Southern California CSU DNP Consortium

California State University, Fullerton
California State University, Long Beach
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AN EVIDENCE-BASED PALLIATIVE CARE EDUCATIONAL WORKSHOP

A DOCTORAL PROJECT

Submitted in Partial Fulfillment of the Requirements

For the degree of

DOCTOR OF NURSING PRACTICE

By

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May 2019

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ABSTRACT

Palliative care (PC) is not only a philosophy but also specialized care designed to improve the quality of life for patients during an acute or a chronic disease process, or a life-threatening illness (National Quality Forum, 2016). Although large medical centers educate nurses about PC, few community hospitals provide education about the need for palliation. Nurses without PC training and roleplay experience are not always confident in initiating a goals-of-care (GOC) conversation and the desire for palliative care with patients and their caregivers.

The purpose of this doctoral project was to develop an evidence-based educational workshop to teach critical care nurses in community hospitals about PC, how to conduct the GOC conversation using the Serious Illness Conversation Guide (SICG), and the commonly used PC screening tools. There were two major steps in this project. The first step was to develop the workshop with an extensive literature review about palliative care. The second step was to evaluate the workshop by seeking PC expert reviewers and from piloting the workshop. In the workshop piloting, four critical care nurses from the CSUF Doctor of Nursing Practice Nurse Anesthesia program were recruited.

The workshop content was revised based on suggestions from the experts and the critical care nurses who attended the workshop. Participants stated that their confidence level in initiating GOC conversations was improved after the workshop and that the

content presented was important to their practice. All of the reviewers agreed that the blending of the lecture, interactive roleplay, and formative evaluation into the workshop was excellent.

This project resulted in the development of such an evidence-based PC educational workshop. The workshop was designed to close the gap in bringing palliative care education and GOC conversation training to critical care nurses in community hospitals. The next step would be to further evaluate the workshop before dissemination.

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ACKNOWLEDGMENTS

I would like to express my appreciation to my doctoral project chair Dr. Jill Berg who endlessly supported and guided me to complete my project. Her professional expertise nourished my knowledge during this incredible adventure. Her enthusiasm inspired me to reach my goals. I also would like to thank my committee member, Dr. Penny Weismuller for her guidance and support not only throughout the project but also throughout the doctoral program. Her wisdom and amazing advice directed my project in the right direction.

In addition, I would like to extend my gratitude to Dr. Sue Robertson for her valuable input. I am also thankful to have support and help from Dr. Gina Armendariz, Katie, Sarah, and my fabulous Cohort VI classmates. I am so honored to work with such a professional group who always motivated me and had my back during difficult times.

Thanks also go to K. Fortes, P. Mallagon, L. Muller, L. Quiggs, and L. Traucht, for dedicating their time and expertise to review and provide feedback so that my project workshop was excellent.

Last but not least, to my family, I am so blessed to have unconditional love and support from my parents, auntie, sister, cousins, and friends. They are always standing by me with their care and patience so that I can complete my doctoral degree. I love all of you very much!!!

BACKGROUND

Palliative care (PC) is not only a philosophy but also specialized care designed to improve the quality of life for patients during an acute or a chronic disease process, or a life-threatening illness (National Quality Forum, 2016). The World Health Organization (2018) states that a PC approach should support patients and their caregivers physically, psychosocially, and spiritually. Palliative care has evolved to focus on clinician-caregivers communication, patient-/caregivers-centered care, and support (Meghani, 2004). Moreover, PC focuses on eliminating the discomfort associated with the treatments and care of chronic diseases (Puntillo et al., 2014).

Besides enhancing the comfort experience for patients, PC helps patients and caregivers to establish goals-of-care (GOC) (Morrison, Augustin, Souvanna, & Meier, 2015). Goals-of-care are comprehensive agreements about treatment options that may include end-of-life (EOL) care. The GOC are based on the patient's values and prognosis (Kaldjian, Curtis, Shinkunas, & Cannon, 2009; Stanek, 2017). The purpose of a GOC discussion is to improve the quality of life for patients rather than to continue medically invasive interventions that prolong the dying process (Kaldjian, Curtis, Shinkunas, & Cannon, 2009; Winzelberg, Hanson, & Tulsky, 2005). Furthermore, PC involves social, spiritual, and bereavement supports for patients and caregivers when death approaches and following death (Rome, Luminais, Bourgeois, & Blais, 2011). In the intensive care unit (ICU), many large medical centers provide primary PC to manage patients' complex symptoms while maintaining the patients' dignity (Dumanovsky et al., 2016; Pantilat, Kerr, Billings, Bruno, & O'Riordan, 2012). It is important to ensure that the primary PC

is consistently offered so that patients and caregivers are able to use the resources that accompany the care (Weissman & Meier, 2011).

A retrospective study by Schroeder, Miller, Ferguson, and Shaw (2017) found that 92% of patients in the ICU did not receive PC within 48 hours of admission, and 72% of those patients died without receiving comfort care. Therefore, primary PC and GOC discussions need to be addressed early for quality and continuity of care. In healthcare services, the GOC conversation is the best practice to improve overall clinical outcomes as well as to reduce anxiety, depression, and stress levels for patients and caregivers (Bernacki & Block, 2014). Thus, the American Nurses Association (2016) asserts that nurses should have general PC knowledge, adequate training on how to conduct GOC conversations, and how to address PC needs for patients and their caregivers.

Although nurses serve as patient advocates and communicators, many nurses are not comfortable in conducting GOC conversations with patients and caregivers (Erickson, 2013). Nurses may become emotionally distressed and may not know how to be empathetic when witnessing the emotional reaction of the patients' caregivers during GOC conversations (Banerjee et al., 2016; Ong, Ting, & Chow, 2018). Lack of PC education and training in communication can result in nurses' hesitation to engage in GOC conversations (Hagan, Xu, Lopez, & Bressler, 2018).

Nurses often integrate their communication skills of talking, listening, therapeutic use of non-verbal gestures, and silent pauses into daily practice. However, nurses still need instructions on how to apply these communication skills in initiating the GOC conversation (Dahlin & Wittenberg, 2015). Two studies revealed that nurses needed a well-developed guide to help them conduct the GOC conversation (Anderson et al., 2017;

O`Shea, 2014). The Serious Illness Conversation Guide (SICG) leverages the communication skills of nurses to facilitate GOC conversations efficiently (Ariadne Labs, n.d). Before utilizing the SICG for conducting the GOC conversation, nurses need to proactively identify the PC needs of patients and their caregivers by using a PC screening tool early.

The use of a PC screening tool helps nurses to identify patients who are at risk of poor EOL quality and might not achieve benefits from medically invasive interventions. Early PC screening allows patients and their caregivers to have immediate access to PC supports. The Center to Advance Palliative Care (CAPC) offers several evidence-based PC screening tools which are designed to close the gap of unmet PC needs for patients in healthcare settings such as community clinics, nursing homes, and community hospitals (Lapp & Iverson, 2015). Nurses can efficiently use a PC screening tool to identify patients and caregivers who will benefit from PC services (Weissman & Meier, 2011). Given nurses' access to patients and their well-developed communication skills, nurses are in a prime position to be educated about PC, PC screening tools and to be trained in how to initiate GOC conversations. The End of Life Nursing Education Consortium (ELNEC) was developed to provide a PC curriculum for educating and training nurses (Sherman, Matzo, Panke, Grant, & Rhome, 2003). It is recognized that nurses' involvement in PC is a crucial contribution to increase the quality of care and to improve PC access for patients and caregivers (Aslakson, Curtis, & Nelson, 2014).

Problem Statement

The problem this paper addresses is the lack of education and training for nurses in small community hospitals regarding PC, the GOC conversation, and the use of a PC

screening tool for early identification of PC needs. Based on the literature review, PC training that occurred at large academic settings increased nurses' knowledge of PC, GOC communications skills and the use of PC screening tools (Anderson et al., 2017; Aslakson et al., 2014; Mun et al., 2017). Although PC training is common in large academic settings, PC education and training for nurses in small community healthcare settings is limited.

Purpose Statement

The purpose of this doctoral project was to develop an evidence-based PC educational workshop to teach critical care nurses in community hospitals about PC, how to conduct the GOC conversation by using the SICG, and the commonly used PC screening tools.

The Objectives:

- To enhance nurses' knowledge of PC and the commonly used PC screening tools.
- To improve nurses' confidence in initiating GOC conversation by teaching them how to utilize the SICG.

Supporting Framework

Successful implementation and sustainability of an educational workshop can be very challenging (Fleiszer, Semenic, Ritchie, Richer, & Jean-Louis, 2015). Therefore, the Donabedian framework provided a roadmap for accomplishing each step in developing this evidence-based educational workshop. The workshop offered PC knowledge and conversation skills for critical care nurses, who were working in a community hospital. The Donabedian framework was developed and published in the Journal of the American Medical Association by Avedis Donabedian in 1988. This

framework has been used to assess the quality of care by investigating three concepts: *structure, process,* and *outcome* (Donabedian, 1988). The *structure, process,* and *outcome* concepts in the Donabedian framework have been used in multiple studies and quality improvement projects to improve quality of care (Liu, Singer, Sun, & Camargo, 2011; Gardner, Gardner, & O'Connell, 2014; Santana, Manalili, Jolley, Zelinsky, Quan, & Lu, 2018)

The first concept is called s*tructure*, which for this workshop was defined as the available resources within community hospitals (Donabedian, 1988). The available resources included materials, equipment, organization, and human subjects (Donabedian, 1988; Gardner, Gardner, & O'Connell, 2014; Santana et al., 2018; Shiyanbola et al., 2016; Talsma, McLaughlin, Bathish, Sirihorachai, & Kuttner, 2014). The *structures* in this project were the PC expert panel, the administrators in the Doctor of Nursing Practice Nurse Anesthesia (DNPNA) program, the California State University, Fullerton (CSUF) campus, evaluation instruments, and critical care nurses who were enrolled in the DNPNA program. The administrators in the DNPNA program supported the recruitment and workshop piloting. A classroom booked in the CSUF campus provided a safe learning environment. The PC expert panel and critical care nurses provided explicit reviews to contribute to evaluating the validity of the workshop when it was piloted. The *structures* also referred to critical care nurses' knowledge of PC, PC screening tools, and nurses' confidence in initiating GOC conversations using the SICG. Critical care nurses attending the workshop should be knowledgeable about the organization, an existing PC screening tool, and PC screening protocols at their work (Fleiszer et al., 2015; Gardner et al., 2014). The PC screening tools and the SICG were *structures* which were used as

educational materials in the workshop. When the nurses were knowledgeable about PC and able to use PC screening tools, there would be a positive impact on PC access for patients and caregivers. Thus, the defined *structures* in this workshop could increase the feasibility of implementing the *process* (Donabedian, 2005; Gardner et al., 2014; Hammermeister, Shroyer, Sethi, & Grover, 1995).

The second concept is the *process*, which consists of all the interventions carried out to achieve or improve the expected *outcomes* (Donabedian, 1988). The *process* was to educate critical care nurses about PC, how to facilitate the GOC conversation using the SICG, and PC screening tools. In this project, there were two *processes*. The first *process* was to seek the PC expert reviewers to refine the content of the workshop. The second *process* was to pilot the workshop. The workshop consisted of teaching strategies such as lecture and roleplay which were used to educate nurses. The lecture included PC contents from the ELNEC curriculum and provided the nurses with knowledge of PC, GOC conversation, and PC screening tools. The roleplay gave nurses an opportunity to use the SICG in practicing how to initiate the GOC conversation. Donabedian (2005) recommended that the *process* should be well designed to achieve the expected *outcomes* because the *process* might have positive and negative impacts on *outcomes* (Naranjo & Viswanatha, 2011).

The *outcome* is the last concept in the Donabedian framework that measures quality improvement (Donabedian, 1988). The success of the workshop would be demonstrated by an increase in nurses' knowledge of PC, PC screening, and their confidence in engaging in the GOC discussion. Nurses' knowledge of PC was measured by the Palliative Care Quiz for Nursing (PCQN) (McDonald, & McGuinness, 1996),

which has been adapted for this workshop. The nurses' confidence in initiating GOC conversations was measured by the Nurse Confidence in Goal of Care Conversation survey (Milic et al., 2015). Additionally, the PC expert reviews and the feedback from participants during workshop piloting were used to evaluate the feasibility and possible sustainability of the workshop. The feedback contributed to improving the workshop for meeting participants' needs.

In summary, the Donabedian framework guides the evaluation of the *structure, process, and outcome* of the workshop. *Structure* and *process* should be continuously evaluated to improve *outcomes* (Liu, Singer, Sun, & Camargo, 2011). If the *process* is not clearly defined, a good *outcome* will not be achieved (Donabedian, 1988). The relationship between *structure, process,* and *outcome* needs to be well understood in order to establish a strong foundation in developing and implementing the workshop (Donabedian, 1988).

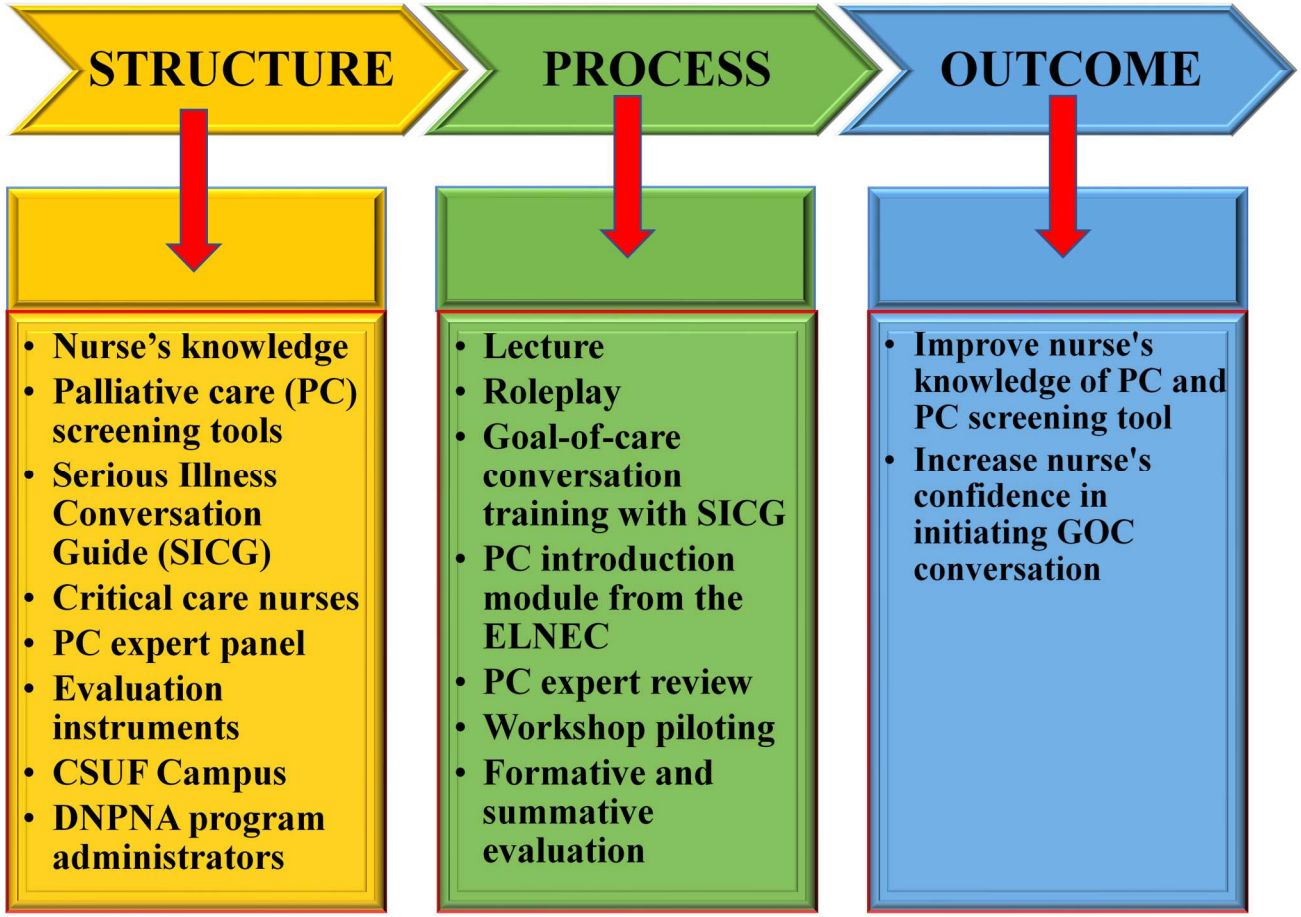

Figure 1. The Donabedian Framework.

REVIEW OF LITERATURE

Overview

A review of the literature was conducted to summarize evidence that supported the development of an educational workshop. The goals of the workshop were to enhance nurses' knowledge of palliative care (PC), PC screening, and nurses' confidence in initiating a goals-of-care (GOC) conversation. The following electronic databases were used to search for relevant publications: The Cumulative Index of Nursing and Allied Health Literature, PubMed, Google Scholar, Academic Search Premier, PsycINFO, and the Education Resources Information Center. Key search terms consisted of GOC conversation, PC screening in the intensive care unit (ICU), PC screening tool, PC in ICU, PC nursing education, educational strategies, End of Life Nursing Education Consortium (ELNEC), PC, and the Serious Illness Conversation Guide (SICG). The search included publications on adult patients with serious illnesses, PC, and GOC conversation. The articles were written in English and published between 2011 to 2018. Publications focusing on the pediatric population were excluded. The initial search using primary terms included a total of 1632 articles. Based on the title, 1275 articles were selected for inclusion in the literature review. The abstracts of 253 articles were screened and evaluated. The last phase of the literature search involved an examination of the full-text manuscripts of 126 articles to find supporting evidence which was specific to the project. There were 44 articles used for final inclusion in the review of the literature (see Appendix T).

Palliative Care in the ICU

In 2015, the Institute of Medicine asserted that critically ill patients admitted to the ICU were not capable of discussing their medical treatment options due to their mental deterioration (Institute of Medicine, 2015). As a result of the patient's incapacity, the caregivers, who were legal decision makers or next-of-kin, were required to make treatment decisions for their loved ones. Patient's caregivers were distressed when healthcare providers began the GOC discussion or when treatment decisions had to be made (Gramling et al., 2015; You et al., 2015). Since such distress hampered the quality of life of patients and their caregivers, early identification of PC needs could assist critical care nurses in initiating the GOC conversation (Campbell, 2006; Szekendi et al., 2018).

Goals of Care Conversations in the ICU

Goals-of-Care are defined as the health expectations which patients want to achieve when seeking medical treatments (Stanek, 2017). The GOC discussion is often assumed to be related to EOL decisions. However, the GOC discussion involves quality of life and psychosocial supports based on the patient's value and prognosis (Kaldjian, Curtis, Shinkunas, & Cannon, 2009; Stanek, 2017). At the Palliative Nursing Summit, Welsh, Matzo, Hultman, and Reifsnyder (2018) stated that nurses should conduct the GOC conversation as part of their full scope of practice because nurses could efficiently establish a strong rapport and communication with patient and caregivers. Furthermore, nurses are able to collaborate and share best practices with physicians and other team members to assess patients and caregivers' value and wishes. Therefore, with full competency achieved in training, nurses should discuss the GOC as part of their nursing

care after providers discuss prognosis with their patients and caregivers. There are six GOC categories that should be discussed: curability, survival time, comfort, quality of life, social supports, and life-goal accomplishment (Haberle, Shinkunas, Erekson, & Kaldjian, 2011; Hagiwara, Villarreal, & Sanchez-Reilly, 2015; Kaldjian, Curtis, Shinkunas, & Cannon, 2009).

In the acute care setting, the GOC are discussed when the patients' medical condition has become critical or when the patient has a poor prognosis (Wong, Wang, Grinman, & Wu, 2016). The poor prognosis means that the patient's condition can not be reversed or returned to baseline condition or that death is imminent. When patients have a poor prognosis or their EOL is inevitable, the GOC discussion is directed to the code status discussion. The common code status options are "Do Not Resuscitate" or "Do Not Intubate" or "Comfort Care" or "Full Code." The decision is documented in the patient's record, and the code status is immediately effective (Anderson et al., 2011; Gehlbach et al., 2011). The GOC discussion about the code status aims to maintain the patient's dignity as well as fulfill their wishes. Based on a systematic review and a retrospective study, nurses conducted the GOC conversation to help patients, and caregivers identify or clarify the GOC that they had proposed before their hospitalization (Sanders, Curtis, & Tulsky, 2018; Wong et al., 2016; Zhang et al., 2017).

Gieniusz et al. (2018) conducted a retrospective cohort study and found that 76% of patients in the ICU died without ever having had a GOC conversation with healthcare providers. These patients died while receiving aggressive medical interventions even though their prognosis was poor. These aggressive treatments only prolonged the dying process. Many studies showed that patients and caregivers in acute care settings

benefited from the GOC conversation (Apostol et al., 2015; Barbor, 2016; Gieniusz et al., 2018; Sekiguchi, Bell, Masaki, & Fischberg, 2014; Zhang et al., 2017). When GOC conversations take place, patients generally receive more comfort care support such as compassion terminal extubation, and life support withdrawal or home discharge for hospice (Apostol et al., 2015; Naib, Lahewala, Arora, & Gidwani, 2015).

Early GOC discussion not only prevents patients from receiving unnecessary medical interventions, but it also reduces the patients' and caregivers' stress level (Gieniusz et al., 2018). A randomized control trial was conducted to determine if patients and caregivers had increased levels of anxiety or depression while discussing the GOC with healthcare providers. They found that GOC discussions did not significantly increase the patient's or caregivers' level of anxiety or depression (Doorenbos, Levy, Curtis, & Dougherty, 2016). In contrast, patients and their caregivers reported that they felt relieved from physical and psychological distress after having a GOC discussion (Aparicio, Centeno, Carrasco, Barbosa, & Arantzamendi, 2017). Furthermore, the GOC conversation was also found not to affect patients and caregivers' satisfaction with the care during a hospital stay (Anderson et al., 2011)

In summary, the integration of the GOC conversation with patient-centered care can improve the quality of care because patients become actively engaged in the GOC discussion. Furthermore, the GOC conversation improves the hospital's performance on quality measurements such as patient satisfaction, re-admission rates, and length of stay (Aparicio et al., 2017; Barbor, 2016; O'Connor, Moyer, Behta, & Casarett, 2015; Sekiguchi et al., 2014; Zhang et al., 2017).

Nurses' Perception of Their Role and Barriers

Facilitators and barriers to the GOC conversation and PC are based on the nurses' perceptions of their role. Nurses' perception can interfere with or facilitate PC screening and delivery. Multiple studies explored nurses' perception of their role during the GOC conversation as well as barriers which they encountered in daily practice (Anderson et al., 2016; Hasselaar et al., 2016; Perrin & Kazanowski, 2015; Slatore et al. 2012; Wittenberg, Ferrell, Goldsmith, Buller, & Neiman, 2016). Recognizing their role and understanding the barriers will help nurses efficiently initiate the GOC conversation and enhance PC access to the patients and their caregivers. Bekelman et al. (2017) found that nurses could increase their confidence in initiating the GOC conversation if they acknowledged their role and the barriers during the conversation.

