

University of Kentucky

UKnowledge

DNP Projects

College of Nursing

2023

Utilizing Podcast Education to Improve Nurse Knowledge, Confidence, and Behaviors Related to Palliative Care Conversations in the Intensive Care Unit

Brittany Estridge

University of Kentucky, brittesparks@gmail.com

[Right click to open a feedback form in a new tab to let us know how this document benefits you.](#)

Recommended Citation

Estridge, Brittany, "Utilizing Podcast Education to Improve Nurse Knowledge, Confidence, and Behaviors Related to Palliative Care Conversations in the Intensive Care Unit" (2023). *DNP Projects*. 415.
https://uknowledge.uky.edu/dnp_etds/415

This Practice Inquiry Project is brought to you for free and open access by the College of Nursing at UKnowledge. It has been accepted for inclusion in DNP Projects by an authorized administrator of UKnowledge. For more information, please contact UKnowledge@lsv.uky.edu.

**Utilizing Podcast Education to Improve Nurse Knowledge, Confidence, and Behaviors
Related to Palliative Care Conversations in the Intensive Care Unit**

Submitted in Partial Fulfillment of the Requirements for the Degree of Doctor of Nursing
Practice at the University of Kentucky

By
Brittany E. Estridge
Lexington, KY
April 2023

Abstract

Background: The personal connection that Registered Nurses (RNs) build with patients and their families puts them at the forefront of many conversations during the patient's stay in the intensive care unit (ICU). Some of the most difficult conversations are related to palliative care (PC). It can be challenging to know how to respond to the complex questions posed in palliative care conversations (PCC) when patients and their caregivers are making decisions that will alter the course of the patient's treatment, as well as affect the quality and length of their life.

Purpose: Nurses receive inadequate training in PCC. The purpose of this project was to implement an educational podcast intervention to improve the knowledge, confidence, and behaviors of ICU RNs related to PCC with patients and their caregivers.

Methods: This study used a one group pre-post design in which participants completed an electronic survey immediately prior to and one month following the intervention. Surveys collected information on participant demographics; as well as knowledge, confidence and behaviors related to PCC with patients and their caregivers. Frequency distributions summarized the demographic characteristics, REMAP application questions, & podcast specific questions. Paired sample t-tests were used to evaluate changes in ICU RN knowledge, confidence, and behaviors from pre- and post- survey scores.

Results: 33 participants completed the pre-intervention survey, 18 went on to complete the post. Comparative analysis was based on these 18 participants and demonstrated a statistically significant increase in the knowledge of ICU RNs related to PCC with patients and their caregivers. The pre-survey mean score for knowledge was 3.67, post-survey mean score was 4.89 ($p < .001$). The pre-survey mean score for confidence was 4.56, post-survey mean score was 8.33 ($p < .001$). A statistically significant increase was not found in the behaviors of participating ICU RNs related to PCC with patients and their caregivers. However, 97% ($n=32$) of participants demonstrated positive behaviors prior to the intervention; making a statistically significant increase much less likely in the post-intervention.

Conclusion: Results from this study suggest that podcast interventions can lead to increased knowledge and improved confidence among ICU RNs related to PCC with patients and their

caregivers. Future research efforts should focus on expanding the overall utilization of podcast education across a variety of practice areas.

Acknowledgements

I would like to acknowledge my DNP advisory committee members: Dr. Jean Edward (Chair and Advisor), Sandra Reagan (Clinical Mentor), Dr. Tamra Langley (Member), and Dr. Holly Chitwood (Member). To each of you, I extend the utmost gratitude for offering your knowledge, encouragement, and support through this entire process. I would like to thank Dr. Amanda Thaxton-Wiggins for her guidance with data analysis. I would like to express my appreciation to the patient care managers in the various ICUs at UK Albert B. Chandler Hospital for distributing my project materials to their nursing staff. Lastly, I would like to acknowledge the ICU RNs who participated in my project. None of this would be possible without you.

Dedication

To my wonderful husband, Zack:

Thank you for always making me feel loved and for pushing me to be the best version of myself.

To my amazing parents, Marsha and Eddie:

Thank you for instilling in me that any goal can be accomplished with enough hard work and determination.

To my best buddy Wally:

Thank you for being with me through both the darkest and brightest moments of my life.

To my friends who are more like family and to the incredible medical professionals I have had the honor of working with over the years:

Thank you for inspiring me to continue the hard work it takes to thrive both personally and professionally. The path I have taken to achieve my Doctor of Nursing Practice degree has spanned a pandemic, many losses and tears, but even more victories and beautiful memories that have made me the woman I am today. I am forever grateful for all of you and all my experiences.

This one's for all of you.

