the ICU has the potential to thwart the adoption of this principle in favor of prioritizing other pressing tasks or matters at hand. Further education on the services provided by palliative care as well as appropriate timing to initiate such services is essential to increasing the prompt referral of patients to this valuable resource.

Limitations

Limitations of this work include lack of collection of PC referrals per provider, which could have provided the DNP student with a measurement of education effectiveness in addition to the data collected from the surveys used. The choice of a five-point Likert scale could be improved by eliminating the option to select ‘neutral’ and transitioning to a four-point Likert scale, which would increase the ability of the DNP student to assess whether comfort was actually improved following the intervention. Additionally, though questions and statements used in the DNP student’s survey had been previously validated, there exists the possibility that participant confusion occurred. This is a potential confounding factor that could be avoided in the future by employing

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cognitive debriefing to determine if the target population level of understanding of questionnaire points is the same as their understanding of those points on the actual survey. Most significantly, the number of participants in this intervention is a limiting factor, creating difficulty in the ability to generalize results.

Conclusion and Further Directions

Equipping mid-level providers with the education necessary to determine which patients are appropriate for PC referral is the foundation of incorporating earlier involvement of these services in applicable patients' health care management. In the absence of standardized, EHR-embedded triggers for PC referral, these providers must rely completely on their knowledge of PC concepts and approaches to goals of care communication to guide them in assessing whether patients and/or their families are appropriate for PC referral. It is well known that palliative care increases patients' quality of life regardless of their disease stage, justifying the potential benefit of early palliative care involvement for patients diagnosed with life-limiting illness or debilitation. Mid-level providers are ideally positioned to recognize which of their patients are appropriate for early PC involvement as the clinicians who are closest to the patient's current level of function and needs apart from the bedside nurse. The crucial difference between these two disciplines being as providers, they have the ability to actualize the incorporation of PC in a patient's care. The education of mid-level providers on the variety of aspects of palliative care available will aid in dispelling the belief that palliative care is only of benefit to patients who are hospice-bound. Instead, incorporating PC early in a patient's acute care admission can prevent unwanted aggressive end-of-life care, while maximizing a patient's quality of life.

Further research is essential to build upon what has already been studied and learned regarding the health care team's ability to efficiently screen patients for prompt PC referral. Most specifically, investigation of various screenings to create standardized referral criteria, and whether these criteria should be tailored to a patient's specific disease process, would be of most benefit to the involvement of palliative care in appropriate patients' care management.

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Appendix A**TLC Model of Palliative Care for Elderly Patients**

Letter	Model Element	Elaboration
T	Timely	Proactive rather than reactive approach to avoid prolonged unnecessary suffering
	Team oriented	Nurses, social workers, trained laypersons, and others involved
L	Longitudinal	Balance of palliative and curative measures evolves with time
C	Collaborative	Patients, family members, and providers share decisions
	Comprehensive	All empirically supported domains of palliative care are addressed

Jerant, Azari, Nesbitt, & Meyers, 2004

Appendix B

Pre/Post-Intervention Survey

Please respond by selecting your self-identified level of understanding/ comfort with the associated palliative care concept.

Palliative Care Concept	Not Comfortable			Comfortable	
How comfortable are you in identifying which patients have chronic illness with limited treatment options?	1	2	3	4	5
How comfortable are you in identifying which patients have decreased functional ability?	1	2	3	4	5
How comfortable are you in assessing that a patient needs a palliative care consult?	1	2	3	4	5
How comfortable are you in requesting a palliative care consult?	1	2	3	4	5

Fedel et al., 2013

Please respond by selecting True or False.

Palliative care is only appropriate in situations where there is evidence of a downhill trajectory or deterioration.	True	False
The philosophy of palliative care is compatible with that of aggressive treatment.	True	False
Palliative care should only be provided to patients who have no curative treatments available.	True	False

Ross et al., 1996

What do you identify as your most significant learning need(s) regarding palliative care and/or treatment goal conversations with patients and families?

What do you see as the most significant barrier to palliative care referral at this institution?

Appendix C**Table 2** *Project Cost*

Item	Cost
Material Resources	
Printing Cost:	
<ul style="list-style-type: none"> • Participant Pre/Post-Survey (14) 	\$4.00
10 ball point pens	\$2.00 (pack of 10)
Refreshments during presentation	\$30.00 – Lunch options, bottled water
Human Resources	
Participants paid time to attend	Lunch supplied – During designated lunch break
Capital Cost	
Space for education presentation	\$0 – space available in facility, on unit
Total Cost	\$36.00

Appendix D**Table 3** *Simplified Project Timeline*

Task	October	November	December	January	February	March	April
Project Approval by facility	X						
Project Approval by university	X						
Teaching Intervention		X					
Analyses of survey results				X	X		
Present Results						X	X

Appendix E

**Institutional Review Board Office
Northwestern University**

Biomedical IRB
750 North Lake Shore Drive
Rubloff Building, Suite 700
Chicago, Illinois 60611
312-503-9338

Social and Behavioral Sciences IRB
600 Foster Street
Chambers Hall, Second Floor
Evanston, Illinois 60208
847-467-1723



NOT HUMAN RESEARCH

DATE: October 29, 2017

TO: Mrs. Gretchen York

FROM: Office of the IRB

I. DETERMINATION DATE: 10/29/2017

The Northwestern University IRB reviewed the submission described below and determined that the proposed activity is not research involving human subjects. Further IRB review and approval is not required.

Type of Submission:	Initial Study
Title of Study:	Provider Education: Palliative Care Concepts & Communication Techniques
Investigator:	Gretchen York
IRB ID:	STU00206328
Funding Source:	Northwestern Memorial Hospital (NMH)
IND, IDE, or HDE:	None
Documents Reviewed:	• HRP503 Gretchen York, Category: IRB Protocol.

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This determination applies only to the activities described in the eIRB+ submission and does not apply should any changes be made. If changes are being considered and there are questions about whether IRB review is needed, please contact the IRB Office to discuss those changes. You may be asked to submit a new study in eIRB+ for a determination.

Investigators and study team members must comply with all applicable federal, state, and local laws, as well as NU Policies and Procedures, which may include obtaining approval for your research activities from other individuals or entities.

For IRB-related questions, please consult the NU IRB website at <http://irb.northwestern.edu>. For general research questions, please consult the NU Office for Research website at www.research.northwestern.edu.

_____ Northwestern University has an approved Federalwide Assurance with the Department of Health and Human Services:
FWA00001549.

HRP-709 / v070115