Nurses' Role in GOC Conversation

In a study by Slatore et al. (2012), nurses considered themselves as information translators because they explained to patients and caregivers about what the physicians said during and after the GOC conversation. Nurses also perceived that they played an important role in ensuring mutual understanding among patients, caregivers, and physicians because they were more knowledgeable of the patients and their caregivers' suffering and needs during the hospital stay (Jensen, Ammentorp, Johannessen, & Ording, 2013). Therefore, nurses' involvement in PC, GOC, and prognosis conversations were crucial since they functioned as patients' advocates and had a strong rapport with the patients and caregivers (Anderson at al., 2016). Some nurses reported that they did not want to get involved in GOC conversations because of inadequate training in GOC conversations, but they were comfortable in providing emotional support for patients and

caregivers (White et al., 2012). Mehta, Wilks, Cheng, Baker, & Berger (2018) revealed that 88% of bedside nurses reported that they were ready for the new role of engaging in GOC conversations with patients and caregivers after attending PC education classes.

Barriers to Initiation of PC and GOC Conversation

Many barriers that delayed the initiation of PC and GOC conversation have been identified in the literature. These barriers include limited PC education and training, and misperception of PC meaning (Anderson et al., 2016; Hasselaar et al., 2016; Perrin & Kazanowski, 2015; Wittenberg, Ferrell, Goldsmith, Buller, & Neiman, 2016). A systematic review supported the finding that there existed a lack of education and training regarding PC, and the GOC conversation among nurses (Hasselaar et al., 2016; White, Roczen, Coyne, & Wiencek, 2014). In addition, nurses in community and suburban hospitals do not receive the same PC education and training as nurses in the academic medical centers (Eriksson, Bergstedt, & Melin-Johansson, 2015; Pesut et al., 2015). Since PC education and training are facilitators of PC delivery, this gap must be addressed.

A qualitative study found that nurses in the community or suburban hospitals lacked PC education and were uncertain about the meaning of PC (O`Shea, 2014). In a literature review by Hasselaar et al. (2016), it was noted that the United States healthcare system did not provide enough training and education for nurses about PC which leaded nurses to a misperception of PC being synonymous with hospice care. Hospice care and PC are different. Hospice care focuses on pain management, psychosocial, and spiritual support for critically or terminally ill patients approaching the EOL. Palliative care is

the management of complex symptoms with the intention of improving the quality of life for chronically and acutely ill patients who are not necessarily dying (Hui et al., 2013).

While inadequate PC education and misperception of PC were barriers for nurses to provide primary PC, PC screening, and to initiate GOC conversations, the emotional discomfort among nurses is another barrier found in studies (Aslakson et al., 2010; Eriksson et al., 2015; Slatore et al., 2012). Nurses without adequate PC training felt uncomfortable with having a GOC conversation. Furthermore, these nurses perceived that engaging in the GOC conversation would exacerbate the patients' and caregivers' distress if they did not know how to communicate empathetically (Aslakson et al., 2012). Therefore, a PC educational workshop would be helpful since nurses are on the frontline for delivering primary PC to patients (Anderson et al., 2017).

In summary, one of the primary nursing roles was to assess patients and caregivers' understanding of their prognosis and PC needs (Wittenberg et al., 2016; You et al., 2015). One study reported that nurses had to face many barriers such as inadequate training, misperception of PC, and emotional discomfort; and PC education could help nurses overcome these barriers (Perrin & Kazanowski, 2015). Doorenbos, Levy, Curtis, and Dougherty (2016) emphasized that nurse-led GOC conversations would improve patient outcomes with increased nurse training on how to initiate GOC conversations.

Using the SICG for GOC Conversation

There are multiple barriers to initiating the GOC conversation; therefore, PC education should include a conversation guide for nurses to use when beginning the conversation. Examples of barriers are patient and caregivers' difficulty with accepting a

poor prognosis, clinicians' difficulty in discussing EOL decisions, and addressing conflicts among caregivers during the GOC conversation (Ganguli, Chittenden, Jackson, & Kimball, 2016; You et al., 2015). The Serious Illness Conversation Guide (SICG) provides a structure that nurse can use to navigate them through barriers and easily engage in GOC conversations with patients and their caregivers (Ariadne Labs, 2012; Bernacki & Block, 2014; see Appendix A). There are eight key elements in the SICG: understanding prognosis, information preferences, sharing prognosis, establishing GOC, fears/worries, acceptable function/quality of life, trade-offs, and caregivers involvement. Nurses can utilize eight elements in the SICG to initiate the GOC conversation with patients and caregivers no matter how sick the patient is. The SICG focuses on engaging patients to participate in their own care plan. Therefore, the healthcare team members should integrate the SICG into their daily communication to facilitate the GOC conversation with patients and their caregivers (Bernacki & Block, 2014).

You, Fowler, and Heyland (2014) reported that healthcare providers often over-estimated the patient's life expectancy, which results in a delayed GOC discussion with patients and caregivers. With this in mind, clinicians should initiate GOC discussions as a routine process whenever patients are admitted to the acute care setting (Gieniusz et al., 2018; You, Fowler, & Heyland, 2014). Although GOC discussions in different stages of the disease process were always sensitive, the SICG users reported their increased confidence in exploring patients' and caregivers' goals, values, and needs after they received training on how to utilize the SICG (Miraglia et al., 2016). Adhering to the SICG will help clinicians successfully engage in early GOC discussion with patients and their caregivers during hospitalization or before the patient's condition deteriorates

(Bernacki & Block, 2014; Lakin et al., 2017). Many researchers found that early PC and patients' involvement in GOC conversation during a hospital stay improved patients' quality of life (Gieniusz et al., 2018; Isenberg et al., 2017; Martins, Oliveira, & Cataneo, 2017). The early GOC conversation and PC delivery provide a platform for improving patient outcomes (Gieniusz et al., 2018; Isenberg et al., 2017; Martins et al., 2017). However, nurses should know how to use PC screening tools to early identify the PC needs of the patients and their caregivers so that the GOC conversation will be initiated early (Creutzfeldt et al., 2015).

Palliative Care Screening Tools

The Improving Palliative Care in the ICU (IPAL-ICU) project identified PC screening criteria to address unmet PC needs (Cortez et al., 2013). There are two commonly used PC screening tools: the CAPC-ICU Screening Tool, which was created by Nelson et al. (2013) and the CAPC Screening Tool, which was developed by Weissman and Meier (2011). Mun et al. (2017) conducted a systematic review to evaluate these two PC screening tools using Clinical Practice Guideline Appraisal of Guidelines for Research and Evaluation II (CPG AGREE II) system. The CPG AGREE II system is an instrument that assesses the quality of a clinical practice guideline by using six domains such as scope and purpose, stakeholder involvement, rigor of development, clarity of presentation applicability, and editorial independence (Appraisal of Guidelines for Research and Evaluation, n.d). The CAPC-ICU Screening Tool (Nelson et al., 2013) and the CAPC Screening Tool (Weissman & Meier, 2011) passed the quality threshold of 70%. Both of these PC screening tools were recommended for use in clinical practice because of their objectively high-quality criteria (Mun et al., 2017;

Zalenski et al., 2014). Although the validity and reliability of these two tools were not tested, both of these quality PC screening tools could identify a high number of patients who needed PC support compared to other PC screening tools (Lapp & Iverson, 2015).

Nelson et al. (2013) suggested that the CAPC-ICU Screening Tool should be tailored for specific needs of critically ill patients in the ICU, both upon admission and during their hospital stay. The CAPC-ICU Screening tool has three criteria: disease criteria, utilization criteria and other criteria (Cortez et al., 2013; Nelson et al., 2013) (see Appendix B). In contrast, the CAPC Screening Tool (Weissman & Meier, 2011) includes two PC screening checklists: one for admission and another for daily rounds (see Appendix C; Appendix D). Both of the PC screening tools are available for use in assessing the PC needs of patients and caregivers in many institutions. It was reported that PC was needed for patients who met four criteria and above (Cortez et al., 2013; Nelson et al., 2013; Weissman & Meier, 2011). Nurses should be educated and familiar with the screening criteria in PC screening tools so that they can quickly integrate the tools in their daily practice (Nelson et al., 2013; Weissman & Meier, 2011). Compliance with the PC screening process will promote early PC access, which will bring the most benefits for patients and caregivers (Hurst et al., 2014; Jenko et al., 2015; Zalenski et al., 2017).

Palliative Care Education

A literature review by Kelly, Thrane, Virani, Malloy, and Ferrell (2011) reported that a PC workshop provided nurses with primary PC knowledge to help them improve patients' quality EOL care. After attending a workshop, nurses could apply primary PC knowledge to relieve patients and caregivers from suffering physical and psychological

distress from their day of initial diagnoses to their end of life (National Comprehensive Center Network, 2012; Puntillo et al., 2014; Thomson, 2013). A study by Cronin and Finn (2017) reported that a PC educational workshop based on a validated curriculum had a positive influence on training nurses on how to initiate GOC conversation. Many PC workshops not only enhanced nurses' knowledge and communication skills but also increased their confidence in delivering the GOC conversations (Boyle & Anderson, 2015; Cronfalk et al., 2015; Milic et al., 2015). Anderson et al., (2017) and Frey et al. (2014) reported that nurses' confidence level regarding PC communication increased with formal PC training compared to those with no training. In addition, after nurses participated in a PC educational workshop, they perceived that their communication skills and knowledge had improved to a level that allowed them to independently conduct GOC conversations (Bekelman et al., 2017; Boyle & Anderson, 2015; Cronfalk et al., 2015; Cronin & Finn, 2017).

Although significant statistical findings regarding PC workshops were inconsistently reported in multiple studies, researchers found that nurses provided positive feedback regarding the importance of PC educational workshops (Brighton et al., 2017; Cronin & Finn, 2017; Pesut et al., 2014). Frey et al. (2014) reported that 73% of the 598 nurses who participated in workshops wanted to have more formal training in PC. After receiving formal training, nurses perceived that they were confident in delivering PC, and helping patients and their caregivers understand the information presented by the physician during GOC conversation (Ahluwalia, Schreibeis-Baum, Prendergast, & Reinke, 2016; Slatore et al., 2012). Therefore, educational workshops and training should be expanded into the community to improve nurses' knowledge and confidence to

early initiate GOC conversation (Dalgaard, Bergenholtz, Nielsen, & Timm, 2014; Frey et al., 2014)

End-of-Life Nursing Education Consortium

To improve the quality of EOL care and PC for the sick people, the American Association of Colleges of Nursing collaborated with the City of Hope National Medical Center to develop the ELNEC (Sherman, Matzo, Rogers, McLaughlin, & Virani, 2002). The ELNEC is a community-based workshop designed to provide continuing education and training to nurses with the aim of increasing nurses' knowledge of PC and EOL care across the healthcare settings (Coats et al., 2017; Grant et al., 2013; Sherman, Matzo, Panke, Grant, & Rhome, 2003). The ELNEC curriculum has been used in numerous studies, improvement projects, and education programs to educate nurses about PC (Gabriel et al., 2015; Kelly, Ersek, Virani, Malloy, & Ferrell, 2008; Kelly et al., 2011; Sherman, Matzo, Paice, McLaughlin, & Virani, 2004; Sherman et al., 2003). Two large studies with a total of 888 nurses showed that the use of the ELNEC curriculum increased nurses' knowledge of PC and alleviated nurses' anxiety toward patients'death and dying process (Grant et al., 2013; Whitehead, Anderson, Redican, & Stratton, 2010).

Teaching Strategies Needed in the PC Educational Workshop

When working with adult learners, it is important that educators understand the strategies which will motivate and engage learners in seeking out new knowledge. The use of evidence-based teaching strategies helps educators to make sure adult learners actively participate in the workshop to gain knowledge and skills (Duff, Gardner, & Osborne, 2014). The Adult Learning Theory by Knowles (1984) indicates that nurses as adult learners who commit to learning when they can analyze and apply what they have

learned into their practice (Candela, 2012). The ELNEC curriculum uses a variety of teaching strategies to increase nurses' knowledge of PC and the skills needed to conduct GOC conversations such as lectures, roleplays, and discussions (Ferrell, Malloy, & Virani, 2015; Ferrell, Virani, & Malloy, 2006). Each strategy is designed to engage adult learners in learning activities.

Lecture and Discussion

The lecture is a face-to-face teaching method in which the educator will explain the information in details that needs to be conveyed to learners (Downar et al., 2017). Studies showed that the lecture played an important role in expanding and retaining nurses' knowledge (Bodine & Miller, 2017; Cox, Roche, & Van Wynen, 2011). The advantage of the lecture format is that educators provide information and explain new concepts in an easy-to-understand manner (Whitney & Luparell, 2012). Research showed that the use of lecture alone significantly increased nurses' knowledge when the knowledge was assessed immediately after the lecture. However, when learners were assessed three to six months after the lecture, there was a decrease in retention of knowledge (Sarayani et al., 2015). A discussion during lecture is an interactive teaching strategy to engage nurses in learning efficiently (Cox, 2015; Sarayani et al., 2015). An application of the discussion strategy used during a lecture would maintain the cognitive presence of learners because it requires learners to apply a high level of critical thinking skills in order to articulate the contents of what was taught (Darabi, Arrastia, Nelson, Cornille, & Liang, 2011; Kaddoura, 2013). Therefore, discussion promotes the analysis and reflection of what learners experience and help them integrate what they learned into their practice.

Roleplay

Roleplay is another teaching strategy used in the workshop in order to engage participants in learning. In adult education, roleplay helps learners practice and apply knowledge and skills through activation of the cognitive, social, and constructivist learning process (Rutherford-Hemming, 2012). Cognitive learning will enhance learners' ability to receive and process new knowledge. It requires learners to pay attention to a topic or information presentation. On the other hand, social and constructivist learning requires learners to interact with each other and integrate new skills, technique, and critical thinking into practice (Rutherford-Hemming, 2012).

Roleplay, which is the most effective teaching strategy in education, has also used in a variety of specialties such as law, business, and engineering (Pettenger, West, & Niki, 2014; Riley & Li, 2014; Schnurr, De Santo, & Green, 2014). Therefore, the use of roleplay in PC education is a promising strategy to improve nurses' confidence and learning (Kirkham, 2018; Ulrich, Gillespie, Boesch, Bateman, & Grubb, 2017; Wheeler & McNelis, 2014). It has been reported in a few studies that nurses integrated different communication skills into the roleplay to maximize their knowledge and skill application (Smith, Van Aman, Schneiderhahn, Edelman, & Ercole, 2017; Spear, Guillen, Elliott, Roettger, & Zukowsky, 2013; Turkelson, Aebersold, Redman, & Tschannen, 2017; Villemure, Tanoubi, Georgescu, Dubé, & Houle, 2016). In summary, it was suggested that an evidence-based educational workshop should combine multiple teaching strategies not only to enhance nurses' knowledge but also to help nurses retain and apply the new knowledge and skills (Gesin et al., 2012).

Evaluation of an Educational Workshop

Evaluation of an educational workshop is an ongoing systematic, complex assessment of the design and quality of educational approaches used to teach new information (Chen, 2005; Chen & Mathies, 2016). The evaluation is designed to seek information and input from participants so that educators could improve the effectiveness and validity of the contents provided in the workshop (Sauter, Gillespie, and Knepp, 2012). The success of the workshop reflects the participants' perceptions that the information provided is acceptable, appropriate, adaptable, and sustainable (Proctor et al., 2011). Many workshops used a summative evaluation format to determine the effectiveness and reliability of the contents (Anderson et al., 2017; Arnold et al., 2015; Gabriel et al., 2015; Reynolds, McLennon, Ebright, Murray, & Bakas, 2017). Summative evaluation is the highest level of assessment since it is designed to measure the workshop's objectives and outcomes based on the knowledge that participants gained (Bourke & Ihrke, 2012). The summative evaluation includes closed-ended questions and/or open-ended questions relating to the contents provided within a workshop.

Summative evaluations might consist of closed-ended questions which the participants answer either *yes* or *no*. This type of evaluation is commonly used when the evaluators seek to obtain concrete answers and easily analyzed responses from participants (Polit & Beck, 2017). Some researchers use the *Likert* scale response format for close-ended questions to explore how participants rate the contents. The *Likert* scale responses are based on a scale such as from one to four or five points scale to measure whether participants agree or disagree on a statement for a specific subject in the workshop (Polit & Beck, 2017). The use of a scale to rate responses increases the

objectivity of the evaluation (Bourke & Ihrke, 2012). In contrast, the evaluation with open-ended questions requires that participants narratively respond in their own words (Polit & Beck, 2017). This type of evaluation explores the participants' perceptions, thoughts, ideas, and attitudes toward the workshop. This method provides rich detail that can be used to improve the workshop. However, educators need to spend more time interpreting the findings by using a qualitative method approach.

The combination of the close-ended and open-ended questions enhances the validity and reliability of the workshop evaluation. The workshop evaluation is validated if the questions in the evaluation measure the relevance, accuracy, and utility of the educational objectives (Sauter, Gillespie, & Knepp, 2012). In addition, the reliability of the workshop evaluation result reflects the consistency of the educational objectives, which are in alignment with the goals of the workshop. Arnold et al. (2015) used a workshop evaluation which included closed-ended *Likert* scale questions and open-ended questions in their study. The study found that the participants viewed the educational contents of the workshop positively and 83% of the participants highly recommended the workshop to others. It is suggested that follow-up evaluations should be conducted regularly to assess the retention of knowledge and the application of the skills taught within a workshop (Anderson et al., 2017; Arnold et al., 2015; Gabriel et al., 2015). The follow-up evaluation can help the workshop educators develop an improvement plan and select appropriate measures to evaluate participants' learning for the next workshop (Ferrell, Virani, Paice, Coyle, & Coyne, 2010).

Evaluation of Participants' Learning

Evaluation of participants' learning is a vital component of the evaluation of a workshop. Understanding participants' learning helps educators to determine if participants achieved the knowledge and skills that were outlined in the goals of the workshop. Furthermore, the evaluation of the participant's ability to integrate the knowledge and skills taught in the workshop is important to determine the effectiveness of the educational activities (Kirkpatrick & DeWitt, 2012). Participants' learning can be assessed by using both formative and summative methods.

Formative Evaluation

Formative evaluation is conducted during the workshop activities to provide learners with immediate feedback on their learning process. This evaluation is conducted to determine how well learners understand and utilize information post lecture. The formative evaluation utilizes constructive feedback as a form of communication between the educator and learners (Arnold et al., 2015; Krimshtein et al., 2011). This formal feedback is given to participants after the educator thoroughly assesses the learners' performance (Stokes & Kost, 2012). This type of feedback is qualitative in nature and tends to empower participants' learning skills. Based on the given feedback, the participants can enhance their application in the learning activity (Owen, 2016). Later, the participants can integrate the knowledge and skills into practice at their facilities (Clayton et al., 2012).

Summative Evaluation

Summative evaluation is often conducted at the end of the workshop once all the information has been presented. This evaluation is conducted to determine whether the

participants have learned the contents in the workshop (Kirkpatrick & DeWitt, 2012). The summative evaluation can be a self-evaluation survey given to the participants before and after the workshop. The self-evaluation survey consists of close-ended questions, *Likert* scale-based questions, and open-ended questions. The self-evaluation survey is a reliable measurement since it is an assessment of the participant's perception of their change in knowledge and skills after receiving the education (Bhanji, Gottesman, De Grave, Steinert, & Winer, 2012). In many pre- and post-test studies, most of the participants confidently rated their improvements in knowledge and skills after attending a workshop (Arnold et al., 2015; Clayton et al., 2012; Cronin & Finn, 2017; Pype et al., 2015)

The summative evaluation can also use the testing format. The test consists of close-ended questions with *true-false* answers or multiple-choice answers. The true-false questions objectively measure the participants' comprehension of the information taught in the workshop (McDonald, 2014). In contrast, the multiple-choice questions provide a broader approach to assess the participants' critical thinking skills regarding the content (McDonald, 2014). For example, the Palliative Care Quiz for Nursing used many true-false questions to measure the nurse's knowledge, skill, and attitude toward the PC (McDonald, & McGuinness, 1996). This validated and reliable instrument has been used in multiple research studies, quality improvement projects, and educational workshops (McCamey, 2017; Nakazawa et al., 2009; Slåtten, Hatlevik, & Fagerström, 2014; Wilson, Avalos, & Dowling, 2016).

In summary, the evaluation of a learner is essential to measure the effectiveness of a workshop's design and teaching methods. While the formative evaluation can engage

the participants in learning during the lecture, the summative evaluation is commonly used to measure the improvement in participants' knowledge and skills at the end of the workshop. A detailed evaluation of the participant's learning will determine if the learners' achievement matches the workshop's goals. Therefore, an evidence-based evaluation should be used to strengthen the design of an evidenced-based educational workshop.

Summary

Early use of PC screening tools to assess PC needs and early PC delivery can help nurses to identify multiple supports for patients and caregivers in the ICU who are vulnerable to emotional and psychological distress (Restau & Green, 2014). An early GOC conversation can improve the patient quality of care, end-of-life care, the hospital's quality performance measures as well as decrease the economic impact on the hospitals as they may receive higher reimbursement rates (Greene, 2012; Hammer, 2018; McKale, 2014). Based on the recommendations from the literature review, an evidence-based PC and GOC conversation educational workshop should be developed to enhance the critical care nurses' knowledge about PC, PC screening tools, and GOC conversation in the community hospitals. Evidence-based workshops also increase the nurses' confidence in initiating GOC conversation by utilizing multiple teaching strategies, skill application, and evaluation. All of these efforts will be a contribution to the quality of care that nurses provide.

METHODS

The purpose of this quality improvement project was to develop an evidence-based educational workshop to improve nurses' knowledge of palliative care (PC) and confidence in initiating a goals-of-care (GOC) conversation by using the Serious Illness Conversation Guide (SICG). The Donabedian Model served as the framework for this project. Based on the Donabedian framework, it was acknowledged that the structures, processes, and outcomes of the educational workshop had an impact on quality of care (Santana et al., 2018). In acute care hospitals, the intensive care unit (ICU) has the goal of curing disease, and thus PC is not part of the critical care structure. As discussed earlier, large academic medical centers facilitate PC education and training for critical care nurses to enhance PC in their units. Community hospitals often lack these resources. In this project, the development of a PC workshop was to provide an alternative to traditional critical care practice in community hospitals. In the sections that follow, the project details and procedures in the development of the workshop are described.

Target Setting and Participants

The target setting for the project was the community hospital, and the target participants were critical care staff nurses. The educational workshop could be offered to staff nurses in order to facilitate the GOC conversation and provide resources for PC within the structure of the critical care environment in the community setting. During workshop piloting, critical care nurses from the Doctor of Nursing Practice Nurse Anesthesia (DNPNA) program were recruited. The workshop was piloted at the California State University, Fullerton (CSUF) campus.

Ethical Issues

The author of this project applied to the CSUF Institutional Review Board (IRB) for project approval. The IRB approval was granted (see Appendix E).

Steps in the Development of the Educational Workshop

The first step in the development involved an extensive review of the literature. All studies and other evidence discussing PC, GOC, and use of evaluation instruments were obtained, reviewed, and synthesized. The materials from the End of Life Nursing Education Consortium (ELNEC) conference in California, a PC symposium held by St. Joseph and Hoag Health system and the advanced communication training session were obtained and used. Information from other workshops and conferences were gathered to develop the workshop. During this time, several PC practitioners were consulted. The PC experts were consulted again to review the workshop once the workshop development completed. All information and feedback were gathered to design the workshop, including the PowerPoint presentation, roleplay scenarios, and evaluation measures. A major resource in the development was the materials from ELNEC.

