

ORIGINAL RESEARCH

Accelerating advanced practice palliative care competencies: An educational research initiative

Binu Koirala*¹, Patricia M. Davidson^{1,2}, Rita D'Aoust¹, JoAnne Silbert-Flagg¹, Tammy Slater¹, Catherine Ling¹, Deborah Busch¹, Cynda H. Rushton¹, Rab Razzak³, Betty Ferrell⁴, Cheryl Dennison Himmelfarb¹

¹School of Nursing, Johns Hopkins University, Baltimore, MD, USA

²University of Wollongong, NSW, Australia

³Palliative Medicine, University Hospitals Cleveland Medical Center, Cleveland, OH, USA

⁴Division of Nursing Research and Education, City of Hope National Medical Center, Duarte, CA, USA

Received: May 15, 2023

Accepted: July 5, 2023

Online Published: July 25, 2023

DOI: 10.5430/jnep.v13n11p31

URL: <https://doi.org/10.5430/jnep.v13n11p31>

ABSTRACT

Objective: To describe the process and impact of integrating palliative care into the nursing curriculum to accelerate advanced practice palliative care competencies.

Methods: Educational research was implemented at the Johns Hopkins University School of Nursing, Baltimore, MD to integrate palliative care knowledge and skills into the advanced practice nursing curriculum. Palliative care principles and skills were threaded through the curriculum and resources and contents were shared across graduate programs, faculty members, and students throughout the school. Additionally, palliative care workshops, symposium and conference were organized at the school to increase academic-practice partnerships and disseminate project progress. The initiative was evaluated using the Palliative Care Quiz for Nursing (PCQN) and Palliative-Care Self-efficacy Scale (PCSES) among faculty and students annually. Additional data on overall feedback on research activities were collected. Data were analyzed using descriptive statistics, t-tests, and analysis of variance.

Results: In total 54 students, faculty, and clinicians participated in two workshops. The evaluation of workshops identified a significant improvement in confidence scores. In total, 620 faculty and students responded to the annual school-wide survey: 203 in 2019, 242 in 2020, and 175 in 2021. There were no significant changes in palliative care knowledge and confidence scores after integrating content within the curriculum. The participants agreed or strongly agreed with the overall positive feedback for the project events regarding expectation, pace, relevance, and objective.

Conclusions: The academic-practice partnership could be one model for improving palliative care competencies. More educational initiatives are needed to identify the role of educational models with appropriate evaluation measures in preparing a competent palliative care workforce.

Key Words: Advanced practice, Doctor of nursing practice education, Palliative care, Nursing

1. INTRODUCTION

With increasing medical advancements, longevity, and prevalence of chronic and complex conditions, the demand for quality palliative care has increased.^[1,2] Beneficial at any stage of serious illness, palliative care is designed to optimize

quality of life by utilizing measures to anticipate, prevent and treat physical, social, psychological, and spiritual suffering for both patients with serious illness and their family members.^[2] Specialist palliative care is delivered through an interdisciplinary care team with specialized certification,

*Correspondence: Binu Koirala; Email: bkoiral1@jhu.edu; Address: School of Nursing, Johns Hopkins University, Baltimore, MD, USA.

professional qualification, and training for optimal patient- and family-centered care.^[2] However, it has been continuously recommended that given the shortage of specialist palliative care services and providers,^[1,3,4] palliative care principles and practices can be delivered by any clinicians including nurses for seriously ill patients in any setting using core skills recognized as primary palliative care.^[3] Advanced Practice Registered Nurses (APRNs) are in a unique position to lead and transform healthcare delivery^[5] by integrating core palliative care principles into the disease management for those living with life-limiting or serious illnesses^[6,7] in diverse care settings.

Palliative care is a requisite but often unmet competency for nurses. The emerging area of research and education has highlighted the need to integrate palliative care education and curriculum specific for APRNs.^[7,8] In an effort to provide education in advanced practice primary palliative care, the End of Life Nursing Education Consortium (ELNEC) has created an online curriculum 7 that is based on the new American Association of Colleges of Nursing Graduate Competencies and recommendations for educating nursing students.^[9] This curriculum recognizes that training programs for advanced practice students from nursing schools and universities are inadequate. Hence, to address this need, the project site, a School of Nursing, proposed an educational initiative to integrate palliative care throughout advanced practice curricula and accelerate palliative care competencies among advanced practice nursing students.

