Vanguard Award 2016 Application

1. **Cover page:**

Healthcare System name: University of California, Irvine Health

Address: 101 The City Drive
Route 162, Building 22A, Room 3104D
Orange, CA 92868

Contact person: Donna Grochow, MSN, RNC
Champions: Douglas Merrill, MD; Donna Grochow, MSN, RNC

Title of application: Proactive Palliative Care in Intensive Care Units: An Interdisciplinary
Quality Practice Innovation

Topic area of focus of this application:
Patient experience
Quality improvement

Brief statement by an executive leader in support of the application:
Submitted by Douglas G. Merrill, MD, MBA Chief Medical Officer and Senior Associate Dean for Quality and Safety, UCI Health

With increasing frequency, the Intensive Care Unit (ICU) is the site where patients spend their final hours or days. Yet, the integration of palliative care expertise has been adopted slowly in this setting. Enhancing caregivers' knowledge and skill in assessment and communication can influence the quality of palliative care in critical care and encourage interdisciplinary collaboration as well as improved support to the patient and family. The proactive palliative care initiative demonstrates that an interdisciplinary initiative can positively influence the care of the dying patient and guide the health care team to provide the support the patient and family deserves without increasing the cost of healthcare.

2. **Executive Summary: (limit 200 words)**

Palliative care (PC) focuses on improving the quality of life for patients and their families who are experiencing life-threatening illnesses by assessing and treating the patient's physical, emotional, spiritual, and psychosocial pain. Approximately 20% of all hospital deaths in the United States occur in the intensive care unit (ICU), which translates to nearly half a million Americans annually. Contemporary recognition of the ICU as a site of death has prompted increased attention to the delivery of high quality palliative care in this setting. The absence of the integration of palliative care expertise in the ICU is associated with a heightened burden of patient symptom distress, family dissatisfaction with care, ethical questioning leading to moral anguish in staff, and overutilization of costly resources.[7,8] Despite this association, critical care settings have been slow to implement palliative care (PC).[9]

The palliative care initiative was a quality improvement project seeking to improve access to PC in the ICU, improve the patient experience, provide support to the frontline nursing staff, reduce the time between ICU admission and PC consultation, and decrease the cost of care.

3. Background and relevance of the problem being addressed and effort undertaken.

Consider the following:
- One in five Americans die during, or shortly after, receiving care in the intensive care unit (ICU);
- Families of patients in critical care experience considerable psychological and physiological distress due to their vulnerability in a foreign and highly stressful environment;
- The provision of timely, inter-professional patient- and family-centered communication is often inadequate in the ICU;
- A half million (540,000) Americans die annually in ICUs representing 59% of all deaths;
- The United States spends more hospital resources on critical care than any other country and a significant and escalating portion of these expenses are spent on patients at the end of life. [1-6]

Contemporary recognition of the ICU as a site of death along with the absence of the integration of palliative care expertise in the ICU is associated with the following: [7,8]
- A heightened burden of patient symptom distress
- Family dissatisfaction with care
- Ethical questioning leading to moral anguish in staff
- Over utilization of costly resources

Conflicting values about the provision of aggressive, curative, high-tech care while concurrently anticipating the possibility of impending death are given as barriers to implementing palliative care (PC) in the ICU setting. [9] Factors unique to critical care sub-specialties have distinct barriers that influence the inclusion of PC into practice. In surgical/trauma ICUs, high expectations for recovery foster an overriding 'rescue mission' that focuses on the reversal of critical illness.[10] The often sudden, catastrophic neuro-critical paradigm fosters an urgency and intention to reduce permanent disability and ultimately death.[11] The unpredictable and often extended course of recovery in these patients makes decision-making difficult, particularly around limiting life-sustaining therapies. Finally, care of the patient with advanced cancer experiencing an emergent consequence of treatment or the malignancy, presents numerous challenges to intervention planning.