The second step was to decide on the content of the workshop. The content focused on adult learner knowledge acquisition and roleplay. The first part of the workshop included a lecture and discussion. The lecture included four topics presented in a PowerPoint presentation, which provided nurses with visual learning. The first topic was a PC introduction, which included information about the PC principles and philosophy from the ELNEC curriculum. There was also a presentation of the differences between PC and hospice care in this section. Throughout the PowerPoint presentation, there were slides with questions which were designed to provide formative

evaluation of the participants' information retention. The second topic was the introduction of PC screening tools. Once all of the information was provided, the participants used the PC screening tools to practice using four scenarios. The third topic was the GOC conversation. Several sample questions were provided for the participants to apply during GOC conversation practice. The fourth topic addressed nurses' perception of their roles and barriers to provide PC and conduct the GOC conversation. During this part of the workshop, the participants were going to discuss their knowledge, experience, and perceptions of barriers that they had encountered in the ICU. Using this discussion strategy, the participants became more engaged and motivated to change their practices (Sherman et al., 2003).

The learning objectives for this section were as followed:

1. Describe the philosophy and principles of PC in the ICU and differentiate PC from hospice care.
2. Identify GOC categories and the need for GOC conversation in the ICU.
3. Discuss the nurses' perception of their role in GOC conversation and barriers to initiation of PC and GOC conversation.
4. Describe the screening criteria in the two commonly used PC screening tools.
5. Demonstrate how to apply the PC screening criteria in identifying the PC needs of critically ill patients.

The second part of the workshop was roleplay. The roleplay helped the participants become familiar with the SICG. The participants received a package which includes a detailed conversation guide with sample questions (see Appendix F), the

NURSE Mnemonic Guide (see Appendix G), *IPAS-3W*s Best Practices guide (see Appendix H), three case scenarios (see Appendix I), and the observation form (OF) (see Appendix J). There was a discussion about eight elements in the SICG so that participants could understand how to integrate each element into the GOC conversations. In addition, the *IPAS-3W* Best Practice and the *NURSE* Mnemonic Guide were provided to the participants. Before the participants started the roleplay, they watched a video of the GOC conversation. The participants had 20 minutes to perform roleplay for each case scenario. These case scenarios were of patients with congestive heart failure, chronic obstructive pulmonary disorder, and hemorrhagic stroke. Participants formed a group of three people. One participant acted as a patient or a caregiver. The second participant acted as a nurse. The third participant was an observer. The observer wrote down the name of a participant who acted as a nurse. The observer used OF to identify key statements for each element in the SICG made by the nurse during the roleplay. These statements helped nurses improve their conversation skills. This section instructed the nurses to apply the SICG to practice a GOC conversation. The roleplay increased the effectiveness of learning and application of knowledge as well as improved problem-solving skills (Chen & Martin, 2015; Gartmeier et al., 2015; McIlvried, Prucka, Herbst, Barger, & Robin, 2008; Yu & Kang, 2017). At the end of this section, there was a quick debriefing to let the participants express their perception of the role play with the purpose of enhancing knowledge and skills (Couper, Salman, Soar, Finn, & Perkins, 2013).

The learning objectives for this section were as followed:

1. Describe the importance of using the SICG in conducting GOC conversation

2. Identify eight elements of the SICG

3. Demonstrate the ability to apply the SICG in GOC conversation through three scenarios

Evaluation of Workshop and Participants' Learning

The evaluation was an important part of the project to determine the validation of the educational workshop. There were two items to be evaluated: participants' learning and workshop content. There was an additional workshop evaluation from the PC expert review to revise the workshop before piloting.

Evaluation of Participants' Learning

Before and after the workshop, the participants completed the Nurse Knowledge of Palliative Care Quiz (see Appendix K), and the Nurse Confidence in Goal of Care Conversation Survey (see Appendix M).

During the PowerPoint presentation, the participants were required to apply the provided information to answer the true/false and multiple-choice questions regarding PC, PC screening criteria, GOC, and the SICG. These questions were designed based on the workshop objectives.

Evaluation of an Educational Workshop

At the end of the PC educational workshop, the participants completed the Educational Workshop Evaluation Survey (see Appendix N).

Expert Review and Revision of the Workshop

An expert panel was sought to review the content of the workshop, the instruments, and the roleplay case scenarios. The expert panel consisted of four PC nurse practitioners and a PC social worker. All the experts used the Expert Evaluation Form

(see Appendix P) to write their comments about the workshop content. The expert panel's comments were reviewed, and revisions were made based on the feedback. After revision, the workshop was piloted with a group of critical care staff nurses.

Workshop Piloting Procedure

Once the workshop content was revised following PC experts' feedback, the workshop was piloted. In order to accomplish the workshop piloting, critical care staff nurses were invited to attend the workshop. Permission from the Director of the DNP Program was obtained to send out a flyer to critical care nurses who were enrolled in the Doctor of Nursing Practice Nurse Anesthesia (DNPNA) program. The DNPNA program is a part of the Southern California CSU DNP Consortium, the School of Nursing at California State University, Fullerton and the Kaiser Permanente School of Anesthesia. Typically, the DNPNA students enrolled in this program are critical care staff nurses seeking further education and training. Eligible participants for the workshop piloting were those who had at least three months of critical care background.

A flyer was sent out via email to ask for volunteers. The flyer included information about the workshop. The DNPNA students were assured that they were under no obligation to volunteer and their participation or lack thereof did not impact their performance in the program. They were told that if they were interested, they would receive a $30.00 Starbucks gift card as compensation for their time and effort once their participation was complete. They also had a chance to win a $70.00 Target gift card through a raffle at the end of the workshop. Participants would not receive any gift card if they withdrew from the workshop before completion or could not complete the whole workshop.

Participants could use an email and telephone to sign up for participating in the workshop. Once there were volunteers, the participants were asked to select a date and time for the workshop piloting. There were two parts in the workshop. Each part was approximately 60 minutes. The first part was a lecture and discussion of the workshop content. The second part was the GOC conversation roleplay practice.

All the volunteer participants came to a classroom at California State University, Fullerton. At the date and time of the workshop, participants read and signed an informed consent form (see Appendix R). They also completed the Demographic Survey (see Appendix O). Participants were assigned an ID number (3 digits random numbers), and all surveys were marked with the ID numbers. Pre and post surveys were differentiated with one (pre) or two (post). Consents were kept in a separate file from the surveys without identification so that no participants' consent form could be linked with their surveys. The pre-/post-surveys were returned to the volunteers after the workshop so that they could use them for their discussion about their workshop experience. The pre-/post-surveys were kept in a locked document box. The data were scanned and stored in a password-protected laptop. The password-protected laptop and locked document box were kept in the locked office room at a private home. The survey results were shredded, and the data were permanently deleted from the laptop after the completion of the project.

The participants attended the workshop and provided feedback for the content, quiz, survey, and workshop effect on adult learning to improve the development of the workshop. The participants completed the demographic survey, Nurse Knowledge of Palliative Care pre/post-quiz, the Nurse Confidence in Goal of Care Conversation

pre/post-survey, and the Educational Workshop Evaluation Survey. The measurement instruments used in the evaluation are described below.

Instruments for Evaluation

The Nurse Knowledge of PC Quiz

The Nurse Knowledge of PC Quiz (see Appendix K) consisted of three items which were adopted from the Palliative Care Quiz for Nursing, designed to measure the nurse's knowledge of PC (Fedel, Joosse, & Jeske, 2014; Ross, McDonald, & McGuinness, 1996). The three questions were "PC is appropriate only in situations where there is evidence of a downhill trajectory of deterioration," "PC should only be provided for patients who have no curative treatments available," and "The philosophy of palliative care is compatible with that of aggressive treatment." Nurses responded to these questions using a *true/false* response style. The questions in the Palliative Care Quiz for Nursing had prior high internal consistency (Ross et al., 1996). Permission to use questions in the Palliative Care Quiz for Nursing Survey was obtained (see Appendix Q).

The Nurse Confidence in Goal of Care Conversation Survey

The Nurse Confidence in Goal of Care Conversation Survey assessed the nurse's confidence in initiating the GOC conversation (Milic et al., 2015). This survey consisted of five questions (see Appendix M). For example, "how confident are you to explore prognosis and goals of care with a patient's caregivers?", "how confident are you to voice concerns to a physician that communication needs of a patient's caregivers are not being met?", "how confident are you in exploring prognosis and goals of care with a patient's caregivers members?", and "how confident are you in eliciting the concerns of a

physician about prognosis and goals of care?". The last question in the Nurse Confidence in Goal of Care Conversation Survey was omitted because the workshop did not cover the content of that question. The nurses used a dichotomized four-point *Likert* scale from one (*not very confident*) to four (*very confident*) to rate their confidence in initiating GOC conversations. Each question in the survey was independently scored. Milic et al. (2015) used the Nurse Confidence in Goal of Care Conversation Survey in their research. Their findings showed that the nurses' confidence in GOC conversation consistently improved immediately after receiving the training and was sustained for three months (Milic et al., 2015). Krimshtein et al. (2011) also used this survey to measure nurses' confidence in GOC conversation. The results showed that 89 nurses were more confident in initiating GOC conversation with patients and caregivers. The questions in the survey had face-validity and reliability (Arnold et al., 2015; Krimshtein et al., 2011; Milic et al., 2015). Therefore, the Nurse Confidence in Goal of Care Conversation Survey was used in this project to measure the nurses' confidence in initiating GOC conversations with patients and caregivers. Permission to use the Nurse Confidence in Goal of Care Conversation Survey was obtained (see Appendix Q).

The Educational Workshop Evaluation Survey

The Educational Program Evaluation Survey consisted of 10 questions (see Appendix N). These questions came from the Course Evaluations Question Bank (Berkley Center for Teaching and Learning, n.d). The first seven questions were positive statements about the workshop and participants used a five-point *Likert* scale from one (*strongly disagree*) to five (*strongly agree*) to rate their evaluation of the program's content, development, and application of knowledge and skills. For example, "The

workshop was effectively organized", "The workshop roleplay section and lecture section usefully complemented/supported each other", "The workshop instructions (including, manuals, handouts, etc.) were clear", "The workshop helped me understand concepts of palliative care more clearly", "The workshop provided guidance on how to be competent in my profession", "The workshop developed my abilities and conversation skills for daily practice", "The workshop developed my ability to apply the recommended conversation guide and palliative care knowledge to practice." The eighth question was "How satisfied were you with this workshop?" The answer to this question was based on a five-point *Likert* scale ranging from one (*not very satisfied) to* five (*very satisfied).* This question evaluated the participant's satisfaction with the program. The last two items were open-ended questions to ask for the participants' input for the program improvement. "Please identify what you consider to be the strengths of the workshop," "please identify the area(s) where you think the workshop could be improved." The questions on this form were validated because the faculty focus group of the Task Force on Teaching Evaluation developed the questions based on the recommendations from the Taskforce on Teaching Evaluation Final Report (2009). The author emailed the University of California, Berkley for permission to use the questions (see Appendix Q).

RESULTS

Workshop PowerPoint Presentation Development Result

After reviewing the literature, teaching materials from the End of Life Nursing Education Consortium (ELNEC) course, Ariadne Labs Community, and Advanced Communication Training session from Providence Institute for Human Caring, the palliative care (PC) educational workshop PowerPoint presentation was developed. Permission to use materials was approved (see Appendix Q). Furthermore, the PC expert reviews were helpful for a revision of the PowerPoint presentation to maximize the participant's learning and application capacity. The PowerPoint presentation consisted of 50 slides (see Appendix S). The PowerPoint presentation was divided into two sections:

1. Section one: PC, PC screening tools, goals-of-care (GOC), nurses' perception of their role and barriers to PC delivery.
2. Section two: The Serious Illness Conversation Guide (SICG) and roleplay.

Expert Review Result

An expert review panel included four PC expert nurse practitioners and one PC social worker who gave explicit evaluations of the workshop regarding its content, instruments, sample questions of each element in the SICG, and the roleplay case scenarios (K. Fortes, personal communication, March 10, 2019; P. Mallagon, personal communication, March 6, 2019; L. Muller, personal communication, March 6, 2019; L. Quiggs, personal communication, February 21, 2019; & L. Traucht, personal communication, March 12, 2019). In their review, the content of the workshop was considered adequate and clear for providing information about PC principles and philosophy. The panel suggested adding a PC specialist, social worker, and chaplain

consultation in the PowerPoint presentation. They also recommended that the introduction of the workshop should be started with a story of why a patient's GOC should be addressed earlier upon admission in order to raise participants' interest in the workshop. Due to the time limitation, an example of witnessing delays in GOC conversations with patients and their caregivers in the ICU was shared with participants.

The PC experts who conducted the GOC conversations in their routine practice provided an in-depth review of the instruments, formative questions, and sample questions of the elements in the SICG. They all agreed that the measurement instruments were useful for evaluating participants' knowledge acquisition. However, they recommended changing the type of answers for the questions in the Educational Workshop Evaluation Survey. They suggested using five-point *Likert* scale responses (ranging from one (*strongly disagree)* to five (*strongly agree))* to enhance the validity of participants' perception of the workshop instead of using *yes* or *no* responses. The Stop and Consider slides in the workshop PowerPoint, which were a formative evaluation of participants' learning were comprehensible. The experts believed that these questions engaged participants to focus on the lecture and helped to retain new knowledge. Furthermore, these slides helped participants to recap and clarify the content misconceptions and facilitated discussion of participants' clinical experiences. The conversation sample questions of the elements in the SICG and statements of GOC, *NURSE* Mnemonic guide, and *IPAS-3Ws* Best Practices guide were revised following the PC experts reviews. The revised sample questions and statements were more comprehensible to help participants practice comfortably and have a smooth transition between elements in the SICG.

The PC experts acknowledged the benefits of the roleplay section because it provided participants with an opportunity to practice the SICG. The PC experts all agreed that the case scenarios were appropriate and enabled critical care nurses to apply the SICG while practicing the GOC conversations. The PC experts also stated that the roleplay section would give participants robust experiences in exercising GOC conversations. Although participants might be out of their comfort zone, they would learn how to adjust their approaches through unexpected questions and answers from their group partners. The experts wanted to know whether participants had time to reflect on their experiences at the end of the section, which would help them improve their communication skills and confidence. The PC expert panel got informed that there was a debriefing section at the end of the roleplay as a part of the project. The purpose of the debriefing section was to discuss and review the roleplay section with participants and to seek feedback from participants to improve the structure of the roleplay section.

In summary, the PC experts' review contributed to revising the content of the workshop. Their valuable feedback was useful for modifying the structure of each section so that there was a smooth transition between sections. The PC experts provided input from real-life experiences in their daily practices to make the sample questions and statements sagacious and comprehensive. Their involvement in this project was acknowledged and appreciated.

Workshop Piloting Result

The PC experts were given the workshop content in order to critique and offer suggestions. Based on those suggestions, the workshop content was revised and tailored to more effectively provide PC and GOC conversation education to critical care nurses in community hospitals. The workshop was then piloted at the CSUF campus. There were four participants who were enrolled in the DNPNA program. Participants characteristics are described in Table 1. The participants' age ranged from 21 to 35. Three participants were female, and one was male. Participants had a range of years of critical care experience from one year to six years. All participants completed pre-/post- Nurse Knowledge of PC Quiz and Nurse Confidence in GOC Conversation Survey, the Educational Workshop Evaluation Survey, and completed two questions seeking comments about the workshop content. After the quizzes, surveys and forms were collected, the comments were examined and synthesized for specific topics.

The initial part of the analysis was to score the Nurse Knowledge of PC Quiz. Two participants incorrectly answered the third question "the philosophy of palliative care is compatible with that of aggressive treatment." The third question was privately and separately discussed to investigate factors affecting their perception regarding the question. There were two hypothesized reasons for participants answering the question incorrectly. The question may have been poorly written, or the content in the PowerPoint presented in the workshop may have caused the participants to be confused about the philosophy of PC. Upon the review, the participants indicated that they did not read the question carefully and thought the question was asking if the philosophy of PC was *comparable* with that of aggressive treatment. Participants reported that the third

question was well written and the content of the workshop was clear. Based on this input, the third question was not modified.

The result of the Nurse Confidence in GOC Conversation Survey showed that there was a positive change in participants' perception of their confidence level in initiating GOC conversation. All participants indicated that the roleplay section was the most powerful section in the workshop because it allowed participants to apply SICG in practice. The roleplay section also helped participants to implement conversation strategies to initiate sensitive conversations. Three out of four participants commented that they had never received any education or training on PC, and wished that the workshop was available at their hospitals. The fourth participant who had taken a workshop on PC in the past said she was glad to have a chance to refresh and reinforce her knowledge of PC and SICG application.

In summary, all of the participants expressed satisfaction with the workshop. The participants all either strongly agreed or agreed that the workshop was effective in teaching them about PC and engaging them in learning, synthesizing and applying the knowledge. The participants recommended having more time for the roleplay section. They also required more specific examples to explain the PC principles and philosophy. The participants explained that those specific examples would help them further understand the distinction between PC and hospice care. In the future, several case examples of patients meeting PC or hospice care criteria will be added to the workshop.

Table 1

Participant Characteristics

	Total (*n* = *4*)
Gender	
Male	*n* = 3
Female	*n* = 1
Age	
21 – 35 years old	*n* = 4
36 – 50 years old	*n* = 0
51 – 65 years old	*n* = 0
Above 65 years old	*n* = 0
Critical Care Experience	
1 – 3 years	*n* = 2
4 – 6 years	*n* = 2
7 – 9 years	*n* = 0
Above 10 years	*n* = 0

DISCUSSION

The purpose of this doctoral project was to develop an evidence-based educational workshop to teach critical care nurses in community hospitals about PC, how to conduct the goals-of-care (GOC) conversation by using the Serious Illness Conversation Guide (SICG), and commonly used palliative care (PC) screening tools. Critical care nurses should provide nursing care within their full scope of practice to advocate for integrating the PC into the intensive care unit (ICU) and proactively assessing patients' GOC during routine practice (Hagan, Xu, Lopez, & Bressler, 2018). The workshop was designed to address the lack of PC education and GOC conversation training for critical care nurses in community hospitals

The literature review of PC, PC screening tools, nurses' knowledge and perception of barriers was used in the workshop development to meet the specific needs of critical care nurses at community hospitals. The validated measurement instruments used in this workshop effectively evaluated participants' learning outcomes (Anderson et al., 2017; Arnold et al., 2015; Fedel et al., 2014; Krimshtein et al., 2011; Milic et al., 2015; Ross et al., 1996). The workshop was developed based upon a literature review and then was validated by a PC expert panel. The experience input from the PC experts was used to revise the workshop's content to increase participants' engagement in learning PC and practicing the SICG. The PC experts valued the formative evaluation of the workshop as it was an active teaching method. In addition, the activity most valued by participants was the integration of interactive roleplay in the workshop. The interactive teaching and learning strategies have been previously described (Anderson et al., 2017; Cronin & Finn,

2017b; Milic et al., 2015; Pernar, Peyre, Smink, Block, & Cooper, 2011; Raoof et al., 2017).

As a result of the revision of the workshop PowerPoint presentation, there were a total of 50 slides. The workshop was piloted in 120 minutes. The piloting time for this workshop was shorter than the workshop duration in other studies, which was typically four to eight hours in length or given over two days (Anderson et al., 2017; Arnold et al., 2015; Milic et al., 2015). The workshop presentation was shorter because the goal was to introduce nurses to PC principles and philosophy, nurses' perception of role and barrier and the SICG application practice, not the whole spectrum of PC.

After recruiting participants, finding the time for piloting was a challenge. Due to the busy schedule of participants, the workshop was divided into two parts of 60 minutes each and given seven days apart. The first part included lecture and discussion. Participants completed a pre-quiz/survey in the first part. All participants came back to the workshop seven days later and completed the roleplay section and post-quiz/survey. There was no attrition as all participants returned for the second part. Although participants received information about the SICG seven days before, all participants stated they were able to recall and apply the SICG to practice GOC conversation during the roleplay section.

At the end of the workshop, during the final debriefing, participants disclosed that they wished they had received this workshop in the past so that they could have used the SICG to discuss GOC with patients and their caregivers. The participants wanted more time to practice the roleplays. This fact might be affected by the change in the workshop format. Initially, the workshop was supposedly conducted within a 120 minute period

without a break. However, lunch was served as one of the incentives for participation and was served twice as the workshop was divided into two parts. Time for preparing the workshop and serving lunch was included as part of the 60 minutes on both days. Had the workshop been given over a two hour period without a break, the functional workshop time would not have been interrupted. Overall, the participants had a positive experience and were satisfied with the workshop. The findings demonstrated that the adult teaching and evaluation methods used in this two-hour educational workshop were consistent with other studies (Pernar et al., 2011; Raoof et al., 2017).

This two-hour workshop could be considered for implementation at community hospitals because its design could achieve the educational objectives regarding PC and GOC conversation training while utilizing a brief education format (Carroll, El-Sourady, Karlekar, & Richeson, 2018). Similar to many studies, this PC educational workshop included interactive roleplay which changed the participants' perceptions of PC and screening and increased their confidence in conducting conversations to elicit the PC needs, GOC and psychosocial support for patients and their caregivers (Bolt et al., 2018; Crousillat et al., 2018). Therefore, a PC educational workshop that includes the roleplay is appropriate to train critical care nurses who do not belong to PC specialist group (Flieger, Spatz, Cherlin, & Curry, 2019; Lunsford & Posey, 2018).

In summary, the PC educational workshop in this project was developed with the contributions from a PC expert panel and participants who provided valuable suggestions for improving the workshop. Similar to other quality improvement projects, participants' knowledge acquisition did not change between pre-/post-quiz during the workshop piloting. However, participants stated that their confidence level in applying the SICG

for conducting GOC through roleplay showed a positive change and participants believed that the workshop was important to their practice (Cronin & Finn, 2017; Jenko, Adams, Johnson, Thompson, & Bailey, 2015; Pesut et al., 2014).

Limitations

There were three limitations noted for this project. First, the time for piloting the workshop was short, which limited the number of target participants due to their busy doctoral study schedules. Second, only four participants, who were critical care nurses, attended the workshop to evaluate the content. Third, due to the small number of participants, the project outcomes obtained through the workshop piloting may not be generalizable.

Implications for Nursing Practice

The American Nurses Association (2017, p.5) published a "Call for Action: Nurses Lead and Transform Palliative Care" to "urge nurses in various roles and settings to lead and transform PC in practice, education, administration, policy, and research. Every nurse should have the knowledge, skills, and abilities to provide primary palliative nursing." Along with this call for action, the evidence-based PC educational workshop was developed to enhance critical care nurses' knowledge about primary PC and screening tools. It also focused on helping nurses to familiarize themselves with educational materials such as the SICG with sample questions, *NURSE* Mnemonic guide, and *IPAS-3Ws* Best Practices guide. After completing the workshop, critical care nurses were more confident in initiating the GOC conversation by themselves in the ICU to assess patients/caregivers' GOC wishes. The SICG provided a structure to lead critical care nurses to engage in earlier GOC conversations.

Early PC delivery and initiation of GOC conversation would be beneficial for critically ill patients and their caregivers. These benefits include early comfort-focused treatment goals and psychosocial support. With the support from the institution's administration and the acknowledgment of the nurses' role and barriers in PC delivery, critical care nurses can be the champions in advocating for their patients and caregivers in accessing PC services.