Aims: The aims of the study are to evaluate data from an educational initiative focused on accelerating advanced practice palliative care competencies in nursing graduates and highlight the strengths and limitations of the education initiative (curriculum integration, workshops, symposium, and conference) to inform knowledge in the process of palliative care competencies integration in advanced practice education and practice.

2. METHODS

2.1 Nature of educational initiative

An educational initiative was conducted to integrate palliative care principles and skills into the Advanced Practice-Doctor of Nursing Practice (AP-DNP) curricula through didactic, simulation, interprofessional, and clinical learning experiences in a nursing school. The palliative care content was not focused on electives or within one course but systematically integrated into all coursework of the AP-DNP program. Considering the need for palliative care skills among all nursing students and faculty, the palliative care resources and content were shared and made accessible to all graduate programs including Masters of Science (MSN) in Nursing

(Entry into Nursing), faculty members, and students throughout the school. Additionally, access to palliative care training was given to all students, faculty, preceptors, and other clinical partners in all practice settings through workshops and continuing professional education. The framework used in the process of integration of advanced practice palliative care competencies followed a cycle of five specific processes: 1) Assessment of curricular needs and goals, 2) Identification and development of resources, 3) Integration of teaching and learning activities, 4) Evaluation of content and learning, 5) Dissemination of resources. A supportive organizational structure and an academic-practice partnership were essential infrastructures facilitating these processes. The detailed process of palliative care resources and curriculum development is described elsewhere.^[10] To evaluate the effectiveness of the educational initiative, palliative care knowledge and confidence data were collected among all students and faculty and examined.

In an effort to increase academic-practice partnerships, for all students, faculties, and clinicians, a one-day workshop focused on contemporary knowledge and skills in palliative care was organized twice during the project implementation phase (years 1 and 3 of the project). The first workshop “Integrating Palliative Care into APRN Practice and Training: What should you know?” was held on June 14, 2018. In the workshop, participants learned how to effectively conduct communication, pain, and symptom management, as well as address grief, bereavement, and ethical issues in the context of the APRN role (Appendix 1: Program flyer and agenda for workshop 1). A second workshop “Palliative Care 2.0: An Essential Workshop for Today’s Clinician” was held on February 21, 2020. Through this interactive workshop, participants were educated about knowledge and skills in integrating palliative care principles into practice, nuanced communication, pain, and symptom management, and other topics related to clinical practice (Appendix 2: Program flyer and agenda for workshop 2). To evaluate the effectiveness of the educational initiative, palliative care knowledge and confidence data were collected among students, faculty, and clinicians and examined. To evaluate the effectiveness of the workshops, palliative care knowledge and confidence data were collected and examined in addition to overall feedback for the events among all students, faculty, and clinicians attending before and after workshops.

In addition, a palliative care symposium was held in year 2 of the project implementation, titled “US-Australia Chronic Aged, and Palliative Care Symposium” on November 15, 2018. The program presented and discussed the emergency department palliative care program, the attitudes towards end-of-life and palliative care in chronic heart failure, and the

importance of palliative care in chronic and aged conditions (Appendix 3: Program flyer and agenda for symposium). Finally, during COVID-19 Pandemic, with the purpose of providing state of science updates and the latest innovations in relevant palliative care topics and creating a forum to discuss the impact of COVID-19 among academic and practice partners, a Virtual Palliative Care Conference: Palliative Care in COVID-19 was held as part of educational initiative. The conference ran for two days, February 25 and February 26, 2021. The focus of the conference was to identify current challenges, progress, and gaps in integrating palliative care into nursing education and practice and provide an opportunity to highlight international efforts in accelerating palliative care competencies among clinicians including identified challenges and opportunities in the COVID-19 pandemic. Additionally, the organized interactive presentations and discussions where participants were able to discuss knowledge and learn skills in effective communication in times of uncertainty, symptom management during COVID-19, and confronting ethical dilemmas and moral resilience in the era of COVID-19 to support quality patient care in regular practice. Guiding principles for the sessions included were evidence-based practice, relevance to nursing and other healthcare practice, skill-building interactive conversations, and interprofessional education (Appendix 4: Program flyer and agenda for the conference). The conference also offered participants the opportunity to receive continuing nursing education (CNE) credits upon completion of sessions. To evaluate the effectiveness of the symposium and conference, overall feedback for the events was collected from all the attendees after the event.