Palliative care provides an additional layer of support to the critical care team along a continuum. Assessment, symptom distress management, communication, and emotional counsel are core elements of the specialty.[13]

The Palliative Care Continuum in the ICU Setting
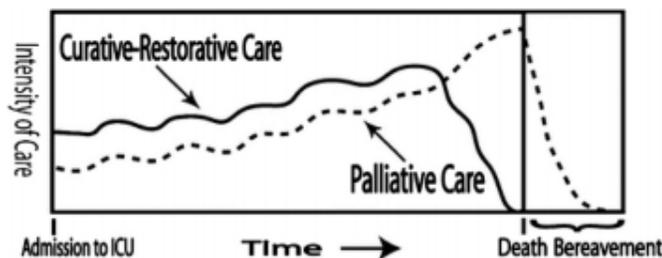
Source: Lanken P et.al. (2008). Palliative care for patients with respiratory diseases and critical illnesses. *American Journal of Respiratory Critical Care Medicine*, 177: 914.

Palliative care's successful integration within the ICU setting requires a multi-faceted, interdisciplinary approach. Enhancing communication skills of health care providers along with early identification of patients who would benefit from palliative care are corollaries of optimum assimilation and the goal for this project.

4. Describe the effort, including the scope, process, strategies and tactics utilized, challenges encountered and how they were addressed.

The initiative to bring consistent palliative care into the ICU utilized a four-pronged approach that aligned to produce an interdisciplinary palliative care program.
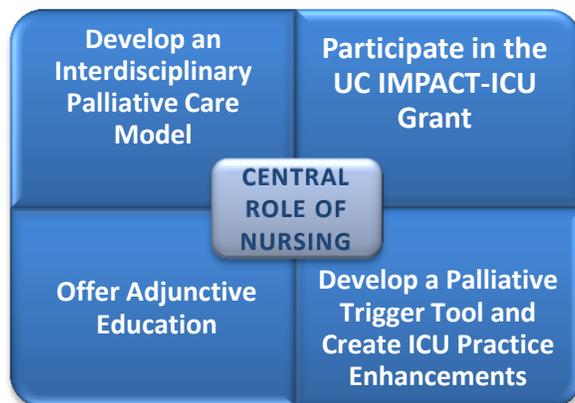
Why is the nurse at the center of this model? There are a number of key reasons; namely, that nurses -
- Are the constant in the critical care experience:
  - Having intense protracted interactions with the patient and family;
  - Developing relationships with the patient and family;
  - Frequently engaging in discussions about concerns, wishes, and answer and clarify misperceptions.
- Know the characteristics and implications of the patient's symptom distress;
- See and hear multiple providers interact with the patient and family;
- Strongly believe in their role as patient/family advocate.[14-17]

Placing nursing at the center of the model ensured a solid foundation for the palliative team and facilitated a collaborative, interdisciplinary approach that was supported by the Medical Director of Palliative Care.

Development of an Interdisciplinary Palliative Care Model

While palliative care for patients with critical illness is necessary in the provision of high quality care, there are limited details on how best to deliver this care.[7] Aldridge and colleagues[8] outlined barriers to the integration of palliative care and noted limited funding resources for nurses as a critical impediment. An analysis of 400 hospital-based palliative care programs revealed that while 83% of the sites had budgeted for a palliative care physician, only 55% had funding in place for a palliative care nurse. Our institution was one of the 45% without such a dedicated role, with our palliative care team consisting of physicians, a social worker, and chaplains.

Without funding, an innovative approach emerged. Utilizing the nursing expertise within the Department of Nursing Quality, Research, and Education, a team, comprised of a critical care clinical nurse educator and four adult clinical nurse specialists joined the palliative care team. The addition of nursing to the existing palliative care team ensured a comprehensive approach to palliative care. The nursing role, championed by the palliative physician, serves in the role of facilitator, attends daily palliative care rounds, and follows up with issues pertinent nursing issues.

Nursing interventions include:
- Clarifying the rationale for orders optimizing symptom management
- Assisting with complex symptom assessment

- Identifying preventive strategies for worsening symptom burden
- Offering emotional support and teaching to patients, families and staff,
- Providing input in family meetings
- Assisting with conflict resolution between teams
- Identifying strategies for working with 'resistant' physicians

Participation in the UC IMPACT-ICU Grant

The University of San Francisco previously quantified positive results in enhancing nurses' confidence and skill around discussions.[17]   In 2013, we collaborated with UCSF to offer communication skill workshops focused on goals of care (GOC) decision-making and prognosis. Two PCRNs and the Director of Palliative Medicine became the leaders of this initiative at UC Irvine.