Conclusion

The development of this PC educational workshop was based on evidence from many studies. Although prior studies focused on training PC specialists, medical residents, medical doctors and oncology nurses (Arnold et al., 2015; Baer & Weinstein, 2013; Cronin & Finn, 2017; Crousillat et al., 2018; Flieger et al., 2019; Gartmeier et al., 2015; Gehlbach et al., 2011; Harris, Dawson, Poe, & Shirey, 2017), this workshop was designed to educate and train critical care nurses regarding PC and the GOC conversation. To close the gap in PC knowledge and GOC conversation training, an educational workshop on PC should be offered for critical care nurses at community hospitals and professional organizations. For best patient care, the patients' GOC should be assessed and their wishes should be followed so that their dignity can be maintained. Critical care nurses are in a prime position to perform those tasks and advocate for their patients; therefore a workshop such as the one developed in this project can help critical care nurses to initiate important GOC discussions. It is recommended that the workshop be implemented in multiple community hospitals with a larger group of critical care nurses to obtain further evaluation and improvement before dissemination.

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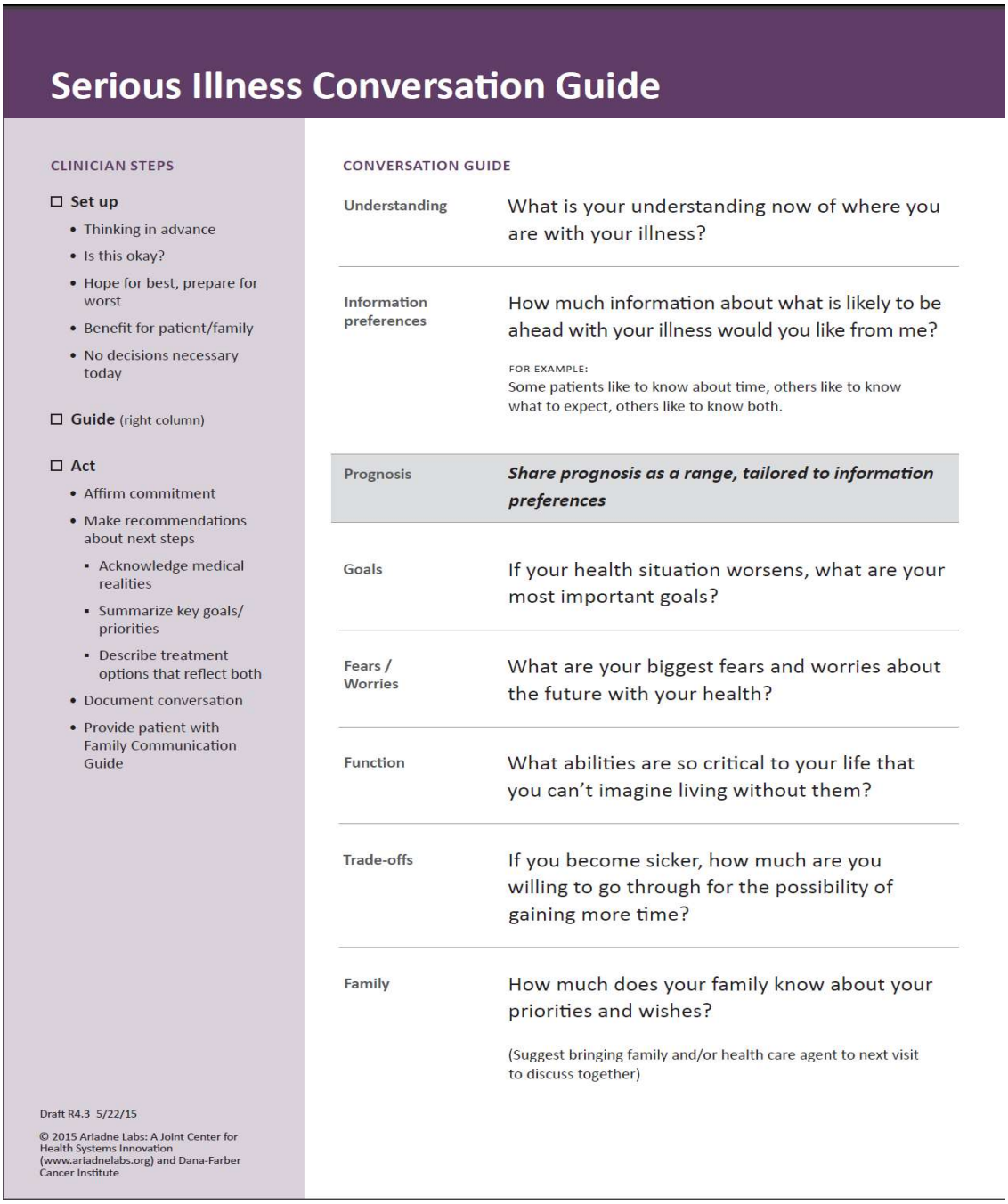
APPENDIX A

THE SERIOUS ILLNESS CONVERSATION GUIDE



Serious Illness Conversation Guide

CLINICIAN STEPS

☐ **Set up**
- Thinking in advance
- Is this okay?
- Hope for best, prepare for worst
- Benefit for patient/family
- No decisions necessary today

☐ **Guide** (right column)

☐ **Act**
- Affirm commitment
- Make recommendations about next steps
  - Acknowledge medical realities
  - Summarize key goals/ priorities
  - Describe treatment options that reflect both
- Document conversation
- Provide patient with Family Communication Guide

Draft R4.3 5/22/15

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CONVERSATION GUIDE

Understanding	What is your understanding now of where you are with your illness?
Information preferences	How much information about what is likely to be ahead with your illness would you like from me? FOR EXAMPLE: Some patients like to know about time, others like to know what to expect, others like to know both.
Prognosis	***Share prognosis as a range, tailored to information preferences***
Goals	If your health situation worsens, what are your most important goals?
Fears / Worries	What are your biggest fears and worries about the future with your health?
Function	What abilities are so critical to your life that you can't imagine living without them?
Trade-offs	If you become sicker, how much are you willing to go through for the possibility of gaining more time?
Family	How much does your family know about your priorities and wishes? (Suggest bringing family and/or health care agent to next visit to discuss together)

APPENDIX B

CENTER TO ADVANCE PALLIATIVE CARE IN THE ICU SCREENING TOOL

Center to Advance Palliative Care in the ICU Screening Tool		
Disease Criteria	**Yes**	**No**
Advanced stage IV cancer		
Multiorgan failure Q2 organ system		
Major acute neurologic insult, e.g., CNS trauma, post-CPR encephalopathy, malignant		
Stroke		
Advanced dementia or other severe cognitive impairment		
Intracranial hemorrhage requiring mechanical ventilation		
Chronic liver disease		
Chronic renal disease +/- chronic dialysis		
Status post cardiopulmonary arrest		
Advanced chronic obstructive pulmonary disease		
Severe congestive heart failure (class III or IV)		
Utilization criteria		
Frequent hospital or ICU admissions (admissions for the same condition within 3 months)		
ICU admission during the same hospital stay		
Admission from the nursing home		
Consideration of PEG tube placement		
Consideration of tracheostomy placement		
Consideration of ethics consultation		
Consideration to start renal replacement therapy during ICU stay		
Other criteria		
Conflicts regarding goals, DNR order, treatment decisions		
Lack of social support, e.g., homelessness, chronic mental illness		
‘‘No’’ answer to ‘‘surprise question.’’ “You would not be surprised if the patient died within 12 months.”		
Anticipated discharge to a long-term acute-care facility		
Homebound due to chronic illness		

APPENDIX C

CRITERIA FOR A PALLIATIVE CARE ASSESSMENT AT THE TIME OF ADMISSION TOOL

Criteria for a Palliative Care Assessment at the Time of Admission		
Primary Criteria	**Yes**	**No**
The ‘‘surprise question’’: You would not be surprised if the patient died within 12 months		
Frequent admissions (e.g., more than one admission for the same condition within several months)		
The admission prompted by difficult-to-control physical or psychological symptoms (e.g., moderate-to-severe symptom intensity for more than 24–48 hours)		
Complex care requirements (e.g., functional dependency; complex home support for ventilator/antibiotics/feedings)		
The decline in function, feeding intolerance, or unintended decline in weight (e.g., failure to thrive)		
Secondary Criteria		
Admission from long-term care facility or medical foster home		
An elderly patient, cognitively impaired, with acute hip fracture		
Metastatic or locally advanced incurable cancer		
Chronic home oxygen use		
Out-of-hospital cardiac arrest		
Current or past hospice program enrollee		
Limited social support (e.g., family stress, chronic mental illness)		
No history of completing an advance care planning discussion/document		

APPENDIX D

CRITERIA FOR PALLIATIVE CARE ASSESSMENT DURING EACH HOSPITAL DAY TOOL

Criteria for Palliative Care Assessment during Each Hospital Day		
Primary Criteria	**Yes**	**No**
The ‘‘surprise question’’: You would not be surprised if the patient died within 12 months		
Difficult-to-control physical or psychological symptoms (e.g., more than one admission for the same condition within several months)		
Intensive Care Unit length of stay >7 days		
Lack of Goals of Care clarity and documentation		
Disagreements or uncertainty among the patient, staff, and/or family concerning . . .		
* major medical treatment decisions		
* resuscitation preferences6, 31		
* use of nonoral feeding or hydration6, 31		
Secondary Criteria		
Awaiting, or deemed ineligible for, solid-organ transplantation		
Patient/family/surrogate emotional, spiritual, or relational distress		
Patient/family/surrogate request for palliative care/hospice services		
Patient is considered a potential candidate, or medical team is considering seeking consultation, for:		
* feeding tube placement		
* tracheostomy		
* initiation of renal replacement therapy		
* ethics concerns		
* LVAD or AICD placement		
* LTAC hospital or medical foster home disposition		

APPENDIX E

INSTITUTION REVIEW BOARD APPROVAL

CALIFORNIA STATE UNIVERSITY, FULLERTON

Office of Research and Sponsored Projects
P.O. Box 6850 or 1121 N. State College Blvd., 2nd Fl., Fullerton, CA 92831 / T 657-278-7719 / F 657-278-7238

APPROVAL NOTICE

From the Institutional Review Board
California State University, Fullerton

January 22, 2019

From: **Dr. Matt Englar-Carlson, Chair**
CSUF Institutional Review Board

To: **PI: Ricky Phan**

Application No. HSR-18-19-392
Study Title: An Evidence-Based Palliative Care Educational Workshop

Re: Initial Exempt Review

APPENDIX F

SERIOUS ILLNESS CONVERSATION GUIDE PRACTICE SAMPLE QUESTIONS

Serious Illness Conversation Guide Practice Sample Questions	
1. Understanding prognosis	➢ What do you understand about your/ your loved one's illness? ➢ What did doctor discuss with you about your/your loved one's prognosis? ➢ What have you been told to expect in the future with your/your loved one's illness? ➢ It can be helpful to think about what your future would be with your/your loved one's illness progress ➢ What has the doctor told you about illness/ your loved one's illness? ➢ What do you understand about your/ your loved one's condition? ➢ How do you think your loved one is doing?
2. Information preferences	➢ What would you like to know about your/ your loved one's condition? ➢ May I share what I know/understand about your loved ones current medical condition? ➢ How much information would you like to know in advance with your illness to decide your future plan of care? ➢ Tell me one thing you would like to know now? ➢ How much information would you like to know in advance with your illness to decide your future plan of care?
3. Sharing prognosis	➢ Doctor, what have you discussed with Mr/Mrs…. about prognosis and goals of care? ➢ Doctor, could you tell Mr/Mrs … about the illness progression? ➢ Has/have the doctor(s) discussed the prognosis? Tell me what you understand about what was said. ➢ Is there any information you would like to be clarified in regard to conversations with the doctors? ➢ As the doctor told you about the prognosis, what part do you not understand? ➢ Do you need me to clarify what information you understood after talking to the doctors?
4. Establishing GOC	➢ Please tell me what your goals of care are for this hospitalization. ➢ If your health condition worsens, what are your most important goals?

	➢ As you think about the future with your health, what are you most worried about? ➢ What concerns you most if you get sicker? ➢ What do you want as your illness progresses? ➢ Tell me more about what your loved one wants his/her life to be before you/he/she gets sicker. ➢ What are you expecting will be accomplished during this hospitalization? ➢ What would you think your loved one wants at this point that he/she depends on machines to support his/her life or when he/she might die? ➢ Have you ever discussed what he/she would want in the event of cardiac or pulmonary arrest?
5. Fears/worries	➢ What are your biggest fears and worries about the future with your health? ➢ How are things going for you/your family? ➢ How are you/your family coping with this situation? ➢ Using NURSE mnemonic to empathetically respond to patients/ caregivers' emotion.
6. Acceptable function/ quality of life	➢ What functional abilities are so critical to your life that you can't imagine living without them? ➢ What do you think your life would be like if you can not feed yourself anymore or be fully dependent on others? ➢ What do you think your/his/her life would be like if you/he/she has to lie on the bed and needs to be connected to a breathing machine to sustain life?
7. Trade-offs	➢ If you become sicker and lose consciousness, how much are you willing to go through for the possibility of gaining more time? ➢ If you were sicker, what would be most important to you? ➢ What things do you do that are so important to your life that you can't imagine living without doing them? ➢ What are the most important accomplishments in your life? ➢ All of us will get older and approach the end of our life. Some people like to be more comfortable at the end of life moment even though it would be very short. However, the other people like their end of life moment to be longer no matter what treatments, procedures or machines they would need. What would you/your loved one like your/his/her end of life to be? (Explain: I like to talk about this because I am worried you/he/she is getting sicker and it is very helpful to think about) ➢ I hope the medications and interventions can help your loved one's conditions improve, but I am worried that the condition will worsen. Would you and your family like to

	stay and pray or would you like to have the chaplain stay with your family?
8. Caregivers involvement	➢ How much does your family know about your priorities and wishes? ➢ Would you like your family to be updated about wish and decisions? ➢ Would you and your family talk together before the family meeting to make the GOC decisions for your loved one?

APPENDIX G

N-U-R-S-E MNEMONIC GUIDE

***N-U-R-S-E* MNEMONIC GUIDE**
➢ ***Name - normalizing:*** Fear and worries are very common feelings you have right now, especially when you/your loved one is very sick, and in the ICU.
➢ ***Understanding - validating the emotion:*** A lot of medical interventions and information can be overwhelming and make you fearful and worried. Seeing your loved one in the ICU with a lot of equipment around him/her can be frightening now.
➢ ***Respect - recognizing the effort*****:** I really respect how much you have been here with your loved one. Or I really respect how much you involved in caring for your loved one. Or this is not easy, and you are working really hard for your health. Or I can really see how much you love (Mr./Mrs. patient's name)
➢ ***Support - They are not alone:*** We are here to help you. The doctors and I are here for you. How can we support you/your loved one?
➢ ***Explore - examine strength*****:** what has been the most difficult thing you have to face during this time? How can we alleviate your discomfort/pain right now? Or How can we best help you?

APPENDIX H

IPAS-3W BEST PRACTICES

IPAS-3W Best Practices
➢ ***Introduction***: I would like to know about your/ your loved one' value, wishes, and goals related to care if you/he/she gets sicker or can't make medical decisions. After this conversation, I hope you and your family can have some thoughts/guidance regarding the direction of care/ the goals of care during a hospital stay. This is a part of how we can make sure that the care is followed your/ your loved one's wishes at this point.
➢ ***Permission***: Is that okay to talk now? If not, we can talk later. Please let me know if you have any questions and want to talk.
➢ ***Assurance:*** All decisions are not necessary to be made today. We all support your decisions.
➢ ***Support***: We are here to help you and your family. We want to support you if you have to make difficult decisions on behalf of your loved one.
➢ ***Wish***: I wish that we were not having this conversation right now, but it is very important. Or I wish the medication will increase your loved one's blood pressure, and antibiotics will fight the bacteria (Nurses talk to patient's family at bedside).
➢ ***Worry***: I worry that your loved one's medical condition continues to decline and we will need to escalate care that may not be in alignment with your wishes. I worry that the medication and antibiotics will not work at some points because the infection is overwhelming your loved one's condition (Nurses talk to patient's family at bedside).
➢ ***Wonder***: I wonder if your loved to one wants be more comfortable as we focus on more comfortable interventions right now instead of aggressive intervention the that may be causing him/her to be distressed. Or I wonder we can discuss more the goals of care for your loved one if his/her condition starts getting worse.

APPENDIX I

CASE SCENARIOS

Case #1: Congestive heart failure

Mrs. Nancy Smith is a 75 years old retired accountant, who was diagnosed with congestive heart failure five years ago. Her past medical history included hypertension, diabetes mellitus type II, neuropathy and pneumonia. She had multiple admissions due to decompensated heart failure. This admission, she was admitted to the Intensive Care Unit (ICU) for shortness of breath, pulmonary edema, and congestive heart failure exacerbation. Upon admission, she was placed on a Lasix drip and bilevel positive airway pressure (BiPAP).

For the last five years, Mrs. Smith was on maximal medical therapy including a beta blocker, ACE inhibitor, and Lasix. Her functional status has been declining. She reported that before this admission, she could not go out of her house because she was so fatigued and dyspnea when she is on mobile. She had to sleep on the recliner and constantly woke up every night due to dyspnea. She lives by herself in an apartment, and her daughter lives two blocks away from her place. Her husband died 10 years ago. A recent Echo showed her ejection fraction was 10 -15%. The intensivist and cardiologist talked to her about the result of the echo and that she had a poor prognosis. She might need intubation if her condition did not improve with Lasix and (Bipap).

You are a critical care nurse who took care of Mrs. Smith for two days. You established a strong rapport with Mrs. Smith because you took care of her on the previous admission. Please use the Serious Illness Conversation Guide (SICG) to discuss with Mrs. Smith about the goals-of-care (GOC) during her stay.

Case #2: Chronic Obstructive Pulmonary Disease

You are taking care of Mrs. Hernandez, a 65 years old retired worker, who has the advanced chronic obstructive pulmonary disease (COPD), diabetes mellitus type II, and stage II chronic kidney disease. She had three ICU admissions which required intubation for the past six months. This admission, she was admitted to the ICU with Bipap and respiratory treatment around the clock due to COPD exacerbation. She was borderline for intubation at this time. The providers noticed that her functional status has declined compared to the previous admission. The duration between admission has been shorter. The providers told her that her COPD has become worse. Mrs. Hernandez is very anxious about hospital admission and what the future holds.

Although she is compliant to medical therapy and on home oxygen, she still feels shortness of breath and her functional status keeps declining. She had to sit and sleep in the recliner chair all day for the last month. She refuses to go to a nursing home even though it is difficult for her to take care of herself at home. The doctor has already discussed her poor prognosis with her. Both of her children live out of state, and the only help she has comes from friends from church.

As her primary nurses, please use the SICG to discuss with Mrs. Hernandez about her GOC.

Case #3: Hemorrhagic Stroke

You are taking care of Mr. Young, a 70 years old gentleman who was very active at his age before this admission. He was admitted to the ICU due to acute hemorrhagic stroke with 20 mm shift to the left reported in the head computed tomography (CT) result. The bleeding also appears in the lateral ventricles. He was on Coumadin therapy for a medical history of atrial fibrillation. He was on medical management for his hypertension. The family found him in the backyard, and they thought he had fallen and hit his head. Now Mr. Young was unresponsive and on ventilator support. The family was in shock and denial when the intensivist told them about their father's poor prognosis. The neurologist also told the family that Mr. Young would not wake up again because the repeated head CT result also showed that the bleeding extended to the brain stem and ventricles.

Mr. Young lives with his wife who is 65 years old and the oldest son's family. The other two children lived two blocks away from his place. All of the children want everything done to maintain his life. However, his wife was in tears at the bedside and told you that Mr. Smith did not want to be like this. She said, "my husband doesn't want to be on the breathing machine when he saw his father dying on the breathing machine because of pneumonia 10 years ago". Legally, his wife is the decision maker.

As a critical care nurse who is advocating for Mr. Young, please use the SICG to discuss with Mrs. Young about the GOC for her husband.

APPENDIX J

OBSERVATION FORM

While observing the discussion between the patient, caregivers, and the nurse, please record how the nurse accomplishes the tasks in Serious Illness Conversation Guide (SICG)

Steps	**Check off**	**Notes**
Introduces the conversation • Explains the conversation's purpose of establishing the goals of care • Reassures about the continuity of care as patient and caregivers' desire • Emphasizes no decisions needed today or change in decisions later	□ □ □ □	
Use the words and questions as outlined in the SICG	□	
Give direct and honest prognosis based on information preferences • Avoid medical jargon • Use clear and simple language • Allows patient and caregivers to react to the information	□ □ □ □	
Acknowledges and explores patient and caregivers' emotions, fears, worries, and knowledge of current medical conditions	□	
Assesses the most important goals patient and caregivers desire	□	
Assesses patient and caregivers' view on the function	□	
Assesses patient and caregivers' view on the quality of life, end of life care, and tradeoffs	□	
Focuses on patient's value, dignity, and goals instead of treatments and procedures	□	
Nurses talks < 50% of the time	□	

APPENDIX K

NURSE KNOWLEDGE OF PALLIATIVE CARE QUIZ

Please circle the correct answers

1. Palliative care is appropriate only in situations where there is evidence of a downhill trajectory of deterioration.

1.True	2.False (correct)

2. Palliative care should only be provided for patients who have no curative treatments available.

1.True	2.False (correct)

3. The philosophy of palliative care is compatible with that of aggressive treatment.

1.True (correct)	2.False

APPENDIX M

NURSE CONFIDENCE IN GOALS OF CARE CONVERSATION SURVEY

Please circle your answers

1. Exploring prognosis and goals of care with a patient's family members

1.Not very confident	2.Somewhat confident	3.Confident	4.Very confident

2. Eliciting the concerns of a physician about prognosis and goals of care

1.Not very confident	2.Somewhat confident	3.Confident	4.Very confident

3. Voicing concerns to a physician that the communication needs of a patient's family are not being met

1.Not very confident	2.Somewhat confident	3.Confident	4.Very confident

4. Contributing in a family meeting discussion about prognosis and goals of care

1.Not very confident	2.Somewhat confident	3.Confident	4.Very confident

5. Using self-care practices to prevent burnout and compassion fatigue (will be omitted out)

1.Not very confident	2.Somewhat confident	3.Confident	4.Very confident

APPENDIX N

EDUCATIONAL WORKSHOP EVALUATION SURVEY

Please circle your answers

1. The workshop was effectively organized.

5. Strongly agree	4. Agree	3. Neither agree nor disagree	2. Disagree	1. Strongly disagree

2. The workshop roleplay section and lecture section usefully complemented/supported each other.

5. Strongly agree	4. Agree	3. Neither agree nor disagree	2. Disagree	1. Strongly disagree

3. The workshop instructions (including, manuals, handouts, etc.) were clear.

5. Strongly agree	4. Agree	3. Neither agree nor disagree	2. Disagree	1. Strongly disagree

4. The workshop work helped me understand the concepts of palliative care more clearly.

5. Strongly agree	4. Agree	3. Neither agree nor disagree	2. Disagree	1. Strongly disagree

5. The workshop provided guidance on how to be competent in my profession.

5. Strongly agree	4. Agree	3. Neither agree nor disagree	2. Disagree	1. Strongly disagree

6. The workshop developed my abilities and conversation skills for daily practice.

5. Strongly agree	4. Agree	3. Neither agree nor disagree	2. Disagree	1. Strongly disagree

7. The workshop developed my ability to apply the recommended conversation guide and palliative care knowledge into practice.