2.2 Sample and data collection

All graduate students including those in MSN and DNP programs and faculty at a nursing school participated in this study. To evaluate the palliative care content and learning, the survey data from faculty members and students were collected at the start of the Fall semester for three consecutive years 2019, 2020, and 2021. All students, faculty, and clinicians completed sociodemographic and palliative care knowledge and confidence surveys at each data collection time point. Additionally, participants of the two one-day workshops were included in the sample for the study on outcome measures. Data from the workshops were collected before and after the event. Further, overall event evaluation data were collected regarding participants' expectations, relevance, pace, and objectives of the workshops and symposium. Conference evaluation data were related to the content and quality of the program, learning environment, handouts and resources shared, and overall program satisfaction. The Johns Hopkins Medicine Institutional Review Board pro-

vided ethical approval for this study (IRB00168035).

2.3 Measures

The Palliative Care Quiz for Nursing (PCQN) was used to collect data on palliative care knowledge.^[11] The survey consisted of 20 items with 'true', 'false' and 'I don't know' response options where the correct answer gives a score of 1 on each item, and possible scores can range from 0 to 20. The mean percentage correct response of less than 75% can be considered as inadequate palliative care knowledge.^[12] The internal consistency of the instrument using Kuder Richardson formula 20 (KR-20) was 0.78.^[11]

The Palliative Care Self-efficacy Scale (PCSES) was used to collect data on palliative care confidence.^[13] There were 12 items where possible scores range from 12 to 48, higher scores indicated higher palliative care confidence. The items rate participants' perceived confidence or self-efficacy to successfully perform each palliative care task using a four-point Likert scale: 1 = need further basic instruction; 2 = confident to perform with close supervision/coaching; 3 = confident to perform with minimal consultation; 4 = confident to perform independently. Cronbach's alpha of the PCSES was 0.92.^[13]

Feedback for the workshops, symposium and conference were collected after each event on participants' expectations, relevance and usefulness of the event contents, pace of the events, objectives of the events and overall feedback on the nature and content of the events.

2.4 Data analysis

Data analysis was conducted using SPSS v.27. Descriptive statistics were used to analyze the demographic characteristics. Numerical data were presented in mean \pm standard deviation or median (interquartile range) and categorical data were presented in numbers (percentage). The data on palliative care knowledge and confidence were analyzed using descriptive statistics and Analysis of Variance to determine whether an educational initiative improved scores among participants. Further dependent sample *t*-tests were used to examine changes in knowledge and confidence scores before and after workshops. Overall event evaluation data for workshops, symposium and conference were analyzed using descriptive statistics and presented as an appropriate figure.

3. RESULTS

3.1 Sample characteristics

A total of 203 participants (Faculty = 43 and Students = 160) in 2019, 242 participants (Faculty = 33 and Students = 209) in 2020, and 175 participants in 2021 (Faculty = 29 and Students = 146) completed the demographic survey and palliative care knowledge and confidence tool. In 2019, the

average age ± SD of the participants was 43.9 ± 13.25 years (85.2% female, 71.9 caucasian, 47.8% single or never married and 50.7% had a bachelors' level of education). In 2020, the average age ± SD of the participants was 34.0 ± 10.73 years 88.4% female, 67.4% caucasian, 51.2% single or never married and 51.2% had a bachelors' level of education). In 2021, the average age ± SD of the participants was 34.4 ± 11.85 years, 92% female, 69.1% caucasian, 49.1% single or never married and 49.7% had a bachelors' level of education).