A multicenter 46-item survey captured nurses perceptions about palliative care communication in the ICU, namely, the importance and frequency of their involvement, their confidence in being part of these communications, and their perceptions of barriers to these communications.[18] The survey was sent to 1791 critical care nurses across the UC system; 598 (33%) responded. Findings served as the basis for instructional planning.

Key to the workshop design is the absence of didactic content. Rather, role play-based learning using communication skills is the preferred teaching method.[19]   Figure 2 depicts the role-play scenarios and outlines some of the communication skills taught.

Providing Adjunctive Nursing Education

Education interventions hold the most promise as a means to empower nurses with knowledge and skill to implement effective strategies to improve communication.[20,21] The Director of Palliative Medicine joined forces with nursing to provide education to the nursing staff.

All nurses (n=900) received a four-hour module on palliative care nursing. UC Irvine embarked on a 'Nurse Residency Program' for new graduate nurses that included a class on palliative and end-of-life nursing care. Specialty based annual conferences that integrated aspects of palliative care into the curriculum and an annual palliative care conference were developed. The interdisciplinary palliative care team collaborates with Nursing Education in the development of this education.

Creating ICU Practice Enhancements: Introduction of a Trigger Tool

Knowing that education alone will not change the culture of an organization, other essential initiatives evolved. Key to these was the creation of a Critical/Palliative Care Trigger Tool to identify patients appropriate for palliative care. Utilizing an evidence-based method to identify these patients in the ICU has been cited as paramount to the introduction of timely specialty palliative care expertise.[7,23-25]   This collaborative project began in 2012 with the review of existing trigger tools. The current tool, shown in Table 1, based on a nationally recommended screening tool, underwent several modifications incorporating the input of the PCRN, Palliative Care Medical Director, Pulmonary/Critical Care Medicine Director, and Neuro/Critical Care Medicine Director. The final tool, designed to meet the needs of our patient population is the result of the collaborative, interdisciplinary approach.

Beginning with the ICU admission, the bedside RN uses the Critical/Palliative Care Trigger Tool to assess the patient. Patients must meet one of the stand-alone criteria or two or more of the collateral criteria to screen positive. Daily screening continues until a positive screen or the patient leaves the ICU. A positive screen sets multiple interventions into action including support to the bedside nurse from the palliative nurse, and discussion with the critical care physician and team to determine if an early palliative care consult is appropriate. Initially, the critical care physicians were hesitant to proceed to a formal palliative care consult. The addition of a daily ICU palliative huddle proved to be the missing component critical care physicians needed to see the positive effect of early palliative care. The interdisciplinary huddle (consisting of the critical care and the PC attending physicians, palliative care nurse, social worker, case

manager, and charge nurse) meets for 15 minutes each morning. During this huddle discussion, each discipline provides input with the critical care physician ultimately deciding which patients need a PC consultation. The daily huddle changed the thinking of the critical care medical team from one of curing at all cost to one of caring and providing goals of care. This culture change was not immediate but now permeates the unit.

A single-center retrospective study of 888 patients examined the impact of the screening tool and huddle on dying patients. Data was collected before (phase 1) and after (phases 2 and 3) the intervention. Phase 2 involved the implementation of the Critical/Palliative Care Trigger Tool and phase 3 added the interdisciplinary huddle.

Other practice enhancements to augment palliative care include:
- Facilitating bedside nurse attendance and participation in Family Meetings;
- Integrating a template in the EMR to document what transpired in Family Meetings
- Writing and updating policies and procedures specific to the palliative care patient (i.e., comfort care, care of the imminently dying patient, nursing care related to Ketamine infusions,)
- Developing an algorithm to optimize the patient experience when removing life support

Challenges encountered included ensuring the palliative nurse was able to absorb the added workload and responding to the medical team's reluctance to palliative care. Addressing these challenges as they occurred was the key to success. The support of nursing and medical administration emphasized the importance of this initiative. Nursing administration continues to support palliative care and works to remove barriers keeping the team from participating. Today, it is unusual for nursing to miss a daily meeting. Physicians expect and appreciate nursing presence and most have embraced the palliative concept.