5. Strongly agree	4. Agree	3. Neither agree nor disagree	2. Disagree	1. Strongly disagree

8. How satisfied were you with this workshop?

5. Very satisfied	4. Satisfied	3. Neither	2. Not satisfied	1. Not very satisified

9. Please identify what you consider to be the strengths of the workshop.

10. Please identify the area(s) where you think the workshop could be improved.

APPENDIX O

DEMOGRAPHIC SURVEY

Please circle your answers

1. What is your gender?
    a) Male
    b) Female
2. What is your age?
    a. 21 – 35 years old
    b. 36 – 50 years old
    c. 51 – 65 years old
    d. Older than 65 years
3. How many years have you worked in the intensive care unit?
    a. 1 – 3 years
    b. 4 – 6 years
    c. 7 – 9 years
    d. Greater than 10 years

APPENDIX P

EXPERT EVALUATION FORM

Based on your experience as a palliative care expert, please tell us your evaluation of:

A. The content of the Palliative Care Workshop

- Was there any content that you would add or alter?

B. Instruments Used:

- The adapted Nurse Knowledge of Palliative Care Quiz to evaluate the participants' knowledge.

- The adapted Nurse Confidence in Goal of Care Conversation Survey to measure the participants' perceived confidence level.

- The adapted Educational Workshop Evaluation Survey to seek the participants' evaluation of the workshop contents and activities

- The Participants Formative Evaluation questions in the PowerPoint slides

- The conversation sample questions/statements about the elements of the Serious Illness Conversation Guide and Goals-of-Care, NURSE mnemonic, IPAS-3W best practices.

- The workshop's activities i.e. role-play scenarios, and structure of the role-play

C. Other Comments:

Thank you for your participation!

APPENDIX Q

PERMISSION TO USE MATERIALS

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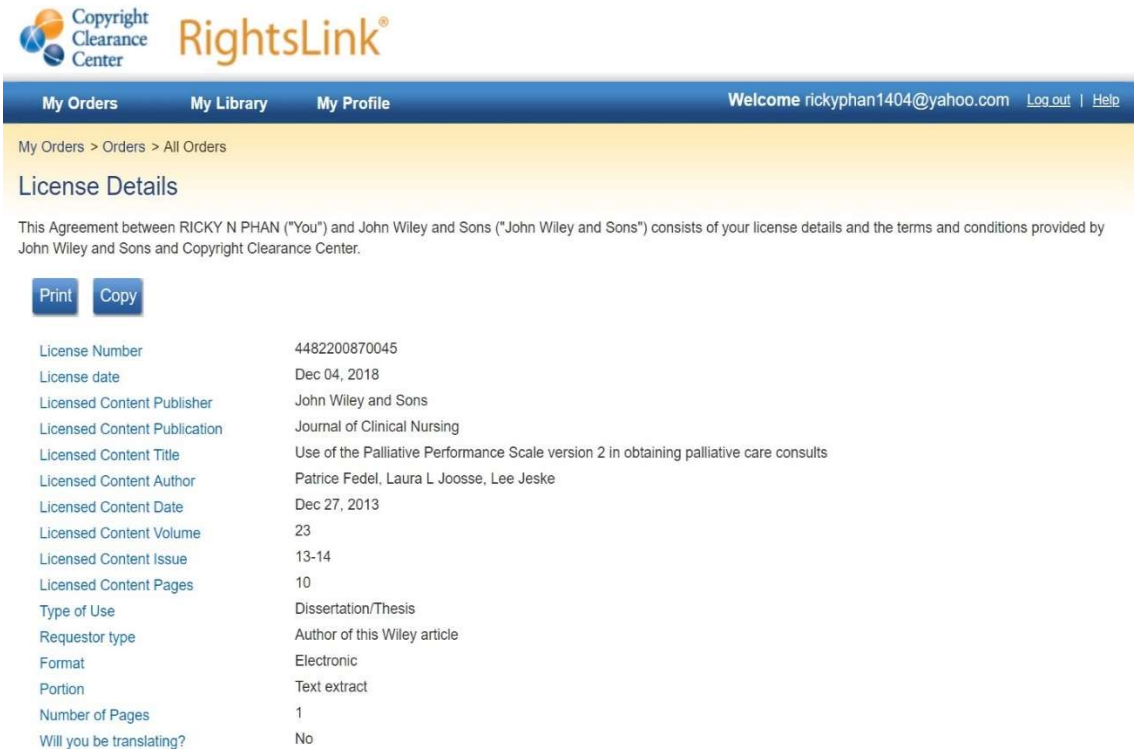

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The requesting person/organization	Ricky Nguyen Phan
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Title of the article or chapter the portion is from	American Association of Critical-Care Nurses
Editor of portion(s)	N/A
Author of portion(s)	Milic, M. M., Puntillo, K., Turner, K., Joseph, D., Peters, N., Ryan, R., . . . Anderson, W. G
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Re: Permission for using the Nurse Confidence in Goal of Care Conversation Survey DNP PROJECT ×

Anderson, Wendy <wendy.anderson@ucsf.edu> Tue, Dec 4, 2018, 6:00 PM

to me

please do!

i'm also attaching some information about the project that came from this, IMPACT-ICU, in case it is of interest.

best,
Wendy

Wendy Anderson, MD, MS
Associate Professor & Attending Physician, UCSF Division of Palliative Medicine
Director, VitalTalk San Francisco Bay Area Hub
Principal Investigator, IMPACT-ICU Program
University of California, San Francisco
UC Hall Building, 533 Parnassus Avenue
Room U-256, Box 0131
San Francisco, CA 94143-0131
office: (415) 502-2399
website: http://profiles.ucsf.edu/wendygabrielle.anderson

Re: Permission for using the Serious Illness Conversation Guide DNP PROJECT ×

Sharelle Davis <sdavis@ariadnelabs.org> Fri, Dec 7, 2018, 10:06 AM

to me

Good afternoon Ricky,

Happy Friday! Thank you for your interest in our program! Yes, you have permission to use our Serious Illness Conversation Guide. I've included the licensing terms our conversation guide falls under:

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If there's anything else you need, or you have any more questions or concerns, please let me know and I'll be happy to help you!

Re: Permission for using the Serious Illness Conversation Guide DNP PROJECT ×

Kaeng Takahashi <ktakahashi@ariadnelabs.org> Wed, Dec 12, 2018, 10:37 AM

to me

Dear Ricky,

My apologies on the delayed reply! Thank you very much for getting in touch. I'm happy to hear about your interest in the Serious Illness Conversation Guide. You are of course welcome to use the Guide for your doctoral project. If you need other resources on the adapting the Guide for your use or have other questions, please let me know. Either myself or a member of the Serious Illness Care team (seriousillnesscare@ariadnelabs.org) would be happy to help you. We only request that you please keep us informed of your work, and to cite the article you referenced as follows: Bernacki, R, Block, S. Communication about Serious Illness Care Goals: A Review and Synthesis of Best Practices. JAMA Intern Med. 2014; 174(12):1994-2003.

Very best,
Kaeng

Kaeng Takahashi | Project Assistant, Implementation Platform | Ariadne Labs
Brigham and Women's Hospital | Harvard T.H. Chan School of Public Health
ktakahashi@ariadnelabs.org | O: 617.384.6619
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RE: Permission to use materials DNP PROJECT ×

Bekelman, David via olucdenver.onmicrosoft.com Tue, Jan 8, 10:37 AM

to me

Sure, you are welcome to use them. Please cite our publication. David

David Bekelman, MD, MPH
Associate Professor of Medicine
Eastern Colorado Health Care System, Department of Veterans Affairs, Aurora, CO
University of Colorado School of Medicine at the Anschutz Medical Campus, Aurora, CO

From: Ricky Phan <nphan1@csu.fullerton.edu>
Sent: Tuesday, January 1, 2019 6:03 PM
To: Bekelman, David <David.Bekelman@ucdenver.edu>
Subject: Permission to use materials

Hello Dr. Bekelman,

My name is Ricky Phan, MSN, ACNP-BC, RN. I am enrolling Southern California CSU DNP Consortium. My doctoral project is focusing on palliative care and goals-of-care conversation topics. I read your article, "Development and Feasibility of a Structured Goals of Care Communication Guide" I would like to have permission for using the material (questions in Health Care Goals) in your article.

Thank you very much.

Re: Permission for using information from the Berkley Center for Teaching and Learning, Course Evaluations Question Bank DNP PROJECT ×

Teaching Departmental <teaching@berkeley.edu> (sent by rmconrad@berkeley.edu) Thu, Dec 13, 2018, 8:48 AM

to me

Dear Ricky,

We happily grant our permission assuming you will provide proper source attribution.

Best,
Rita

Rita-Marie Conrad, PhD
Senior Consultant
--
Center for Teaching and Learning
University of California, Berkeley
Berkeley, CA 94720
http://teaching.berkeley.edu
Connect to Colleagues and the latest news on Teaching at Berkeley!
--
Choose your path. Make your mark.

RE: Permission for using information from the ELNEC modules DNP PROJECT ×

Pamela Malloy <pmalloy@aacnnursing.org> Wed, Dec 5, 2018, 6:43 AM

to me

Hi Ricky,
I am so glad to hear that you are going back to school for your DNP.
Yes, feel free to use any of the ELNEC modules you need. Just give proper attribution.
My best to you! Please keep me posted on your progress.

Pam Malloy, MN, RN, FPCN, FAAN
Director and Co-Investigator of the ELNEC Project
Special Advisor on Global Initiatives
American Association of Colleges of Nursing (AACN)
655 K St NW, Suite 750
Washington, DC 20001
202-463-6930 ext. 238
http://www.aacnnursing.org/ELNEC

APPENDIX R

CALIFORNIA STATE UNIVERSITY, FULLERTON
RESEARCH STUDY CONSENT FORM

HSR-18-19-392

Project Title: An Evidence-Based Palliative Care Education Workshop

Researchers: Ricky Phan, MSN, ACNP-BC, CCRN, TCRN, Doctor of Nursing Practice Student.

Jill Berg, PhD, RN Adjunct Faculty, School of Nursing (faculty advisor)

Penny Weismuller, DrPH, RN, Professor, School of Nursing (faculty advisor)

You are being asked to take part in a research project carried out by Ricky Phan, Jill Berg and Penny Weismuller. This consent form explains the project and your part in it if you decide to participate. Please read the form carefully, taking as much time as you need. You can decide not to participate. You can change your mind later and withdraw. There will be no repercussions if you decide not to take part in the project.

What is this project about?

The aim of this project is to develop an evidence-based educational workshop to teach critical care nurses in community hospitals. The project focuses on palliative care, how to conduct the goals-of-care conversation using the Serious Illness Conversation Guide, and the commonly used palliative care screening tools.

The primary purposes are:

- To enhance nurses' knowledge of palliative care and the commonly used palliative care screening tools.
- To improve nurses' confidence in initiating the goals-of-care conversation by teaching them how to utilize the Serious Illness Conversation Guide.

You are being asked to take part because *you are currently or used to work as a staff nurse in the Intensive Care Unit.*

Taking part in the project will take about approximately 3 hours.

You cannot participate in this project if *you have less than 3 months of critical care experience.*

What will I be asked to do if I am in this project?

If you take part in the project, you will be asked to *attend the workshop, including:*

- *Participants will complete pre-quiz/survey and informed consent before the workshop starts.*
- *The first part of the workshop is approximately 15 minutes. It will include the lecture and discussion.*
- *The second part of the workshop is approximately 95 minutes. The second part includes:*

  - *The explanation of the Serious Illness Conversation Guide and the instruction for the role-play will be 10 minutes.*
  - *The participant will watch a 20-minute conversation video.*
  - *The participants will spend 60 minutes for role-play practice. There are 3 case scenarios, and the participants will take turns to act out their roles.*
  - *There will be 5 minutes of debriefing for the roleplay part.*
- *After completing the workshop, the participants will spend 5 minutes completing the evaluation survey, and post-quiz/survey.*
- *The pre/post- quiz and survey are the same. The questions will assess the participant's knowledge of palliative care and confidence in conducting the goals-of-care conversation.*
- *Participants have the right to refuse to participate in the workshop before the workshop starts or withdraw from participation at any time.*

Are there any benefits to me if I am in this project?
The potential benefits to you for taking part in this project are: *you will have more knowledge about palliative care, palliative care screening tools and goals-of-care conversation. You will be able to apply the Serious Illness Conversation Guide in practice.*

Are there any risks to me if I am in this project?
The potential risks from taking part in this project are *emotional and psychosocial discomforts during the role-play as participants are required to act. These risks are minimal, and the project director will explain and warn the participants about the emotional components of the conversation video and case scenarios.*

Will my information be kept confidential or anonymous?
The data for this project are being collected confidentially. None of your response will be linked to your identity. The project director will store the data in the locked document box. The project researchers are the only people who can access and interpret the data. The results of this project may be published or presented at professional meetings, but the identities of all project participants will remain confidential.
The data will be destroyed through shredding machine after the project is completed

Are there any costs or payments for being in this project?
There will be no costs to you for taking part in this project.
Each participant will receive a $30 Starbuck gift card for taking part in this project after the workshop is completed. A $70 Target gift card will be used as a special prize for a raffle at the end of the workshop. If you decide to quit the project before completion, you will not receive the gift card.

Who can I talk to if I have questions?
If you have questions about this project or the information in this form, please contact Ricky Phan*: nphan1@csu.fullerton.edu and (714) 261-7813.* If you have questions about your rights as a project participant, or would like to report a concern or complaint

about this project, please contact the Institutional Review Board at (657) 278-7719, or e-mail irb@fullerton.edu

What are my rights as a project volunteer?
Your participation in this project is completely voluntary. You may choose not to be a part of this project. There will be no penalty to you if you choose not to take part. You may choose not to answer specific questions or to stop participating at any time.

What does my signature on this consent form mean?
Your signature on this form means that:

- You understand the information given to you in this form
- You have been able to ask the project director questions and state any concerns
- The project director has responded to your questions and concerns
- You believe you understand the project and the potential benefits and risks that are involved.

Statement of Consent

I have carefully read and/or I have had the terms used in this consent form and their significance explained to me. By signing below, I agree that I am at least 18 years of age and agree to participate in this project. You will be given a copy of this signed and dated consent form to keep.
Name of Participant (please print) _____

Signature of Participant_____Date _____

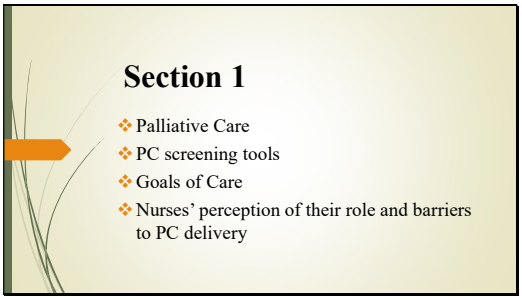
Signature of Investigator_____Date_____

APPENDIX S

THE PALLIATIVE CARE EDUCATIONAL WORKSHOP POWERPOINT PRESENTATION

Slide 1

Slide 2



Slide 3

Learning Objectives

- Describe the philosophy and principles of PC in the ICU and differentiate PC from hospice care.
- Identify GOC categories and the need of a GOC conversation in the ICU
- Discuss nurses' perception of their role in a GOC conversation and barriers to initiation of PC and a GOC conversation.
- Describe the criteria for the two commonly used PC screening tools
- Demonstrate how to apply the PC screening criteria in identifying PC needs of critically ill patients

Slide 4

The Facts About Dying in America Today

- Over 2.6 million people die/year in the U.S.
- 40% of patients die in a hospital and 60% of these patients die in the ICU
- The majority of deaths occur after a long, progressively debilitating chronic illness
- 92% of patients in the ICU did not receive PC within 48 hours of admission, and 72% of those patients died without receiving comfort care

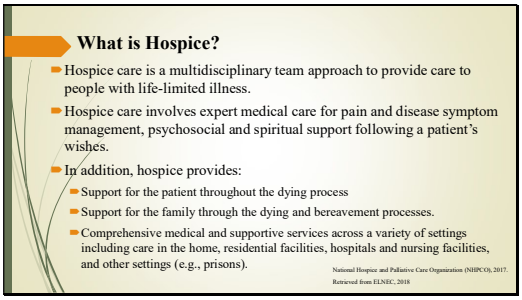
Coyle, 2015; CDC, 2018; Isaac & Curtis, 2015; Munro, 2014; Schroeder, Miller, Ferguson, and Shaw, 2017. Retrieved from ELNEC, 2018

Slide 5

What is Palliative Care?

- Palliative care (PC) is not only a philosophy but also specialized care designed to improve the quality of life for patients during an acute or a chronic disease process, or a life-threatening illness (National Quality Forum, 2016).
- The World Health Organization (2018) states that a PC approach should support patients and their caregivers physically, psychosocially, and spiritually.
- PC focuses on eliminating the discomfort associated with the treatments and care of chronic diseases (Pantilio et al., 2014).

Slide 6



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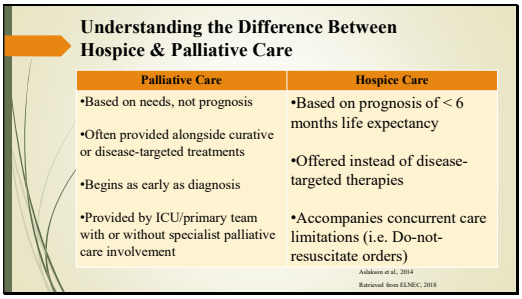

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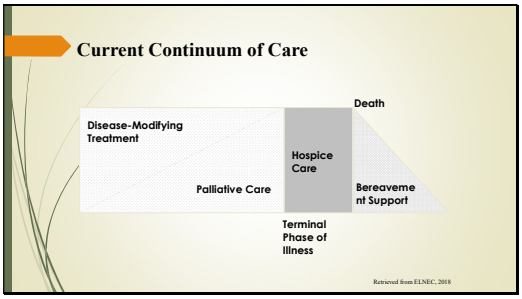

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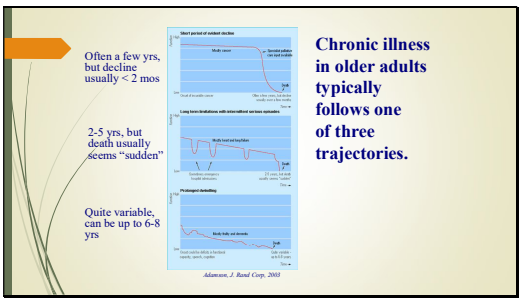

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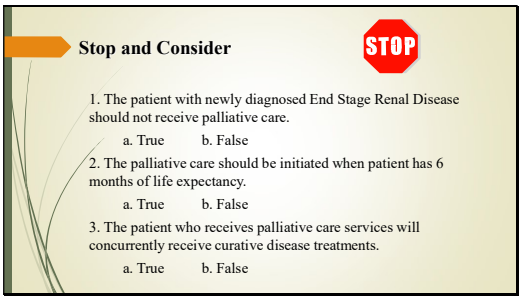

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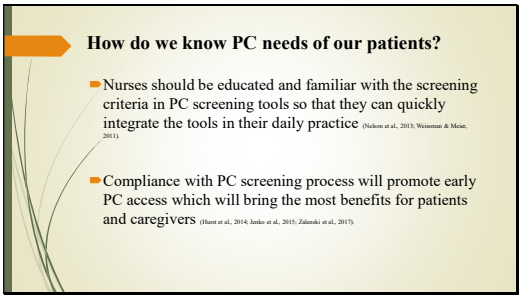

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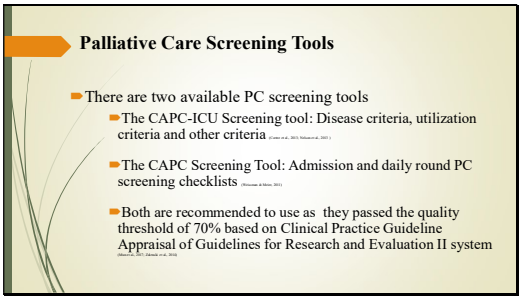

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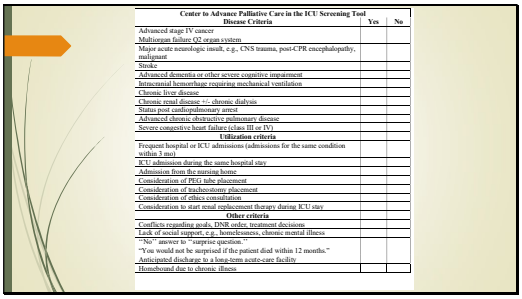
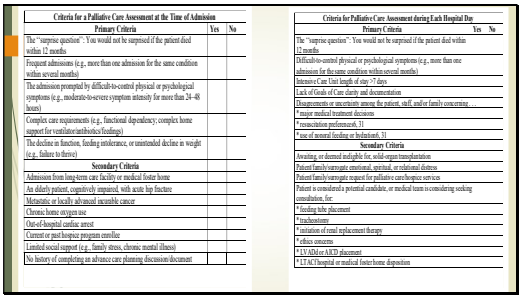


Center to Advance Palliative Care in the ICU Screening Tool Disease Criteria	Yes	No
Advanced stage IV cancer		
Multiorgan failure Q2 organ system		
Major acute neurologic insult, e.g., CNS trauma, post-CPR encephalopathy, malignant		
Stroke		
Advanced dementia or other severe cognitive impairment		
Intracranial hemorrhage requiring mechanical ventilation		
Chronic liver disease		
Chronic renal disease +/- chronic dialysis		
Status post cardiopulmonary arrest		
Advanced chronic obstructive pulmonary disease		
Severe congestive heart failure (class III or IV)		
Utilization criteria		
Frequent hospital or ICU admissions (admissions for the same condition within 3 mo)		
ICU admission during the same hospital stay		
Admission from the nursing home		
Consideration of PEG tube placement		
Consideration of tracheostomy placement		
Consideration of ethics consultation		
Consideration to start renal replacement therapy during ICU stay		
Other criteria		
Conflicts regarding goals, DNR order, treatment decisions		
Lack of social support, e.g., homelessness, chronic mental illness		
"No" answer to "surprise question." "You would not be surprised if the patient died within 12 months."		
Anticipated discharge to a long-term acute-care facility		
Homebound due to chronic illness		

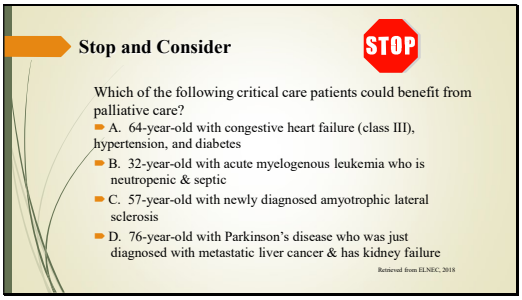
Slide 14



Criteria for a Palliative Care Assessment at the Time of Admission Primary Criteria	Yes	No
The "surprise question": You would not be surprised if the patient died within 12 months		
Frequent admissions (e.g., more than one admission for the same condition within several months)		
The admission prompted by difficult-to-control physical or psychological symptoms (e.g., moderate-to-severe symptom intensity for more than 24–48 hours)		
Complex care requirements (e.g., functional dependency; complex home support for ventilator/antibiotics/feedings)		
The decline in function, feeding intolerance, or unintended decline in weight (e.g., failure to thrive)		
Secondary Criteria		
Admission from long-term care facility or medical foster home		
An elderly patient, cognitively impaired, with acute hip fracture		
Metastatic or locally advanced incurable cancer		
Chronic home oxygen use		
Out-of-hospital cardiac arrest		
Current or past hospice program enrollee		
Limited social support (e.g., family stress, chronic mental illness)		
No history of completing an advance care planning discussion/document		