At all data collection time points, 2019, 2020 and 2021, the median years of experience of participants as a registered nurse was 5 years; as advanced practice nurse was 7 years for 2019 and 2020 and 10 years for 2021. Nearly half of the participants at all data collection times had previous personal experience with palliative care, and more than one-third of the participants had previous professional experience with palliative care (see Table 1).

Table 1. Sample characteristics for annual faculty and student evaluation

Characteristics	2019	2020	2021
	(n = 203) Mean ± SD/Median (IQR)/ n (%)	(n = 242) Mean ± SD/Median (IQR)/n (%)	(n = 175) Mean ± SD/Median (IQR)/ n (%)
Age	35.5 ± 11.98	34.0 ± 10.73	34.4 ± 11.85
Are you?			
Faculty	43 (21.2)	33 (13.6)	29 (16.6)
Student	160 (78.8)	209 (86.4)	146 (83.4)
Gender			
Male	23 (11.3)	21 (8.7)	12 (6.9)
Female	175 (85.2)	214 (88.4)	161 (92.0)
Non-binary	4 (2.0)	3 (1.2)	2 (1.1)
Race			
Caucasian	146 (71.9)	163 (67.4)	121 (69.1)
Asian	27 (13.3)	47 (19.4)	30 (17.1)
African American	16 (7.9)	26 (10.7)	12 (6.9)
Hispanic/Latino	9 (4.4)	18 (7.4)	3 (1.7)
Native American/Native Alaskan	1 (0.5)	2 (0.8)	1 (0.6)
Native Hawaiian/Other Pacific Islander	3 (1.5)	-	-
Prefer not to disclose	11 (5.4)	5 (2.1)	4 (2.3)
Highest level of education			
BS/BSN	103 (50.7)	124 (51.2)	87 (49.7)
MS/MA/MPH	60 (29.6)	81 (33.5)	53 (30.3)
Doctoral	40 (19.7)	36 (14.9)	35 (20.0)
Marital Status			
Single/Never Married	97 (47.8)	124 (51.2)	86 (49.1)
Married/Partnered	93 (45.8)	103 (42.6)	80 (45.7)
Divorced/Separated	10 (4.9)	12 (4.9)	7 (4.0)
Prefer not to disclose	3 (1.5)	3 (1.2)	2 (1.1)
Years of experience as			
Registered Nurse	5 (1.75 – 13.00)	5 (0 – 10)	5 (2.00 – 12.25)
Advanced Practice Nurse	7 (1.00 – 7.00)	7 (3.00 – 13.5)	10 (3.00 – 17.00)
Experience in palliative care			
Personal	106 (52.2)	121 (50.0)	82 (46.9)
Professional	89 (43.8)	85 (35.1)	69 (39.4)
Additional training in palliative care			
ELNEC	20 (9.9)	18 (7.4)	22 (12.6)
CAPC	9 (4.4)	13 (5.4)	9 (5.1)
Continuing Education Credits	29 (14.3)	45 (18.6)	37 (21.1)
Elective Courses	21 (10.3)	24 (9.9)	21 (12.0)
Certification Program	7 (3.4)	9 (3.7)	12 (6.9)
Conference Presentation	29 (14.3)	31 (12.8)	25 (14.3)

Note. IQR- Inter Quartile Range; SD-Standard Deviation; %-Percentage

Twenty students, faculty, and clinicians including preceptors from eight different institutions attended the June 2018 workshop (workshop 1). Thirty-four students, faculty, and clinicians including preceptors from thirteen different institutions attended the February 2020 workshop (workshop 2). The majority of the participants attending workshops were female, had bachelor's or master's degrees, and had personal or professional experience with palliative care (see Table 2).