Figure 1 highlights the timeline of UC Irvine Palliative Care Interventions (2012-2017)

5. **Describe the results of the effort**

The UC Irvine Health palliative care initiative resulted in positive outcomes in four strategic areas: *improved nurse satisfaction, improved health care resource utilization, improved family support,* and *decreased costs.* The extraction of UC Irvine Health-specific nursing data from the multicenter survey (completed pre-, post-, and 3 months post-workshop) revealed the following in support of our goals.

Improved Nurse Satisfaction

Communication Skill Confidence Ratings: Nurse Satisfaction			
ITEM	PRE %	POST %	3 MOS. POST %
Cope with the stresses of working in the ICU	79.2	93.0	92.1
Stand Alone Questions @ 3 Months Post-Workshop			
QUESTION		YES	NO
Have you found the skills that were presented in the workshop to be helpful in discussing prognosis, GOC, and PC with families and other clinicians?		89.5	5.3

UC Irvine Health nurses found the workshop skills useful. A session on coping with the emotional demands of ICU nursing rated high, and its effects appeared to sustain over time.

Improved Health Care Resource Utilization

Communication Skill Confidence Ratings: Resource Utilization Findings			
ITEM	PRE %	POST %	3 MOS. POST %
Arrange a meeting between a patient's family & clinicians to discuss prognosis % GOC	60.4	97.0	84.2
Arrange a consultation from the PC team when you feel it is indicated	81.2	98.0	94.7
Communicate the value of PC consultation to a physician	20.0	66.3	54.1
Describe PC & how it could be useful to a patient's family	25.3	73.0	68.4

Following workshop participation, nurses felt empowered to integrate PC when indicated and to lobby for a needed consultation. They felt that through their enhanced understanding of palliative care, they could articulate patient and family needs in a more effective way with physicians. Follow-up with attendees on their units by workshop facilitators also helped nurses problem-solve in their own practice setting.

Improved Family Support

Findings revealed enduring improvements in various aspects of nurse advocacy of the family's needs as well as nurse involvement in family meetings. Nurses have multiple critical roles in family meetings such as listening, adding information, explaining or clarifying information, and observing whether understanding took place.[27]

Communication Skill Confidence Ratings: Family-Related Findings			
ITEM	PRE %	POST %	3 MOS. POST %
Contribute to discussions of prognosis & GOC in family mtgs?	43.6	92.1	73.7
Assess a family's understanding of patient's prognosis & GOC	66.3	97.0	89.5
Ensure that a family's needs for information are addressed during a family meeting	39.0	70.3	54.1
Stand Alone Questions @ 3 Months Post-Workshop			
QUESTION		YES	NO
Since completing this workshop, have you discussed prognosis, GOC and/or PC with families?		92.1	7.9
Since completing the workshop, have you attended family meetings?		76.3	23.7

Decreased Costs

A single-center retrospective study of 888 patients examined the impact of the screening tool and huddle on dying patients in the ICU at UC Irvine Health. Data was collected before (phase 1) and after (phases 2 and 3) the intervention. Phase 2 involved the implementation of the Critical/Palliative Care Trigger Tool and phase 3 added an interdisciplinary huddle. The intervention reduced the time to palliative care consultation after ICU admission from 9.5 to 4.8 days ($p<0.005$) and after meeting screening criteria from 8 to 2.2 days ($p<0.0005$). Among patients who received a PC consultation, those who received an early consultation had costs significantly less than those with late consultation. Figure 3 depicts the comparison of average direct costs for two patient cohorts: those who triggered positive for a palliative care consultation, and those who did not. In both groups, early consultation was associated with decreased costs

Figure 3.
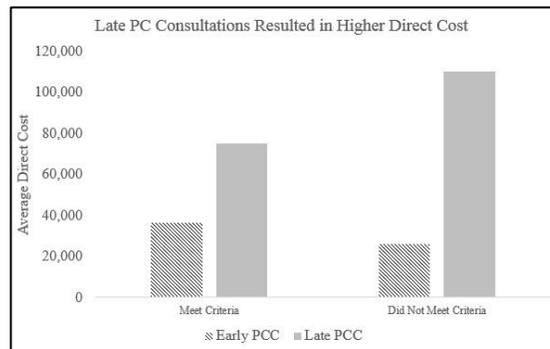
6. Discuss the significance of the results. How do the results demonstrate outstanding achievement?