Criteria for Palliative Care Assessment during Each Hospital Day Primary Criteria	Yes	No
The "surprise question": You would not be surprised if the patient died within 12 months		
Difficult-to-control physical or psychological symptoms (e.g., more than one admission for the same condition within several months)		
Intensive Care Unit length of stay >7 days		
Lack of Goals of Care clarity and documentation		
Disagreements or uncertainty among the patient, staff, and/or family concerning . . .		
* major medical treatment decision		
* resuscitation preferences, 31		
* use of nonoral feeding or hydration, 31		
Secondary Criteria		
Awaiting, or deemed ineligible for, solid-organ transplantation		
Patient/family/surrogate emotional, spiritual, or relational distress		
Patient/family/surrogate request for palliative care/hospice services		
Patient is considered a potential candidate, or medical team is considering seeking consultation, for:		
* feeding tube placement		
* tracheostomy		
* initiation of renal replacement therapy		
* ethics concern		
* LVAD/or/LRD placement		
* LTAC/hospital or medical foster home disposition		

Slide 15



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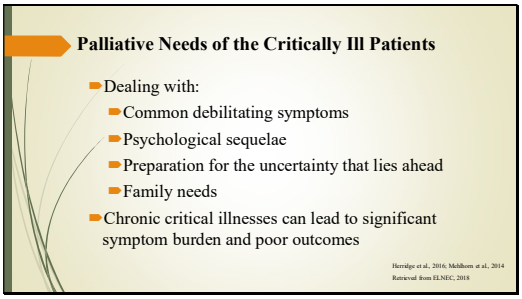

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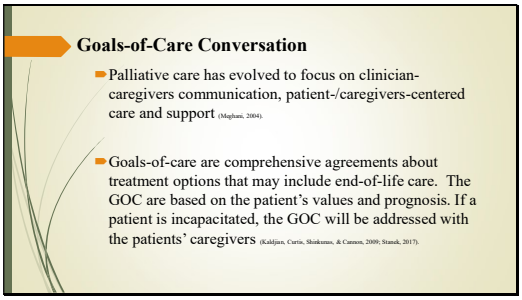

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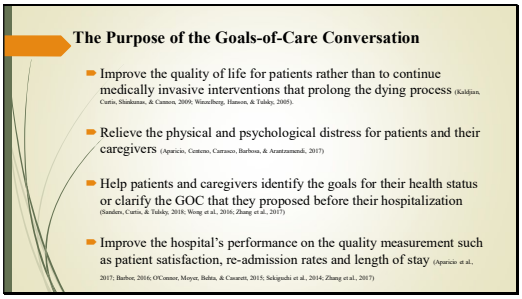

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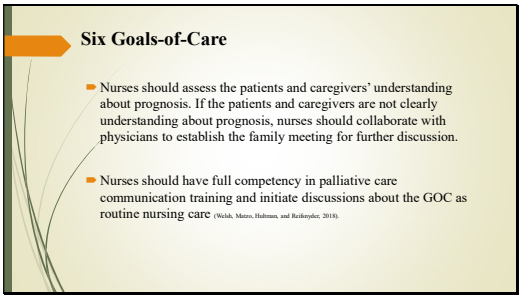

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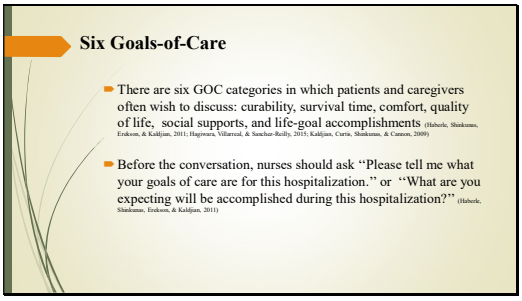

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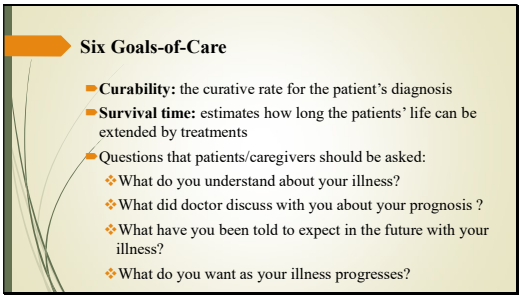

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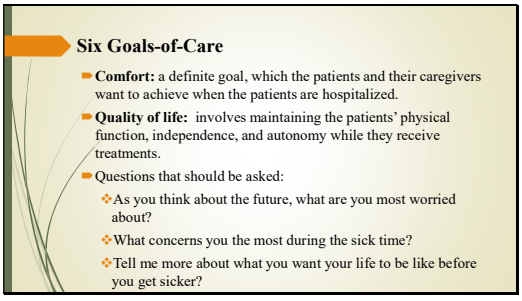

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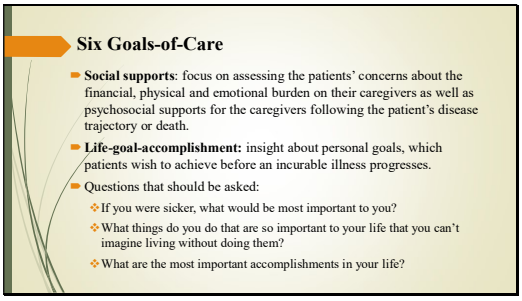

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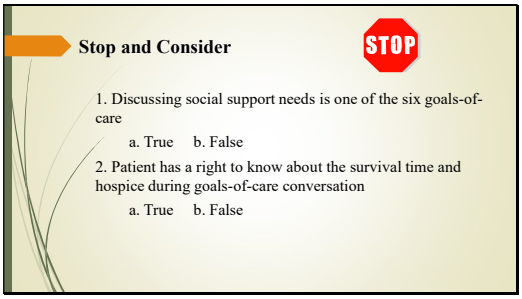

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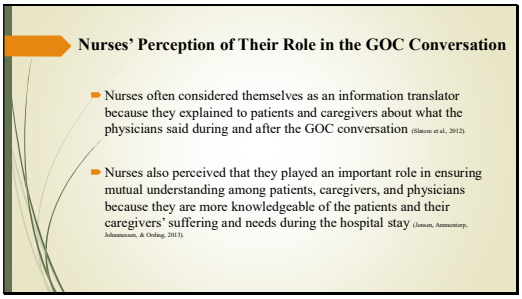

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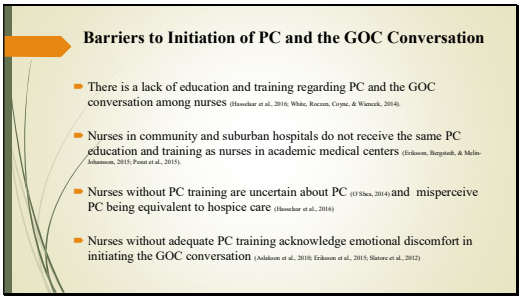

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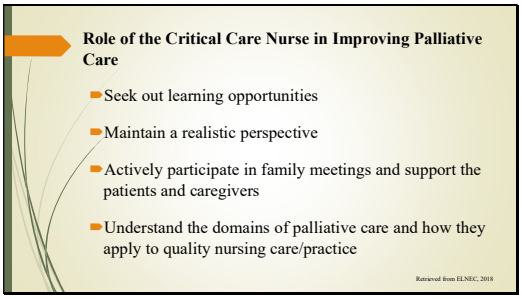

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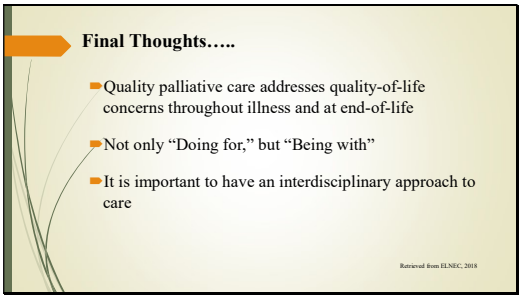

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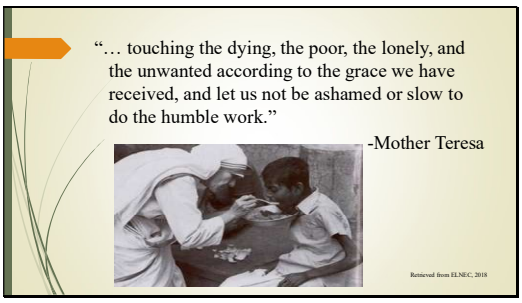

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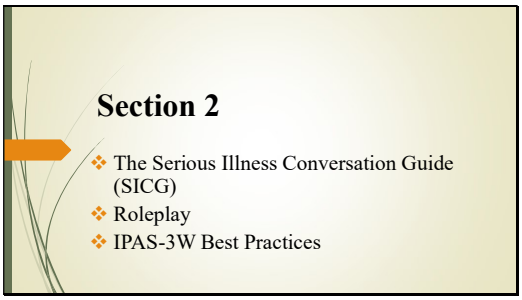

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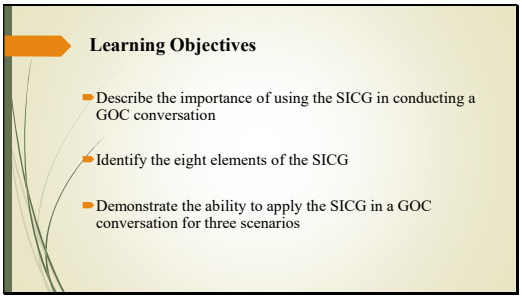

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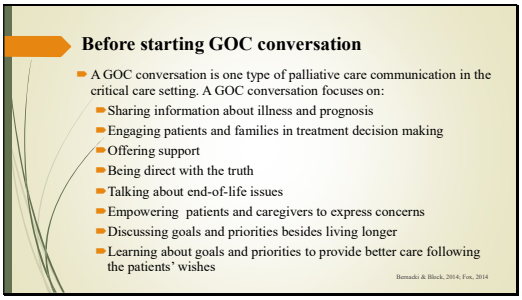

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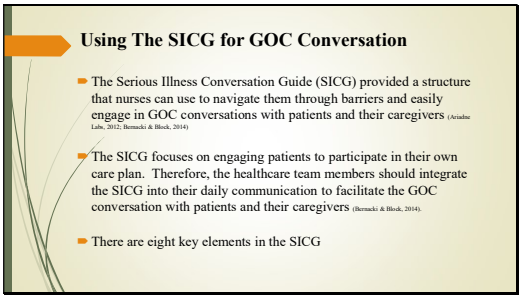

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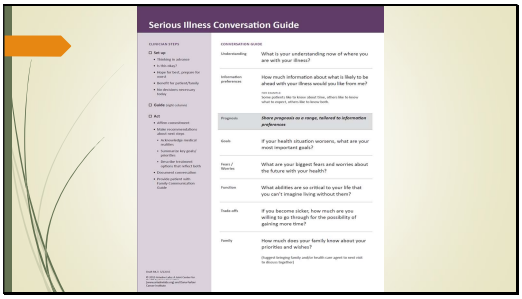

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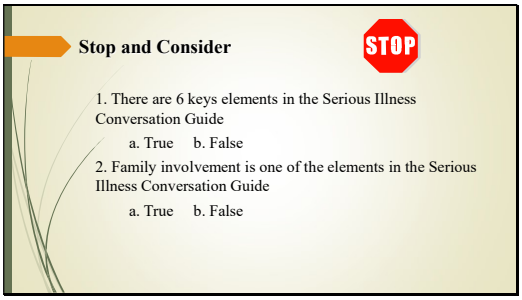

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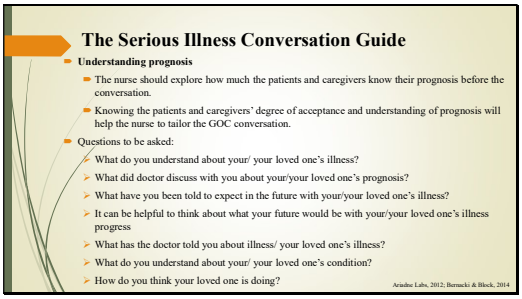

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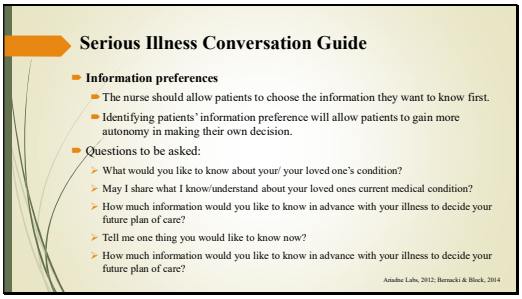

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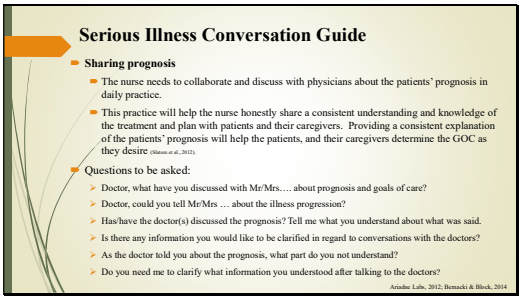

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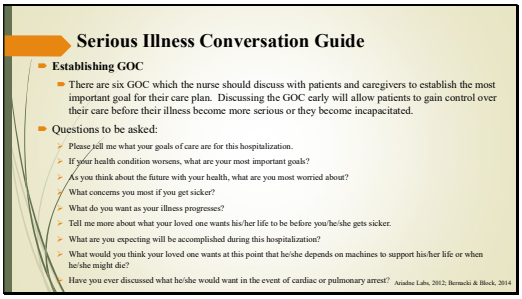

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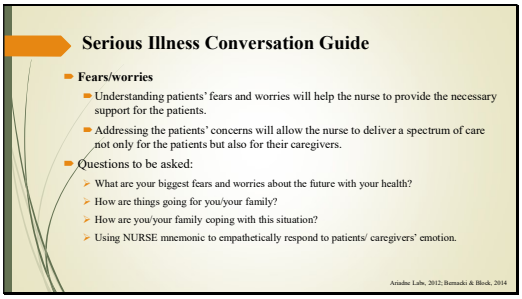

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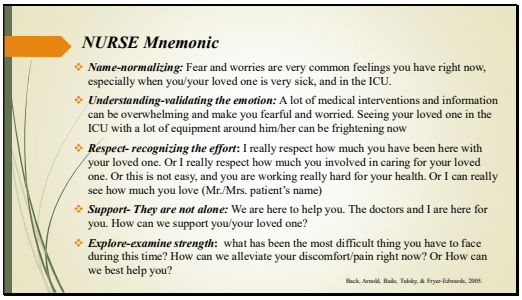

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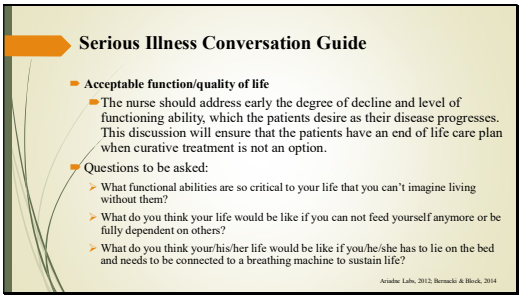

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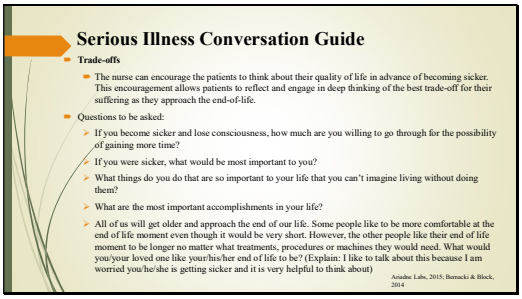

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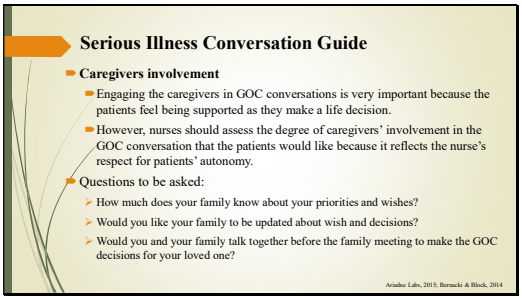

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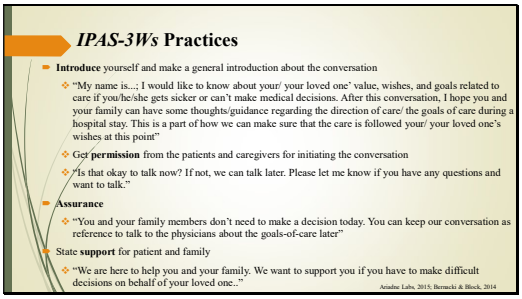

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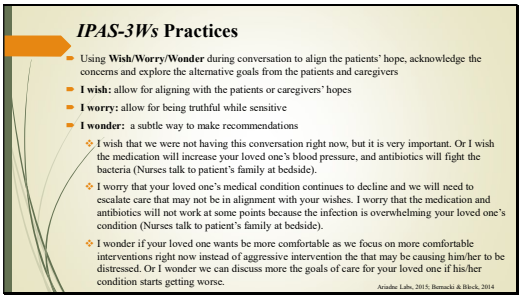

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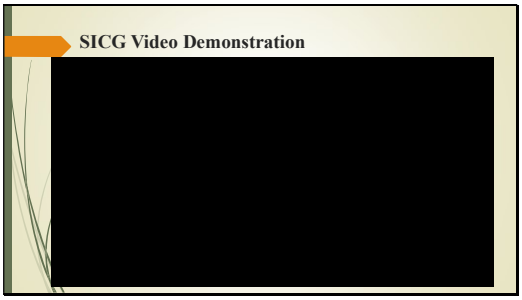

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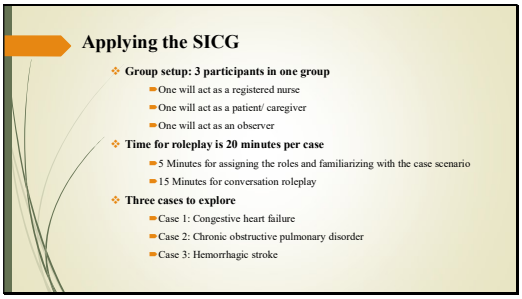

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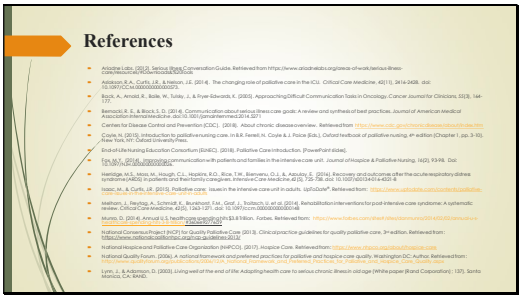

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APPENDIX T

TABLE OF EVIDENCE

Table 1

Palliative Care in Intensive Care Unit

Purpose	Design & Key Variables	Sample & Setting	Measurements	Findings	Authors' Conclusions	Limitations
Create a new program for early identification of Pts who need PC consultation (Mun et al., 2017)	Systematic review IV: PC program initiation in ICU DV: Model of PC integration, Screening/trigger criteria, guideline development & evaluation, outcomes & metrics	23 publications Electronic search including PubMed, Cumulative Index to Nursing & Allied Health Literature, Cochrane, and National Quality Forum (NQF) databases	Mosby's Research Critique Form, Rapid Critical Appraisal of Randomized Controlled Trials by Melnyk & Fineout-Overholt, & Appraisal of Guidelines for Research & Evaluation (AGREE) II	Model of PC integration: "consultative model" referred to immediate PC specialist's involvement for highest risk Pts with poor clinical outcomes & "integrative model" referred to embed PC practices among multidisciplinary team in approaching Pts & families regarding PC, prognosis & GOC conversation Screening/trigger criteria: specific screening criteria should	IPAL-ICU project guideline offered a specific framework to establish PC program in ICU to integrate PC principles daily to meet Pts & families' PC needs	None

Purpose	Design & Key Variables	Sample & Setting	Measurements	Findings	Authors' Conclusions	Limitations
				be used on admission & during hospitalization for early PC referrals to avoid over-utilization of ICU resources without changing poor prognosis. Research by Nelson, Brasel et al., 2010 had highest score of 83% in AGREE II scale. Guideline development & evaluation: Care & Communication Bundle was considered a standard of PC practice in ICU. Outcomes & metrics: evaluation of process & outcome measures help sustain PC program in ICU Improving Palliative Care in ICU (IPAL-ICU) project contained all of above principles.		

Purpose	Design & Key Variables	Sample & Setting	Measurements	Findings	Authors' Conclusions	Limitations
Assess PCC outcomes for Pts with positive referral criteria. (Zalenski et al., 2017)	Retrospective quality improvement project IV: PC consultation DV: PC consultation outcomes including DNR code status; hospice referral; 30 readmission rate; direct cost; LOS.	405 African American, Caucasian, & Latino Pts University-affiliated Urban tertiary care centers, & suburban community hospitals	Palliative care screening tool; EMR; hospitals' central accounting system	Results compared between Pts receiving PCCs & Pts not receiving PCCs. Pts receiving PCCs: more DNR initiation (AOR = 7.5; 95% CI 5.6 - 9.9) & hospice referrals (AOR =7.6; 95% CI 5.0-11.7), lower 30-day readmissions (AOR = 0.7; 95% CI 0.5 -1.0); No significant effect on LOS & cost. Early PCCs: reduces LOS (1.7 days [95% CI -3.1, - 1.2]) & costs (-$1815 [95% CI - $3322, - $803]	Early PCCs led to DNR code initiation, hospice referrals, reduction in LOS & direct cost, but did not affect 30 readmission rates. Clinicians & hospital administration should utilize PC screening & early PCC to improve Pt outcomes	Selection for PCCs not random, mostly dependent on standard methods & physicians' orders. Physicians in academic centers know more about PCCs & have more PCCs orders. Readmission rates undercounted due to unenrolled community hospitals around study centers.