Table 2. Sample characteristics for workshop participants

Characteristics	Workshop 1 (n = 20)	Workshop 2 (n = 34)
	Mean ± SD/n (%)	Mean ± SD/n (%)
Age	43.9 ± 13.25	38.4 ± 11.98
Gender		
Male	-	-
Female	20 (100.0)	33 (97.1)
Non-binary	-	1 (2.9)
Highest level of education		
Bachelors	1 (5.0)	15 (44.1)
Masters	11 (55.0)	14 (41.2)
Doctorate	7 (35.0)	4 (11.8)
Experience in palliative care		
Personal	16 (80.0)	21 (61.8)
Professional	13 (65.0)	27 (79.4)

Note. SD-Standard Deviation; %-Percentage

3.2 Palliative care knowledge and confidence

Table 3 displays palliative care knowledge and confidence scores at different data collection times. In workshop 1, there was no significant change in mean scores on the PCQN (pre-test 14.8 ± 0.80 , post-test 14.9 ± 0.96 ; $p = .903$). However, attendees demonstrated an increase in mean score on the PCSSES (pre-test 30.7 ± 2.89 , post-test 35.7 ± 2.56 ; $p = .011$). In workshop 2, there was no significant change in mean scores on the PCQN (pre-test 13.5 ± 0.71 , post-test 14.3 ± 0.57 ; $p = .127$). However, attendees demonstrated a significant increase in median score on the PCSSES (pre-test 29.5 ± 2.14 , post-test 33.1 ± 1.87 ; $p = .000$).

At three school-wide data collection time points of 2019, 2020, and 2021, students and faculty demonstrated poor palliative care knowledge with mean percentage correct responses of 59.19%, 60.02% and 59.24%, respectively. There were no statistically significant differences in overall palliative care knowledge and confidence scores among all students and faculty between the years 2019, 2020, and 2021.

3.3 Feedback on the educational initiative including workshops, symposium, and conference

The educational initiative received highly favorable reviews from the students, faculties, and clinicians. The evaluation of the participants attending workshop 1 (n = 20), workshop 2 (n = 32), symposium (n = 24) and conference (n =

133) is presented in Figure 1. The evaluation highlighted that the events were organized, the contents were relevant, the pace was appropriate, and the objectives of the events were met. The conference granted a total of 179 continuing education credit hours to the participants. At least 133 participants including multidisciplinary faculty, clinicians, and students attended the conference from at least 50 different educational and clinical sites. The informal evaluation and participants' feedback highlighted that in today's health-care environment, academic-practice partnerships through workshops, symposiums, and interactive conferences can provide an opportunity to collaborate and generate lively discussion through a platform that showcases current needs and provides an opportunity to express individual experiences impacting palliative care knowledge and practice which may not otherwise be possible.

Table 3. Palliative care knowledge and confidence

Educational initiative evaluation	Palliative Care Knowledge Mean ± SD	Palliative Care Confidence Mean ± SD
Workshop 1, n = 20		
Pre-test	14.8 ± 0.80	30.7 ± 2.89
Post-test	14.9 ± 0.96	35.7 ± 2.56
p-value	.903	.011
Workshop 2, n = 34		
Pre-test	13.5 ± 0.71	29.5 ± 2.14
Post-test	14.3 ± 0.57	33.1 ± 1.87
p-value	.127	.000
Student and faculty annual evaluation		
2019, n = 203	12.0 ± 3.44	30.4 ± 10.96
2020, n = 242	11.8 ± 3.67	29.3 ± 10.47
2021, n = 175	11.9 ± 4.04	29.3 ± 11.67
p-value	.892	.473

Note. SD-Standard Deviation

4. DISCUSSION

An educational project was implemented to integrate palliative care knowledge and skills within nursing education to help prepare a competent advanced practice nursing workforce that values individualistic care to relieve suffering and goals that matters most to the population they serve. The study integrated palliative care knowledge and skill contents throughout the nursing curriculum and observed changes in palliative care knowledge and confidence scores over years. Additionally, two palliative care workshops, one symposium and one conference were held where nursing students, preceptors, faculties, and other clinical partners were invited. The data from the workshops identified a significant increase in confidence scores and overall evaluation of workshops, symposium and conference were highly positive in regard

to their content, objectives, and relevance to participants' educational and practical needs. The study found that there

were no significant changes in palliative care knowledge and confidence scores after integrating content within curriculums.