Our multifaceted effort to improve care of the critically ill patient at the end of life has changed the culture of clinical practice in our ICUs. Initial positive efforts that focused on two critical care units have influenced care in other specialties. Nurses now actively attend and engage in family meetings and are identifying processes for integrating the ICU PC Trigger Tool into their practices in units where implementation has not occurred. Physicians willingly discuss palliative options with the interdisciplinary team. Through numerous educational initiatives, our critical care nurses have been empowered to advocate for their patients and families particularly when there is patient/family misunderstanding, or discord between providers that can affect decision-making. The case study in Table 2 illustrates a recent advocacy scenario by a staff nurse who participated in the IMPACT-ICU Workshop.

The impact of this initiative has been a durable one. We provided eight workshops to 101 nurses from the Medical/Cardiac Care ICU and the Neuro ICU during the IMPACT-ICU grant period (August 2013 – March 2015). Diffusion of this critical care initiative has occurred in requests for communication skills education by telemetry, step-down, medical-surgical, and oncology nurses. The results of this quality initiative were so positive that the nursing administration is supporting, conceptually and financially, the attendance of all nurses from the other ICUs and all appropriate patient care areas at the workshop. Hence, following the grant period, we subsequently offered ten additional workshops to educate the remaining ICU nursing staff (n=154). Step-down nursing staff and medical-surgical nursing staff are the next groups slated to attend. Nurses receive financially supported education time to participate in the workshops.

In the fall of 2016, nurses in these specialties will attend the workshop. In 2017, all medical/surgical nurses will participate. Communication skill training is now required for all new critical care nurses within their first year of employment. Once the existing cohorts of telemetry, step-down, and oncology nurses participate in the education, all new nurses will be required to attend as part of their orientation process.

The Palliative Care Nursing Conference is an annual offering. Additionally, the Medical/Surgical Nursing and Oncology Nursing 'Hot Topics' (i.e., conferences providing updates on current issues within the field) integrate elements of palliative care into their content (i.e., symptom management, communication at the

end of life). All new graduate nurses regardless of what setting they work in, continue to receive education in the 'Nurse Residency Program' on palliative nursing.

The ICU/Palliative care trigger tool, accessed through the electronic medical record, has become a routine part of each nurse's initial daily patient assessment. A positive trigger results in a consult from the PCRN to provide support to the nursing staff, if needed, in beginning the palliative conversation with the physician and patient/family.

7. Describe sustainability and scaling of the achievements

Introduction of the palliative concept and trigger tool to the nursing staff occurs during orientation. As of February 2016, the Critical/Palliative Care Trigger Tool was integrated into our electronic medical record and is a standard nursing practice in the ICU. This facilitates 'real time' data collection and analysis of patient and provider characteristics to guide future intervention planning. Physicians review the data daily and determine next steps based on the results of the trigger tool. The daily interdisciplinary palliative care huddle is a key intervention sustaining the initiative.

8. Describe the key lessons learned and any advice to colleagues who might try to undertake a similar effort.

Hearing about optimum communication skills or observing others enact them on the job, is not enough to promote improved communication competence.[28] Improving palliative-focused communication in the ICU, fostered a considerable culture change that was the key to improving the care while ensuring a collaborative, interdisciplinary approach.

Integration of palliative care into critical care has resulted in the identification of some important 'best practices' to share including the following:

- Gather data that describes the institution's experience
- Identify/engage key stakeholders
- Outline expectations and processes and discuss interdisciplinary concerns
- Consider initial efforts as a 'pilot' to make changes as needed and customize approaches to staff and institutional needs.
- Identify what outcome measures will evaluate effectiveness.
- Establish accountabilities for each component of the initiative.
- Share results on an ongoing basis with key stakeholders.

Maximizing the care of the seriously ill patient in the ICU has resulted in positive outcomes due to our concerted nurse-driven, yet interdisciplinary focus, our sensitivity to staff nurses' needs for follow-up support at the bedside, and organizational advocacy for this effort over time.

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