Purpose	Design & Key Variables	Sample & Setting	Measurements	Findings	Authors' Conclusions	Limitations
Address PC needs for Pts & family by ICU team (Creutzfeldt et al., 2015)	Parallel-group prospective cohort study IV: Implement developed PCNST DV: # of Pts' PC needs were identified # of follow-up care services were identified	130 Pts admitted to ICU with PCNST 132 Pts admitted to ICU without screening Harborview Medical Center	PCNST EMR	63% Pts' PC needs were identified by PCNST Other resources were provided after PC needs identification: family conference (OR 7.90; *p = 0.001*), social work consultation (OR 2.64; *p = 0.020*), & spiritual care consultation (OR 3.69; *p = 0.008*).	When Pt's PC needs were identified in neuro ICU, social support & GOC were often discussed. PCNST helped ICU team to identify & provide PC services for Pts & families.	PCNST was newly developed Lack of randomizatio n PCNST were not widely used during QI project Small sample size
Test effectivenes s of PPSv2 on triggering PC referrals in ICU (Jenko, Adams, Johnson, Thompson,	Pre-intervention & post-intervention design IV: implement PPSv2 DV: compliance of using PPSv2	27 nurses ICU at 529-bed community hospital	PPSv2 8-item survey tool with first 5 Likert-type scale questions, & last 3 True/False questions EMR	85.6% compliance using PPSv2. Nurses were comfortable & knowledgeable about identifying PC needs for Pts but not significant increases. PC referrals increased by 110%	Validated PPSv2 increased # of PC referrals which positively impacted finance & improved pt outcomes.	Small sample size Short duration of PPSv2 test

Purpose	Design & Key Variables	Sample & Setting	Measurements	Findings	Authors' Conclusions	Limitations
& Bailey, 2015)	# of PC referrals Nurses' perception of using PPSv2 in care Nurses' comfort & knowledge of PC			Nurses had positive perception of PPSv2 with 3 main themes: PC need assessment, communication enhancement, outcome improvement		

Table 2

Goals of Care Conversation

Purpose	Design & Key Variables	Sample & Setting	Measurements	Findings	Authors' Conclusions	Limitations
Explore different effects between early GOCD & late GOCD on pt quality of EOLC. Explore association of early GOCD to lower use of aggressive intervention, inpatient death & ICU admission. (Gieniusz et al., 2018)	Retrospective cohort study IV: # of days from admission date to GOCD date. DV: Aggressive interventions, inpatient death, IC admission.	197 cases A 450 beds New York University Lutheran Medical Center	EMR review.	76% of cases received aggressive interventions; 60.9% died without hospice plan, 20.8% died with pending hospice, 18.3% were hospice discharge. From admission day to GOCD day, 4% of greater risk of receiving aggressive intervention for each additional day (95% CI = 1.02-1.07, $p < 0.001$) & inpatient death (95% CI = 1.02-1.06, $p < 0.001$), & 19% of risk of ICU admission (95% CI = 1.02-1.40, $p = 0.0278$)	Early GOCD may improve quality of EOLC by reducing aggressive interventions & inpatient death. Early GOCD reduced ICU LOS & cost while preventing Pts from futile treatments at end of their lives. Early GOCD focus on patient-centered care, values & wishes instead of aggressive treatments to sustain their lives	No standard documentation of GOCD in EMR. No inclusion of recovery case or home discharge after terminal diagnosis. Pain measurement was not counted as indicator of QOL as it was not well documented in EMR.

Purpose	Design & Key Variables	Sample & Setting	Measurements	Findings	Authors' Conclusions	Limitations
Describe nurses' perceptions of their role & mission in initiating GOC conversation. (Wittenberg, Ferrell, Goldsmith, Buller, & Neiman, 2016)	Cross-sectional study Nurse's communication tasks: to assess Pts & families understanding of prognosis during GOC meeting; to present with Pts after poor prognosis disclosure; to support Pts during decision making. Nurses desired to change care team setting to enhance GOC conversation.	109 nurses End-of-Life Nursing Education Consortium Workshops	Open-ended survey	Nurse's roles: Assess Pts & families' understanding of prognosis & obtaining pt's GOC; Discuss with Pts about treatment decision; Support pt's family; Listen to patient's feeling expression; Inquire available sources to support pt making treatment decision. Nurses wanted to change care team's function, structure & process to improve GOC conversation.	Nurses' perception of their primary role was to assess Pts & families' understanding of prognosis. Function, structure & process of care team in setting could be a barrier to nurses' participation in GOC conversation with Pts & families.	Samples not representative in other setting or specialty
Compare effect of GOC intervention	RCT study with intervention	80 HF patients	Pt self-report, GOC conversation	GOC intervention:	Nurse-led GOC intervention bundle improved quality of	Not conducted in

Purpose	Design & Key Variables	Sample & Setting	Measurements	Findings	Authors' Conclusions	Limitations
& usual care on improvement of GOC conversation, physician-pt communication quality, PC referrals, AD placement, & emotional level (anxiety & depression). (Doorenbos, Levy, Curtis, & Dougherty, 2016)	group & control group IV: GOC intervention bundle. DV: # of GOC conversation; physician-pt communication quality, # of PC referrals, # of AD placement, & emotional level	HF outpatient clinic of academic center in Pacific Northwest	documentation in EMR. Generalized anxiety disorder – 7 questionnaires, patient health questionnaire – 9, quality of communication questionnaire; barriers & facilitators questionnaire EMR review for PC referrals, AD placement	Increase in GOC conversations (58% vs. 2.6%, $p < 0.001$). Enhance quality of EoL conversation ($F = 5.09$, $p = 0.03$) Not significant increase in PC referrals, AD placement as well as anxiety & depression level No significant barriers found between intervention group & control group.	communication & # of GOC conversation between Pts & providers but did not significantly induce emotional distress to Pts.	multiple clinics Strict inclusive criteria Narrow scope of GOC discussion
Validate 6 GOC commonly discussed in literature reviews	Randomized study with one intervention group IV: pt responses	8 clinicians University of Iowa	Comparison of clinician's 6 GOC categorization 2 weeks before & after for	83.5% matching rate when clinicians categorized pt responses into 6 GOC types in first & second round.	6 categories of GOC identified in literature needs to be discussed during GOC conversation with Pts & families	Convenience sampling might lead to bias

Purpose	Design & Key Variables	Sample & Setting	Measurements	Findings	Authors' Conclusions	Limitations
(Haberle, Shinkunas, Erekson, & Kaldjian, 2011)	DV: % of matching rate clinicians could categorize pt responses into 6 GOC types Inter-rater & intra-rater among clinicians		same 60 open-ended response. Comparison of clinician's categorization of 60 open-ended response to close-ended responses	In first round, 50.8% of matching rate between clinicians' categorization for open-ended responses & closed-ended responses. In second round, 51.7 % of matching rate. In combination of both rounds, matching rate was 51.3% In combination of both rounds, when merging of "be cured" & ''improve or maintain function/ quality of life/independence.'' into one GOC category, matching rate was 87.8% Inter-rater among categories in medical students (0.01- 0.74 %), in physician (0.18-0.77%)	understand diagnosis & prognosis. "be cured" & ''improve or maintain function/ quality of life/independence'' needs to be identified explicitly during GOC discussion because these goals are inter-related depending diagnosis. Inter-rater & intra-rater among clinicians - low due to differences in years of experience.	Distribution of GOC categories among 60 randomly selected pt responses Invalid assumption of matching between clinician's interpretation of open-ended pt responses & closed-ended pt responses

Purpose	Design & Key Variables	Sample & Setting	Measurements	Findings	Authors' Conclusions	Limitations
				Intra-rater among categories in medical students (0.24- 0.86 %), in physician (0.42-0.85%)		
Describe effect of prognostic communication process during PC GOC conversation on pt outcomes (Norton et al., 2013)	qualitative descriptive study prognostic communication during PC GOC conversation	66 Pts 750-bed academic medical center in upstate New York	Interview & audio record	5 processes: "Signposting crossroads": Clinicians discussed with Pts & families about when pt faced with disease treatment burden more than benefits. "Closing of a goal": Clinicians stated hoped-for GOC was not feasible after eliciting pt & family's understanding of disease trajectory. "Clarifying current path": Clinicians made explicit picture of treatment trajectory leading to best or worst outcomes. "Linking paths & patients' values":	PC GOC conversation conveying prognosis would elicit pt centered care regarding pt's condition, values & feasible outcomes.	Only initial PC conversations were recorded Study is conducted among one PC specialty group in single institution Conversation occurred among hospitalized seriously ill patients.

Purpose	Design & Key Variables	Sample & Setting	Measurements	Findings	Authors' Conclusions	Limitations
				Clinicians confirmed their understanding of Pt's value & discussed with Pt's families about GOC based on Pt's value. "Choosing among paths": Clinicians referred alternative options such as comfort care or individualized feasible GOC.		
Examine relationship between goals-of-care outcomes and healthcare utilization IPCU. (Zhang et al., 2017)	Retrospective study IV: IPCU admission & transfer DV: code status change, 30 days readmission rate,	74 oncology Pts medical record at Dana-Farber/Brigham and Women's Cancer Center in Boston, Massachusetts	EMR review	Code status change: 73% of pts discharged home with "DNR/ DNI code status." 30 readmission rates: 4%	A dedicated IPCU has positive influence on 30 readmission rate, GOC discussion, & code status change. Staff in this specialty unit, who are stakeholders, needs to be trained in communication skills to improve GOC conversation and multidisciplinary	Retrospective in a single center. Limited time data collection

Purpose	Design & Key Variables	Sample & Setting	Measurements	Findings	Authors' Conclusions	Limitations
					approach to pt centered care	
Examine GOC discussion documentation rate; relationship between GOC documentation & pt outcomes among hospitalized pts; & identify triggers for GOC discussion (Wong, Wang, Grinman, & Wu, 2016)	Retrospective study IV: GOC discussion DV: documentation, pt outcomes & triggers	200 eligible randomly selected hospitalized LTC pts medical record. academic teaching hospitals in Toronto, Canada	EMR review	Triggers for GOC discussion: low glasgow coma scale, high respiratory rate, and low oxygen saturation. Pt outcomes: higher rates of "DNR status" order (80% vs 55%) & comfort measures only order (7% vs0%) Pts with GOC discussions: higher odds of in-hospital death (52.0, 95% CI: 6.2-440.4) and 1-year mortality (4.1, 95% CI:1.7-9.6). GOC discussion documentation: 37.5% of pts with GOC discussion documentation.	GOC discussion is not initiated as a routine process. Low glasgow coma scale, high respiratory rate, and low oxygen saturation are factor triggering GOC conversation. GOC discussion was associated with higher "DNR code status" and comfort care order. Such a delayed GOC discussion leads to high incidence in-hospital patient death rate & 1-year mortality. Pt outcomes influenced by low rate of GOC	Retrospective chart review in academic teaching hospital, without community hospital involvement. No analysis of other factors such as GOC training, culture, language barriers.

Purpose	Design & Key Variables	Sample & Setting	Measurements	Findings	Authors' Conclusions	Limitations
				No GOC discussion documentation at discharge summary for about 75% of pts with a change in their GOC	discussion documentation for hospitalized LTC patients & change in GOC which is not documented in summary discharge	
Examine association of inpatient PC consultations with 30-day hospital readmissions (O'Connor, Moyer, Behta, & Casarett, 2015)	Retrospective IV: PC consultation DV: 30 days readmission	34,541 hospitalized pt EMR a large urban tertiary care medical center	EMR review	Pts with palliative care had a lower 30-day readmission rate, (AOR 0.66, 0.55–0.78; $p < 0.001$). AR: 10.3% (95% CI: 8.9%–12.0%) for PC, & 15.0% (95% CI: 14.4%–15.4%) for usual care. Pts with GOC discussions during PC consultation had lower readmission rate (AOR 0.36, 0.27–0.48; $p < 0.001$)	PC consultation can lower 30-day readmission rate. This rate is lower when PC consultation associated with GOC discussion.	Single tertiary center with single well trained PC team. Readmission rate is only measured outcome
Evaluate GOC documentation in EMR	Retrospective GOC documentation	77 pts EMR	EMR review	Code status documented: 97.4% (75/77) patients	High rate of code status documentation, but GOC	Retrospective in a single site only 2 GOC found.

Purpose	Design & Key Variables	Sample & Setting	Measurements	Findings	Authors' Conclusions	Limitations
(Hagiwara, Villarreal, & Sanchez-Reilly, 2015)		Acute Care for Elderly (ACE) unit in acute care hospital		GOC documented: 15.6% (12/77)	documentation rate is low. GOC documentation only with comfort care or hospice.	
Determine effect of PC consultation on LOS, inpatient, mortality, and GOC toward comfort measures, withdrawal of life support (Naib, Lahewala, Arora, & Gidwani, 2015)	Retrospective IV: PC consultation DV: LOS, mortality rate, GOC toward comfort care & withdrawal life support.	117 pts EMR Mount Sinai's hospital	EMR review	End-of-life discussions: 85 pts (72.6%) GOC toward comfort care (38.8% vs 3.1%, $p < 0.001$) Withdrawal of life support (23.5% vs 6.3%, $p < 0.02$) compared with patients with no GOC discussions No difference in CICU LOS and mortality rate between 2 groups	PC consultation positively influences GOC discussion. EoL decision making toward comfort care and withdrawal life support significantly increased. However, there is no different impact to LOS and mortality rate.	Single retrospective in single unit and hospital Only pts with one organ failure such a HF
Association of PC consultation with inpatient	Prospective observational study	1630 pts 533-bed Pacific	EMR review	Pts with PC:19% died in-hospital.	Hospitalized elderly need early PC consultation to assist with plan of	Small sample, single unit, single center, relationship

Purpose	Design & Key Variables	Sample & Setting	Measurements	Findings	Authors' Conclusions	Limitations
hospital death among elderly (Sekiguchi, Bell, Masaki, & Fischberg, 2014)	IV: PC consultation DV: inpatient hospital death, risk of inpatient hospital death for additional day before consultation	Basin major tertiary care referral and teaching hospital in Honolulu, Hawaii		In-hospital death in ICU: 38.2% Non-ICU medical patients: needing PC consultation for plan of care (OR = 1.89, 95% CI: 1.27–2.80). Risk of in-hospital death increased 2% for each additional hospital day before consultation (OR = 1.02, 95% CI = 1.01–1.03). ICU patients: risk for in-hospital death increased 8% for each additional hospital day before consultation (OR = 1.08, 95% CI = 1.01–1.16).	care to avoid inpatient hospital death. Delayed PC consultation associates with increase of risk for inpatient hospital death, especially elderly in ICU	between in hospital death and elderly with critical illness in ICU
Association of PC consultation with inpatient hospital death among elderly	Prospective observational study IV: PC consultation	1630 pts 533-bed Pacific Basin major	EMR review	Pts with PC:19% died in-hospital. In-hospital death in ICU: 38.2%	Hospitalized elderly need early PC consultation to assist with plan of care to avoid inpatient hospital death.	Small sample, single unit, single center, relationship between in hospital death and elderly

Purpose	Design & Key Variables	Sample & Setting	Measurements	Findings	Authors' Conclusions	Limitations
(Sekiguchi et al., 2014)	DV: inpatient hospital death, risk of inpatient hospital death for additional day before consultation	tertiary care referral and teaching hospital in Honolulu, Hawaii		Non-ICU medical patients: needing PC consultation for plan of care (OR = 1.89, 95% CI: 1.27–2.80). Risk of in-hospital death increased 2% for each additional hospital day before consultation (OR = 1.02, 95% CI = 1.01–1.03). ICU patients: risk for in-hospital death increased 8% for each additional hospital day before consultation (OR = 1.08, 95% CI = 1.01–1.16).	Delayed PC consultation associates with increase of risk for inpatient hospital death, especially elderly in ICU	with critical illness in ICU

Table 3

Nurses' Perception of Palliative Care and Their Role

Purpose	Design & Key Variables	Sample & Setting	Measurements	Findings	Authors' Conclusions	Limitations
To explore nurses' understanding PC for OA in acute care (O`Shea, 2014)	Qualitative descriptive exploratory study Explore nurses' opinion about PC for OA in acute care hospital	18 female nurses in different units in acute care hospital Community urban hospital	Semi-structured interview guide	Uncertain understanding of PC concept. Difficulty initiating PC communication Being pt advocate Professional conflicts Health care system disparity	Nurses: no clear understandings of PC even though they can be excellent pt advocates. Professional conflicts & healthcare system disparities led to delays of early PC for OA in hospital. Collaborative interdisciplinary education about PC should be broadly instigated.	None
Describe natural occurrences of goal expression in	Cross-sectional direct observational study	72 inpatient PC consultation	Audio recording consultation; medical record;	Goal expression of life expectancy & quality was 2.7 times frequently mentioned in PC conversation when pt &	Goal communication helped pt/family have clear understanding about	None

Purpose	Design & Key Variables	Sample & Setting	Measurements	Findings	Authors' Conclusions	Limitations
PC consultations (Gramling et al., 2015)	Duration of conversation, PC team expression about treatment goals, pt/family goal expression	observation In academic medical center in northeast U.S.	conversation coding.	family experienced suffering ($p < 0.001$). PC goal with specific medical intervention options identified in conversation: 71% & multiple medical intervention options: 32%.	PC consultation purposes. Understanding association between goal expression & existing suffering of pt/family help providers to establish good communication & achieve treatment goals.	
Assess nurses' knowledge of PC & ability to initiate EoL conversation with Pts & families independently after short educational session. (Mehta, Wilks, Cheng, Baker,	Pre- & post-survey IV: 1-hour educational session DV: nurses' independence in ordering PC consultation & comfort in initiating EoL conversation	50 nurses Suburban, community hospital in Maryland	Survey with multiform of answers such as multiple choice, true/false, & Likert scale	86% nurses assumed that ordering PC consultation should be done independently. 88% nurses perceived that comfort level increased during EoL conversation	Brief educational section enhanced nurses' knowledge of PC so that they could directly order PC consultation & be more comfortable in initiating EoL conversation with Pts & families.	Single setting Lack of diverse Pts & randomization Short education session

Purpose	Design & Key Variables	Sample & Setting	Measurements	Findings	Authors' Conclusions	Limitations
& Berger, 2018)						Survey tool & educational information were not validated
Explore ICU bedside nurses' perception of their role in PC communication (Anderson et al., 2016)	Survey study Perceived involvement, confidence & barriers	598 nurses 5 academic medical centers of University of California	40 items surveys with Likert scale	88% participants perceived that their engagement in GOC, PC & prognosis conversation was important 20% of nurses "very confident" & 56% of nurses "confident" in assessing family's understanding of GOC. Barriers nurses perceived: more education, physician's disregard of nurses' perception of pt prognosis, GOC & PC, sensitivity of discussion	ICU bedside nurses perceived their important involvement in GOC, PC & prognosis conversation. Nurses would need more education & support to engage in GOC discussion.	Nurses who didn't respond to survey didn't express their perception. Nurses' skill & participation were not assessed. Research was not conducted in different organization
Examine nurse's communicatio	Qualitative study	54 nurses	Observation	Biopsychosocial: Focus on information exchange about acute biomedical	Communicating in critical care is a collaborative	Limited setting

Purpose	Design & Key Variables	Sample & Setting	Measurements	Findings	Authors' Conclusions	Limitations
n and roles in theoretical framework of patient-centered care. (Slatore et al., 2012)	IV: interviewing nurses DV: nurses' perception of PCC domains and their roles in communication	2 Academic medical centers in Portland, Oregon	Semi-structure interview with audio record	problems & related nursing intervention, but nurses did not mention purpose of intervention as well as medication. Pt as person: Nurses treat pts and families as person through informal conversation & non-verbal communication Sharing power and responsibility: Nurses make decision with pts and families based on routine biomedical care from physicians' decision. Therapeutic alliance: Nurse communicates with pt & family about care plan except for code status & major medical issues. Clinician as Person: Nurses communicates with physicians about their concerns r/t pt's conditions and express feeling about pt's situation.	approach among interdisciplinary. Understanding aspects of PCC communication will guide development of education to improve nurses' communication skills based on strength & roles	Limited population Not observe and interview all of nursing staff Not interview physician, pts,& families about nursing communication

Purpose	Design & Key Variables	Sample & Setting	Measurements	Findings	Authors' Conclusions	Limitations
				Nurses had few communications in sharing power, responsibility, & therapeutic alliance because they perceived that their role is information translator between physicians and patients and patients' families. Nurses did not want to share responsibility & power in updating major issues r/t biomedical and code status because they thought such communication was not a nurse's role		
Explore method of early identifying PC needs, preconditions for early integrating PC	Systematic review IV: literature search using Cochrane Library, PubMed,	44 studies Cochrane Library, PubMed, EMBASE, CINAHL,	Critical Appraisal Skills Program Appraisal and Guidelines for Research & Evaluation	Methods: trajectory approach, integrated tools, & prognostic tools to identify PC needs Barriers: staff misconception of PC, lack of communication skills,	No recommendation of methods of early identifying PC needs due to lack of validation. Although multiple barriers to early PC integration in	homogeneous sample, limited population, limited general hospital,

Purpose	Design & Key Variables	Sample & Setting	Measurements	Findings	Authors' Conclusions	Limitations
in acute care hospitals, & its outcome. (Dalgaard, Bergenholtz, Nielsen, & Timm, 2014)	EMBASE, CINAHL, PsychINFO, & SveMedþ database DV: Method of early identifying PC needs, barriers of early integrating PC & its outcomes	PsychINFO, & SveMedþ database		lack of effective communication among interdisciplinary team members with patients about prognosis. Outcomes: early integration of PC in daily practice help care team to manage symptoms better and improve quality of life for patients and families.	practice, well designed professional education & training will help clinical staff to overcome barriers.	exclusion criteria

Table 4

The Need of Palliative Care Education

Purpose	Design & Key Variables	Sample & Setting	Measurements	Findings	Authors' Conclusions	Limitations
Evaluate effects of embedded PC program in specialty unit on serious ill Pts receiving PC services & non-PC clinicians' comfort & skills in discussing EoL issues with Pts & families (Szekendi et al., 2018)	Improvement project IV: initiation of PC service in specialty unit Coaching non-PC clinicians in discussing GOC with Pts & families DV: # of GOC conversation initiation & documentation Non-PC clinician's comfort & communication skill level	PC team, nurses, surgical attendings, residents, physician assistants (PAs), nurse practitioners (NPs), social workers, & nurse case managers 3 different units in 3 Midwestern academic medical centers	EMR review Adapted instrument to measure perceived comfort & communication skills	PC team1: 560 Pts screened, 89 Pts needed GOC conversation, but 60 conversations held. GOC conversation documentation was 8.2% (pre-intervention phase), GOC conversation initiation was 10.7% (intervention phase). PC team 2: 196 Pts screened, 54 Pts needed GOC conversation, but only 31 conversations held. GOC conversation documentation was 18.5% (pre-intervention phase), GOC conversation initiation	Embedding PC program in specialty unit would be a modest PC model to expand access to PC for serious ill Pts. This program enhanced primary PC services by general practitioners that would close gap between high demand & limited PC resources	Short duration of project implementation. Lack of long-term tracking of GOC conversation documentation Limited # of sites for project implementation.

Purpose	Design & Key Variables	Sample & Setting	Measurements	Findings	Authors' Conclusions	Limitations
	regarding EoL discussion			was 15.8% (intervention phase). PC team 3: 82 Pts screened, 82 Pts needed GOC conversation, but only 32 conversations held. GOC conversation documentation was 27.9% (pre-intervention phase), GOC conversation initiation was 39% (intervention phase). Non-PC clinicians reported their communication skills & comfort in discussing with pt & family about GOC with average score 5.0 to 5.1		

Purpose	Design & Key Variables	Sample & Setting	Measurements	Findings	Authors' Conclusions	Limitations
Implement & evaluate IMPACT-ICU to train & support bedside nurses in providing PC & collaborate with MDT (Anderson et al., 2017)	Quality improvement project IV: Communication skill training workshop; PC nursing coaching round DV: Improvement in communication skills of nurse leaders, staff nurse; identification of PC needs for Pt & family, family-clinician communication outcomes, PC services addressed by MDT	428 ICU nurses & eight nurse leaders 4 academic health system medical centers	EMR; training notes; in person & telephone conference; exit survey; PC nursing coaching round records.	Nurse leader: Self-rating improvement in communication skill 13 -38% before training; 63 – 88% after 3 days training 88 -100% after 2 years. Staff: Self-rating improvement in communication skill 19-45% before workshop; 55 – 75% after workshop ($p < 0.01$). 1110 PC needs for Pts & family were early identified; 49% of PC addressed & assessed by ICU interdisciplinary team; 19% of PC assessed by nurse practitioners; 32% of PC assessed by ICU physicians	IMPACT-ICU program improved PC communication skills & ability of opening training workshops for nurse leader & bedside nurses. Bedside nurses: more confident in PC communicating & more involved in providing primary bedside PC. Early PC needs identification for critically ill Pts during nursing coaching round.	No Pts & families outcomes after PC needs were addressed Only objective measure of nurse leaders' teaching. Only bedside nurses involved while other MDT did not. IMPACT-ICU program was only initiated in tertiary academic centers.