Figure 1. Overall event evaluation from workshops, symposium and conference

No significant change in palliative care knowledge and confidence scores in the curriculum integration process could be explained by the nature of the measurements used and the method of palliative care content integration. The PCQN measure used to collect data on palliative care knowledge includes true-false questions related to the definition of palliative care, opioid use and other medications use for common symptoms and focuses more on pain management.^[11] Further, the PCSES measure is more focused on confidence in reacting or interacting with patients and family members when dealing with dying and death and coping with common symptoms and limited decision-making capacity.^[13] Although these are validated,^[11, 13] and powerful tools used in literature for the evaluation of palliative care knowledge^[14-16] and confidence,^[16, 17] these might not be appropriate tools for this project evaluation. The reason for this could be the identification of measurements was done at the beginning of project implementation, however, the palliative care knowledge and skill integration process in this project evolved during the project period and identified that instead of creating a specific course or module on palliative care, integrating its values,

knowledge and skills throughout the course contents will provide a practical basis for students to implement these skills.^[18] Hence, rather than focusing on the specific definition or content with exact true or false answers, the project team implemented a curriculum examination activity and tied palliative care principles to the existing course content. For example, in the health assessment and measurement course, project team identified that AP-DNP students already perform a physical assessment and collect clinical background information on patients, within this course the project team integrated the introduction to palliative and end-of-life care information highlighting the tools for palliative care need assessment and role of the advanced practice nurse. This helped students to develop skills in implementing and identifying palliative care needs at the time of initial health assessment. Then, in subsequent courses palliative care knowledge and skills were integrated wherever possible.^[10] The content identified and integrated into the curriculum was more focused on developing skill sets on primary palliative care and identifying palliative care needs than answering whether is it right or wrong in implementing specialty palliative care.

Hence, it might be important to consider a horizontal thread for curriculum integration as well as a vertical thread such as focusing on specific conditions, linking with other contents, and building the vertical thread from one course to another. For instance, identifying patients who could benefit from palliative care as the condition is discussed such as heart failure, chronic lung disease, or renal insufficiency, and how to access resources or initiate management and referrals. In addition, specific strategies that can be used are identified but not discussed including active learning strategies that focus on application and evaluation such as case studies, and simulated learning including telehealth. In addition, a competency-based learning and evaluation approach will guide the iterative learning and outcomes that occur as palliative competencies are integrated across a curriculum. This approach aligns with the recent changes in nursing and nurse practitioner education.^[19-21] Therefore, future projects should consider the nature of project aims, activities, and processes when identifying appropriate evaluation methods.

The value and impact of the educational initiative were demonstrated by the overall feedback received from the direct and indirect participants of the project. The workshops, symposium, and conference were designed and indented to focus on developing skills in practical aspects of palliative care and improving academic-practice partnerships. During the workshops, symposium and conference the interaction between palliative care experts and participants from diverse academic, research, and clinical institutions and varied disciplines might have helped improve confidence in the participants by problem-solving practice issues and generating new ideas for the identified challenges. Academic-practice partnership could be a critical mechanism to help strengthen quality nursing care and support nurses to become well prepared to lead change and advance health.^[22] Thus, the academic-practice partnership should be prioritized by nursing schools and healthcare organizations to help improve palliative care competencies among students, faculties, preceptors, and other clinical partners.

As the prevalence of chronic and complex conditions increasing globally, the need for palliative care is also increasing.^[23] There is and will be a higher shortage of palliative care providers.^[23] Hence, integrating palliative care into the healthcare curriculum specifically the nursing curriculum is critical to keep pace with the need of healthcare system and the global population.^[3] The schools of nursing and advanced practice nurses with palliative care competencies can deliver effective, individualized care to all patients living with chronic and complex conditions in diverse settings.^[18] However, the initiatives are minimum and limited evidence exists to help support these findings. There is a need for

the development of educational models which highlights the burning need and prepares the workforce equipped with the necessary knowledge and skills at least in primary palliative care.^[9,18]

Limitations of the study should be acknowledged. The study identified the measurements for the evaluation of knowledge and confidence at the beginning of the project implementation where the integration of the content was distinctive to the scope of the measurement tool. The annual data collection was done among all graduate students and did not identify specific programs. Collecting data on specific programs might have helped conduct subgroup analysis on the nature of content integrated into each program and their effect on outcomes. Regardless of the limitations, the study highlights an initiative contributing to the literature highlighting the importance of developing primary palliative care skills among all healthcare providers including nurses. In addition, the study contributes to the ways of developing palliative care competencies and advanced practice palliative care providers to keep pace with the growing population living with chronic and complex disease conditions. Further, the project worked as a catalyst of cultural change within and outside the school of nursing as the study proposed to focus on one specific AP-DNP curriculum at the beginning, however with the much broader need identified during early implementation, resources and activities of the project included all graduate programs at the school of nursing. Importantly, the study highlights the importance of academic-practice partnerships in improving palliative care competencies.

5. CONCLUSIONS

Knowledge of palliative care must be threaded through the curriculum and ongoing updates need to be provided so that nurses can refer patients for appropriate care. The school of nursing could be a starting place to integrate this much-needed knowledge and skills. More educational initiatives are needed to identify the role of educational models in preparing a competent workforce with appropriate evaluation measures. Academic-practice partnerships could be one model for improving palliative care competencies among advanced practice nurses, faculties, preceptors, and other clinicians.

FUNDING INFORMATION

The educational initiative presented is funded by the Maryland Higher Education Commission, Nurse Support Program II (MHEC grant # NSPII 18-113). The content is solely the responsibility of the authors and does not necessarily represent the official views of the supporting agencies.

ACKNOWLEDGEMENTS

The project team appreciates all the support and guidance received from the school of nursing's leadership team, faculty including AP-DNP track coordinators and instructors, simulation development collaborators, workshop and confer-

ence presenters, students, preceptors, and clinical partners involved during project preparation, implementation, and evaluation.

CONFLICTS OF INTEREST DISCLOSURE

The authors declared that they have no conflict of interest.