Purpose	Design & Key Variables	Sample & Setting	Measurements	Findings	Authors' Conclusions	Limitations
Develop & implement educational program based on COMFORT curriculum to enhance oncology nurses' communication skills (Cronin & Finn, 2017)	Pretest& post-test survey IV: educational program DV: nurses' communication skills, attitude & care efficacy	20 randomized selected nurses Academic center in Boston	Communication Skills Attitude Scale, Adapted Perceived Importance of Medical Communication, & Caring Efficacy Scale.	Improvement in communication skill was 86% (pre-test mean, 4.18 [SD, 0.93] – post-test mean, 4.38 [SD, 0.65]) Improvement in nursing attitude toward communication was 75% (pre-test mean, 4.42 [SD, 0.85]) – (post-test mean, 4.55 [SD, 0.56]) No significant findings in care efficacy due to some answer in Caring Efficacy Scale survey was left blank.	Although statistic results are not significant, such program improved actual perceived score in communication skill, attitude & care efficacy by nurses. Educational program got positive & encouraging feedbacks from nurses because program enhanced nurse's comfort in PC conversation & outcomes for Pts & families	None
Critique development, implementat	Systematic review	170 reports 10 electronic databases &	Electronic distraction form, 2 independent authors,	Quality score of 157 published	EoLC communication skills training interventions	Unpublished reports included.

Purpose	Design & Key Variables	Sample & Setting	Measurements	Findings	Authors' Conclusions	Limitations
ion, evaluation, report of EoLC communication skills training interventions for generalist PC Providers (Brighton et al., 2017)	ID: Appraise EoLC communication skills training interventions DV: Study selection; risk of bias; developing & delivering training; evaluating training effectiveness	5 relevant journals	descriptive statistics & narrative synthesis	papers = 16.88 (SD = 3.88) including 8 low, 108 medium, & 41 high. Few interventions with user (*n = 7*), & teaching methods using a mixture of didactics (*n = 123*); reflection & discussion (*n = 105*); & roleplay (*n = 86*). Controlled evaluation of weak studies; <15% randomized participants evaluation of studies. Based on staff self-reported outcomes 49% without validated measures	research design was not effective. Need of guideline for reporting of EoLC communication skills training interventions.	Unclear & missing information in studies
Develop a feasible structured	Developmental study Pilot testing	42 health care workers including	Feedbacks from providers & Pts	GOC communication guide was developed &	Structured GOC communication guide was	None

Purpose	Design & Key Variables	Sample & Setting	Measurements	Findings	Authors' Conclusions	Limitations
GOC communication guide (Bekelman et al., 2017)	Feasibility of GOC communication guide	physicians, psychologists, chaplains, nurses, & social workers. 15 Pts & surrogates Academic Veterans Affairs health system.		modified based on MDT input. Arena of focus: Pt's understanding & attitude toward illness, values & goals of care; Negative & positive perception of future of disease; EoL preferences; Complete written documents for EoL wishes & share with family & providers about goals & values; Follow-up discussion about GOC conversation. Pts & surrogates accepted 30 minutes conversation, which was clear & helpful for them to identify GOC follow their values.	developed to make sure its feasibility & acceptability by patients & MDTmembers.	

Purpose	Design & Key Variables	Sample & Setting	Measurements	Findings	Authors' Conclusions	Limitations
Describe PC knowledge among healthcare workers including registered nurses, nursing assistants, paramedics, nursing managers in different organization in rural community in Sweden. (Eriksson, Bergstedt, & Melin-Johansson, 2015)	A quantitative study PC knowledge, competency, educational gap, support, & reflection among healthcare workers in rural area.	1098 working healthcare workers Nursing home, home care, & group residential settings.	4 sections of 20 question survey	Lack of PC education: 40% lacked PC education. Lack of PC competence in spiritual area: < 50%. Need further education: 75% of healthcare workers aged 20–66 (75% women, 55% men). Need for support & reflection: PC services to support for staff in different healthcare organizations & professions (*p = 0.000 – p = 0.01)*, & more female than male staffs aged 50–59 need to reflect (*p = 0.007*).	Staff healthcare workers in different professions & organizations need more education & specific area regarding PC. Staffs also need support & reflection to relieve psychosocial distress after Pt's death.	Universal questionnaires for different professions in different settings.
Evaluate effect of education	Mix-method study including	22 nurses & 13 HCW for	PC workshop	Significant improvement in perceived competence	By providing PC approach education workshop, HCW	Small sample size

Purpose	Design & Key Variables	Sample & Setting	Measurements	Findings	Authors' Conclusions	Limitations
for rural nurses & HCW on perceived knowledge & competence in delivering PC approach (Pesut et al., 2015)	qualitative & quantitative Quantitative: IV: educational workshop DV: perceived nurses & HCW's knowledge & competence Qualitative: Experience of receiving education related to PC approach	quantitative study 16 nurses & HCW for qualitative study	Pre- & Post-test surveys PC Nursing Self-Competence Scale 5 points Likert scale 12-item knowledge survey Semi-structure interview	in delivering PC approach among HCW, but not nurses. Highest improvement in personal & professional issues related to nursing care (t=4.19; *p=0.002*) & lowest improvement in inter-professional collaboration & communication (t=2.30; *p=0.045*) Significant improvement in perceived knowledge in delivering PC approach regarding ethical& legal issues among nurses & HCW. Pre-test: more than 50% of nurses & HCW; post-test: report of inadequate knowledge regarding ethical & legal issues in PC approach decreased	gained more benefits in perceived competence & knowledge. No significant statistical findings among nurses in perceived competence & knowledge related to PC approach, but increased post-test scores among nurses & HCW. Positive qualitative effects of PC approach education workshop on participant's confidence in delivering GOC conversation.	Data from self-report

Purpose	Design & Key Variables	Sample & Setting	Measurements	Findings	Authors' Conclusions	Limitations
				to 27.8% in nurses, & 41.7% in HCW. Nurses & HCW improved their knowledge & communication after attending PC approach education workshop.		
Develop educational program focusing on improving critical care nurses' communication skills to engage discussion between Pts's families & physicians about GOC & prognosis.	Mix-method of qualitative & quantitative study Quantitative: IV: educational workshop DV: nurse's perceived improvement in communication skills & confidence in GOC conversation	82 critical care nurses University of California San Francisco Medical Center	Pre-, post-surveys, & 3 months follow-up surveys. Surveys include 14-22 items Sound recording during group discussion	% of 9 nursing communication skills related to GOC conversation among nurses was improved after workshop ($p < 0.01$ for all skills). Percentage of nurse's confidence in discussing GOC & prognosis with pt's families was significantly improved after workshop ($p < 0.01$). Nurses saw their important involvement	Educational workshop supported nurses in enhancing their communication skills & confidence in delivering GOC conversation with pt's family. Nurses had more encouragement & became active in their role to advocate for pt & families during GOC & prognosis discussion.	Workshop evaluation based on participant's survey Short duration of workshop Poor 3 month follow-up survey's participation Single academic setting

Purpose	Design & Key Variables	Sample & Setting	Measurements	Findings	Authors' Conclusions	Limitations
(Milic et al., 2015)	Qualitative: Perception of participant's involvement in discussing GOC & prognosis.			in GOC conversation with pt's families		
Identify barriers to integrate PC in U.S (Hasselaar et al., 2016)	Literature review Barriers for early PC integration	18 articles PubMed from 2005 to March 2015	WHO's Public Health Strategy for Palliative Care	Education-related barriers: inadequate PC education and training, misperception of PC as EoL care Implementation-related barriers: PC specialist shortage, inability of early recognition of PC needs of PT, culture Policy-related barriers: payment system, inadequate reimbursement, and incentives, unavailability of research funding, lack of PC integration in nursing home	U.S healthcare should change reimbursement system to value base to decrease healthcare cost & improve pt outcomes. Expanding PC education to general practitioner and other healthcare interdisciplinary team will increase workforce. More investment to PC research to develop new tool to trigger PC for chronic ill PTS	None

Purpose	Design & Key Variables	Sample & Setting	Measurements	Findings	Authors' Conclusions	Limitations
Examine nurses' perception of PC services, training, as well as its quality. (Frey et al., 2014)	Descriptive cross-sectional design IV: survey DV: PC service quality & support service Accessibility; Clinical staff PC experience & education; Perceived confidence in PC delivery; Impact of formal PC training	598 clinical staff 710-bed hospital	Surveys	PC service quality & support service accessibility: was reported as "good" (x=4.17, SD=0.91), but cross-cultural accessibility was low (x=3.84, SD=2.21) Clinical staff PC experience & education: Staff spent 19.3% (SD=23.0) of their time to care for end-of-life patients. However, 19.7% of participants received formal training while 73.7% of participants would like formal training. Impact of formal PC training on perceived confidence in PC delivery: Participants with formal training had higher score for	Most of clinical staff had experience in taking care of EoL pts, but formal training would increase staff's perception of confidence in delivering high quality of PC. Survey result is a guide to develop formal PC education & training in acute care hospital.	non-randomised & non-uniform sampling. Retrospective surveys without pre-test Bias of participants in responding to survey of hospital's PC quality

Purpose	Design & Key Variables	Sample & Setting	Measurements	Findings	Authors' Conclusions	Limitations
				professional & emotional preparedness (x=3.21, SD=0.55), (x=2.83, SD=0.37) respectively in comparison with those without formal training (x=2.72, SD=0.66) (95% CI 0.34- 0.60), (x=2.29, SD=0.64) (95% CI 0.31- 0.75)		

Table 5

End-of-Life Nursing Education Consortium

Purpose	Design & Key Variables	Sample & Setting	Measurements	Findings	Authors' Conclusions	Limitations
Assess community needs of inter-professional palliative care educational needs (Coats et al., 2017)	Cross-sectional descriptive design and mix-method 3 phases of study. Assessment of care setting, types of PC services PC educational contents PC Curriculum	88 keys informants Washington State	Telephone interview Surveys and discussion Assessment review	Needs: Primary PC & specialty PC, online modalities including workshop Contents: communication, inter-professional teamwork, & PC integration into organization Curriculum: adjustable teaching methods, length of courses, & topics	With key informants' input, inter-professional PC curriculum provides basic knowledge r/t PC among interdisciplinary team members. Well-trained interdisciplinary team members can integrate PC knowledge into practice.	None
Describe result of ELNEC-CC/Archstone train-the-trainer project & impact on practice of critical care nurses.	Pre/post survey study Participants' perception of their PC teaching, their colleague's reception of PC	388 nurses ELNEC CC/Archstone courses	Surveys	Teaching of content as moderately effective (mean score, 5.89) Colleagues' reception to more training (mean score, 8.38) Changes in care for dying patients by nurses as moderately effective (mean score, 6.26).	ELNEC-CC/Archstone courses improved nurses' EoL/palliative care education & practice. Such ELNEC-CC should be extended to improve nurse's skill set to	None

Purpose	Design & Key Variables	Sample & Setting	Measurements	Findings	Authors' Conclusions	Limitations
(Grant et al., 2013)	training, changes in care for dying pts at their facility.				integrate PC in critical care setting	
Assess impact of ELNEC training program on RNs' death anxiety, concerns about dying, & knowledge of dying process. (Whitehead, Anderson, Redican, & Stratton, 2010)	quasi-experimental, longitudinal study IV: ELNEC training program DV: death anxiety, concerns about dying, & knowledge of dying process	500 RNs Carilion institution & Virginia Tech institution	Revised Death Anxiety Scale (Cronbach's alpha = 0.804) Concerns about Dying Instrument (Cronbach's alpha = 0.83)	Matched pair analysis: knowledge of death & dying has significant differences between treatment & control groups posttest ($p = 0.01$) and again at 12-month test ($p = 0.013$), but not at 6 month test ($p = 0.07$) Unmatched analysis: statistically significant differences between two groups at posttest ($p = 0.004$) & at 12 months ($p = 0.006$), but no significant at 6 month test ($p=0.06$) No significance found between treatment & control groups for either RDAS or CAD, but treatment group has less death anxiety and concern about dying.	Implementation of ELNEC training program is very important to improve nurses' knowledge of death and dying. This program promises an alleviation in nurses' death anxiety and concerns of dying	None

Table 6

Teaching strategies

Purpose	Design & Key Variables	Sample & Setting	Measurements	Findings	Authors' Conclusions	Limitations
Compare effectiveness of lecture vs. lecture plus simulation on increasing nurses' knowledge of EoL care (Bodine & Miller, 2017)	Quantitative, cross-sectional, descriptive design ID: Lecture class & lecture plus simulation class DV: Nurse's knowledge of EoL care	53 emergency nurses 70-bed emergency department at a level I trauma center in central California	Beckstrand and colleagues' Survey of Emergency Nurses Perceptions of EoL care Abbreviated 25-question quantitative ELNEC examination	No statistically significant difference between lecture vs. lecture plus simulation on nurses' knowledge of EoL care Lecture courses: statistical significance in symptom management and grief, loss, & bereavement when compared with pretest scores. Lecture plus simulation: statistical significance in cultural considerations in EOL care; grief, loss, and bereavement; & preparation and care for time of death when compared with pretest scores	Despite no significant difference between 2 teaching methods, nurses' knowledge of EoL care significantly increased.	Small sample size, participant's nursing experience,
Describe effect of clinician debriefing on pt and process outcome	Preferred Reporting Items for Systematic Reviews & Meta-Analyses	27 studies Systematic review	Kirkpatrick's four-level system for evaluation of educational interventions.	Debriefing benefits: improving learning, enhancing non-technical performance, technical performance, and pt outcomes. Process-outcome: improved resuscitation (mean difference	A structured debriefing is an educational strategy to improve clinician knowledge & skill in practice. However, debriefing didn't	None

Purpose	Design & Key Variables	Sample & Setting	Measurements	Findings	Authors' Conclusions	Limitations
during life-threatening emergencies (Couper, Salman, Soar, Finn, & Perkins, 2013)	IV: Debriefing strategy DV: benefit of debriefing, patient outcome, process outcome		International Liaison Committee on Resuscitation guideline Grading of recommendations assessment, development, & evaluation system	6.80, 95 % CI 4.19–9.40, $p < 0.001$)) Pt outcome: return of spontaneous circulation (OR 1.46, 95 % CI 1.01–2.13, $p = 0.05$). No effect on survival to hospital discharge (OR 0.80, 95 % CI 0.38–1.67, $p = 0.55$)	effect on long-term patient outcomes	
Evaluate educational strategy to increase critical care nurses' knowledge of delirium & confidence in assessing delirium (Smith, Van Aman, Schneiderha	Pre/post-test IV: Multimodal educational strategy (online learning modules & simulation scenario) DV: CCNs' knowledge of delirium & CAM-ICU Confidence levels of	34 CCNs Medical-Surgical ICU	Knowledge of Delirium tool Confidence Scale Educational Methodology Satisfaction tool	CCNs improved knowledge of delirium and CAM-ICU through online learning modules, and no significant difference with simulation CCNs increased confidence in using CAM-ICU with significant result ($p < 0.001$) CCNs highly satisfied with educational strategies (91.1% agree or strongly agree)	Educational strategies including both online learning module & simulation scenarios are effective in engaging CCNs in learning.	Small sample size, 50% nurses participated in simulation

Purpose	Design & Key Variables	Sample & Setting	Measurements	Findings	Authors' Conclusions	Limitations
hn, Edelman, & Ercole, 2017)	CCNs in using CAM-ICU CCNs' satisfaction of multimodal educational strategies					
Explore & reflect advantage & challenge of using ISS training on teamwork enhancement (Villemure, Tanoubi, Georgescu, Dubé, & Houle, 2016)	Systematic reviews and meta-analyses IV: ISS training DV: CCNs' competency in practice r/t patient safety & collaboration	28 articles ICU	Preferred reporting items for systematic reviews & meta-analyses	ISS has positive impact on improving pt safety ISS engage and motivate multidisciplinary team member in improving professional skills ISS is feasible and cost-saving in institution	ISS is a promising educational strategy for continuing education to improve CCNs' competency in practice and collaboration.	Bias in sampling, data analysis & common bias in systematic review
Evaluate effectiveness of	quasi-experimental pre-/post	34 CCNs 20-bed MICU	ICU Nurse-Physician Questionnaire.	Improving nurse's perception of nurse-nurse & nurse-physician	Use of didactic, simulation, & short educational booster	High acuity ICU in

Purpose	Design & Key Variables	Sample & Setting	Measurements	Findings	Authors' Conclusions	Limitations
multifaceted educational strategy to introduce structured communication tools to CCNs (Turkelson, Aebersold, Redman, & Tschannen, 2017)	implementation IV: 3 educational strategies: an EB didactic curriculum, a high-fidelity simulation with manikin, & short educational booster session DV: Perception of inter-professional communication Knowledge and attitudes Nursing performance and manikin outcomes	located in a northern state	National League for Nursing's Satisfaction & Self-Confidence With Learning Tool	about problem-solving conflict strategy Statistically significant (P <.0001) post-intervention increase in knowledge scores (M=95.86; SD=6.22) compared with pre-intervention scores (M = 82.41; SD = 13.38); high satisfaction with learning experiences during simulation exercises CCNs using structured communication tools could identify priority problem	sessions improve quality of communication among interdisciplinary team (nurse-nurse & nurse-physician) Simulation used with structured communication improve open & interactive between nurses and physicians	large academic center, small sample size, not 100% nurses fill surveys and participate in simulation, short time for simulation session

Purpose	Design & Key Variables	Sample & Setting	Measurements	Findings	Authors' Conclusions	Limitations
Compare effect of traditional lecture vs computer-based learning module on knowledge retention regarding pressure ulcer (Cox, Roche, & Van Wynen, 2011)	quasi-experimental, pretest/posttest IV: traditional lecture vs computer-based instruction DV: knowledge retention right after education, 3 months & 6 months post - education	60 CCNs 500-bed, suburban community teaching Magnet hospital	Pressure Ulcer Knowledge Tool	Effect of both traditional lecture & computer-based learning module on knowledge retention: After education - significant (*p = 0.043*); compared to control group (p = *0.00*) 3 months after education – significant (p=0.000); compared to control group (p = 0.000), no significant difference between lecture vs computer-based learning module (p = 0.717) 6 months after education – no significant difference found among 3 group Significant difference found in prevention, staging, & assessment among ICU & med-surg unit	Both traditional lecture & computer-based learning module have positive effect on nurses' knowledge retention r/t pressure ulcer, prevention, staging, & assessment. However, education should continue quarterly to reinforce knowledge. Computer-based learning module is feasible and flexible teaching strategy for nurse's knowledge acquisition.	Hawthorn effect, small sample size, single study site.

Table 7

Education Program Evaluation

Purpose	Design & Key Variables	Sample & Setting	Measurements	Findings	Authors' Conclusions	Limitations
An evidence-based communication training workshop designed to improve communication skills of medical residents (Arnold et al., 2015)	Pre- & post-test study IV: brief didactic talks, faculty demonstration of skills, and faculty-supervised small group skills practice sessions with simulated families. DV: Communication skills	38 participants Non-hospital setting	Self-administered written pre- & post evaluation adapted from Oncotalk evaluation Self-assessment items: closed-ended 5-point Likert scales Workshop evaluation: closed-ended Likert scales & open-ended questions Follow-up survey	Communication skills improvement ($p<0.05$) 92% rated workshop as very good or excellent 83% agreed to recommend course 100% reported being competent/very competent	C3 (3 days communication skills) workshop increase self-reported skill acquisition & learners' satisfaction	Training workshop conducted in a single site
Evaluate effectiveness of 2 competency	Qualitative study IV: 3 strategies implementation	10 nurses large Midwestern Academic	Semi-structured interview questions on telephone	Acceptability: 10 participants with positive feedback for educational outreach	3 strategies implementation help nurses accept competency	Small sample size, homegenous.

Purpose	Design & Key Variables	Sample & Setting	Measurements	Findings	Authors' Conclusions	Limitations
programs on neurocritical care nurses' perception of evidence-based stroke and spinal cord injury guidelines implementation (Reynolds, McLennon, Ebright, Murray, & Bakas, 2017)	: local opinion leaders, printed, educational materials, & educational outreach DV: Nurses'perception	Health Center		Appropriateness: 8 participants appreciated instant feedback from leaders Sustainability: 7 nurses suggested ongoing education	program. Such 3 strategies are appropriate & make program sustained	

Table 8

Evaluation of Participant's Learning

Purpose	Design & Key Variables	Sample & Setting	Measurements	Findings	Authors' Conclusions	Limitations
Develop & evaluate communication training program for CCN to participate with physician in family meeting (Krimshtein et al., 2011)	Pre- & post-test study IV: 1-day educational intervention DV: participant's communication skills & feedback	99 participants Five acute care hospitals within Veterans Integrated Service Network	Pre-/post-Program Questionnaire (5-point scale, from 1 = Excellent to 5 = Poor) Closed-ended and open-ended questions about program's content	Skill improvement among nurses ($p < 0.0001 – 0.023$) Qualitative feedback about program, especially role-play simulation	An evidenced based training workshop should be implemented in acute care setting to help nurses recognize their potentials and active role in family meeting & on multi-disciplinary team	Homogenous sample, not 100% nurses responding to post-test, not measure skills objectively, professional experts
Communication skills workshop development for palliative medicine trainees	Pre- & post-test study IV: 3 days communication training workshop DV: satisfaction, confidence in	41 participants Royal Australasian College of Physicians in Australia and New Zealand	Workshop evaluation: 4-point *Likert scale* questionnaires after course & 3 months follow-up close-ended questions	Highly positive feedback from participants and high recommend workshop to others Significant increase in confidence in communication skills	Feasible communication training workshop increase participant's confidence in communication skills and is highly valued	Non-randomized stuy, no objective measurement of knowledge & skills

Purpose	Design & Key Variables	Sample & Setting	Measurements	Findings	Authors' Conclusions	Limitations
(Clayton et al., 2012)	communication skills, attitude, stress & burnout		Participants' self-evaluation: 5-point *Likert scales* Attitude evaluation: 5-point *Likert scales* Maslach Burnout Inventory survey	Change attitude about palliative medicine in practice Small non-significant improvement in emotion distress		

Notes. # = number; AD = advanced directive; AOR = adjusted odds ratio; CCNs = critical care nurses; DNR = do not resuscitate; DV = dependent variables; EMR = electronic medical record; EoL = end of life; EoLC = end of life care; GOC = goals of care; GOCD = goals of care discussion; HF = heart failure; ICU = intensive care unit; IMPACT-ICU = integrating multidisciplinary palliative care into the ICU; IPAL-ICU: Improving palliative care in the ICU; ISS = In situ simulation; IV = independent variable; LOS = length of stay; MDT = multidisciplinary team; OA = older adults; PC = palliative care; PCCRI = palliative care communication research initiative; PCCs = palliative care consultations; PCNST: palliative care needs screening tool; PPSv2: palliative performance scale version 2; Pt = patient; Pts = patients; RCT = randomized control.