REFERENCES

- [1] Kelley AS, Morrison RS. Palliative care for the seriously ill. *New England Journal of Medicine*. 2015; 373(8): 747-755. PMID:26287850 <https://doi.org/10.1056/NEJMr1404684>
- [2] National Consensus Project for Quality Palliative Care. *Clinical Practice Guidelines for Quality Palliative Care*. 4th Edition ed. Richmond, VA: National Coalition for Hospice and Palliative Care; 2018.
- [3] Gorman R. Integrating Palliative Care into Primary Care. *The Nursing Clinics of North America*. 2016 Sep 2016; 51(3): 367-379. PMID:27497014 <https://doi.org/10.1016/j.cnur.2016.05.002>
- [4] Quill TE, Abernethy AP. Generalist plus specialist palliative care—creating a more sustainable model. *N Engl J Med*. Mar 2013; 368(13): 1173-5. PMID:23465068 <https://doi.org/10.1056/NEJMp1215620>
- [5] Dahlin C, Coyne P. The palliative APRN leader. *Ann Palliat Med*. Feb 2019; 8(Suppl 1): S30-s38. PMID:30180730 <https://doi.org/10.21037/apm.2018.06.03>
- [6] Klinedinst R, Anderson C, Fundalinski K, et al. Palliative care for everyone: Insider tips for teaching primary palliative care to RNs and APRNs. 2020; 59(2): 473-474. <https://doi.org/10.1016/j.jpainsymman.2019.12.160>
- [7] Mazanec P, Ferrell B, Malloy P, et al. Preparing Advanced Practice Registered Nursing Students to Provide Primary Palliative Care. *Nurse educator*. 2020. PMID:33093344 <https://doi.org/10.1097/NNE.0000000000000928>
- [8] Dahlin C, Coyne P, Paice J, et al. ELNEC-APRN: Meeting the needs of advanced practice nurses through education. *Journal of Hospice and Palliative Nursing*. 2017; 19(3): 261-265. <https://doi.org/10.1097/NJH.0000000000000340>
- [9] American Association of Colleges of Nursing. *Preparing Graduate Nursing Students to Ensure Quality Palliative Care for the Seriously Ill & Their Families*. Available from: <https://www.aacnnursing.org/Portals/42/ELNEC/PDF/Graduate-CARES.pdf>
- [10] Koirala B, Davidson PM, Ferrell B, et al. A framework for integrating advanced practice palliative care competencies in nursing education. *Journal of Nursing Education and Practice*. 2023; 13(9): 32-37. <https://doi.org/10.5430/jnep.v13n9p32>
- [11] Ross MM, McDonald B, McGuinness J. The palliative care quiz for nursing (PCQN): the development of an instrument to measure nurses' knowledge of palliative care. *J Adv Nurs*. Jan 1996; 23(1): 126-37. PMID:8708208 <https://doi.org/10.1111/j.1365-2648.1996.tb03106.x>
- [12] Kassa H, Murugan R, Zewdu F, et al. Assessment of knowledge, attitude and practice and associated factors towards palliative care among nurses working in selected hospitals, Addis Ababa, Ethiopia. *BMC Palliat Care*. Mar 2014; 13(1): 6. PMID:24593779 <https://doi.org/10.1186/1472-684X-13-6>
- [13] Phillips J, Salamonson Y, Davidson PM. An instrument to assess nurses' and care assistants' self-efficacy to provide a palliative approach to older people in residential aged care: A validation study. *International Journal of Nursing Studies*. 2011; 48(9): 1096-1100. PMID:21377679 <https://doi.org/10.1016/j.ijnurstu.2011.02.015>
- [14] Hao Y, Zhan L, Huang M, et al. Nurses' knowledge and attitudes towards palliative care and death: a learning intervention. *BMC Palliative Care*. 2021; 20(1). PMID:33765995 <https://doi.org/10.1186/s12904-021-00738-x>
- [15] Adriaansen M, van Achterberg T, Borm G. Effects of a postqualification course in palliative care. *Journal of Advanced Nursing*. 2005 Jan; 49(1): 96-103. PMID:15610386 <https://doi.org/10.1111/j.1365-2648.2004.03268.x>
- [16] Karacsony S, Chang E, Johnson A, et al. Measuring nursing assistants' knowledge, skills and attitudes in a palliative approach: A literature review. *Nurse education today*. 2015 Dec 2015; 35(12): 1232-1239. PMID:26043658 <https://doi.org/10.1016/j.nedt.2015.05.008>
- [17] Barnett M, Reed C, Adams C. Death Attitudes, Palliative Care Self-efficacy, and Attitudes Toward Care of the Dying Among Hospice Nurses. *Journal of clinical psychology in medical settings*. 2021 Jun 2021; 28(2): 295-300. PMID:32170511 <https://doi.org/10.1007/s10880-020-09714-8>
- [18] Koirala B, Davidson P, Ferrell B, et al. Rationale and Resources to Accelerate Advanced Practice Palliative Care Competency. *AACN Advanced Critical Care*. 2020; 31(2): 191-195. PMID:32525999 <https://doi.org/10.4037/aacnacc2020281>
- [19] American Association of Colleges of Nursing. *The essentials: core competencies for professional nursing education*. Available from: <https://www.aacnnursing.org/Portals/0/PDFs/Publications/Essentials-2021.pdf>
- [20] National Organization of Nurse Practitioner Faculties. *NONPF's NP Role Core Competencies*. Available from: https://www.nonpf.org/page/NP_Role_Core_Competencies
- [21] National Task Force on Quality Nurse Practitioner Education. *Standards for Quality Nurse Practitioner Education*. Available from: https://cdn.ymaws.com/www.nonpf.org/resource/resmgr/2022/ntfs_ntfs_final.pdf
- [22] American Association of Colleges of Nursing. *The Guiding Principles for Academic-Practice Partnerships*. Accessed 05-13, 2022. <https://www.aacnnursing.org/Academic-Practice-Partnerships/The-Guiding-Principles>
- [23] World Health Organization W. *Palliative Care*. <https://www.who.int/news-room/facts-in-pictures/detail/palliative-care>