Table of Contents

Abstract.....	2
Acknowledgements	4
Dedication.....	5
Background and Significance.....	9
Problem Statement.....	9
Context, Scope, and Consequences	9
Current Evidence-Based Interventions.....	10
Purpose and Aims.....	11
Theoretical Framework	11
Review of the Literature.....	12
Search Methods	12
Synthesis of Evidence.....	13
Summary of Findings	13
Gaps in Practice.....	14
Methods	14
Design.....	14
Setting.....	15
Agency Description/Organizational Values	15
Stakeholders	15
Facilitators and Barriers	16
Sample	16

Research Procedure	16
Consent and IRB Approval	16
Evidence-Based Intervention.....	17
Measures and Instruments	17
Data Collection	18
Data Analysis.....	18
Results	19
Sample Characteristics	19
Pre-Post Intervention Changes in Knowledge, Confidence, and Behaviors	19
Post-Intervention REMAP Knowledge and Confidence	19
Intervention Evaluation	20
Discussion.....	20
Implications for Future Nursing Research	22
Limitations.....	23
Conclusion.....	23
References	24

List of Tables

Table 1. Descriptive Summary of Participant Demographics	28
Table 2. Pre-Intervention Survey Characteristics.....	29
Table 3. Comparison of Knowledge, Confidence and Behavior Pre- and Post-Intervention...30	

List of Figures

Figure 1. Intervention Specific Post-Intervention Survey Items	31
--	----

Figure 2. Post-Intervention Knowledge of REMAP32

List of Appendices

Appendix A. Letter of Support from UK Albert B. Chandler Chief Nursing Officer..... 33

Appendix B. Cover Letter for Waived Informed Consent 34

Appendix C. Letter of Approval From University of Kentucky Nursing Research Council ... 36

Appendix D. University of Kentucky IRB Approval Letter 37

Appendix E. Qualtrics Pre-Intervention Questionnaire..... 38

Appendix F. Qualtrics Post-Intervention Questionnaire 41

Background and Significance

Problem Statement

Registered nurses (RNs) in the intensive care unit (ICU) build individualized relationships with patients and their caregivers. Throughout a patient's hospital stay, the bedside RN is trusted to navigate many challenging conversations related to palliative care (PC). Families, physicians, and nurses identify involvement of bedside RNs as a major factor in the quality of PC in the ICU. The unique role of the bedside RN in the ICU allows them to identify PC needs and coordinate palliative care communication (PCC) (Anderson & Puntillo, 2017; Milic et al., 2015). While it is known that bedside RNs play this important role, engaging in PCC is an area where many RNs receive inadequate training and education (Buller et al., 2019). With proven success in providing PCC education to RNs, the lengthy and complicated nature of many PC educational programs may be a potential barrier to RN participation (Anderson & Puntillo, 2017). However, more flexible educational approaches such as podcast education can be effective in providing education to RNs as a very appealing alternative to fit their busy schedules (Abate, 2013; Blum, 2018). This paper will address the gaps in knowledge, training, and experience related to PCC experienced by ICU RNs and how an educational podcast can bridge this gap. The implementation and effects of an educational podcast intervention to improve the knowledge, confidence and behaviors of ICU RNs related to PCC with patients and their caregivers will be described in detail.

Context, Scope, and Consequences

As the current population ages and average life expectancy increases, the demand for PC exceeds the resources available (Kmetec et al., 2020). Patients in ICUs and their caregivers have many PC needs. These include emotional support, management of pain/symptoms, and clinician-family communication to ensure that patients receive treatments that are consistent with their goals (Anderson & Puntillo, 2017; Hagelin et al., 2022). Of these needs, communication between the bedside RN and patients/caregivers may be the most important of all. The communication skills required to be effective in these conversations are vital to providing holistic patient care that places the patient's beliefs, values, needs, and desires at the center of decision-making (Bernacki et al., 2014; Kmetec et al., 2020; Lin et al., 2021).

RNs have the greatest amount of direct exposure to patients and must be prepared to be at the forefront of PCC with patients and their caregivers (Anderson & Puntillo, 2017; Smith,

2018). It is important that they be equipped with the necessary communication skills to guide patients and their caregivers through PCC and ultimately support decision-making that will impact the final days of the patient's life. Unfortunately, RNs often feel unprepared for these conversations (Brighton & Bristowe, 2016; Ellis et al., 2021; Hamdan et al., 2020) and perceive inadequate communication education/training as a barrier to their involvement in PCC (Anderson & Puntillo, 2017; Fuoto & Turner, 2019). However, meeting the educational needs of practicing nurses poses a significant challenge. Institutions are limited in the financial and staffing resources that they can contribute to support continuing education, especially when the training requires staff to spend substantial time in addition to their normally scheduled work hours (Bishop et al., 2019). An intervention that addresses the gaps of experience and education in PCC is necessary to improve ICU RN knowledge, confidence and behaviors related to PCC with patients and their caregivers (Hokka et al., 2022; Smith et al., 2018; White, 2011).

Current Evidence-Based Interventions

Problem-based learning, simulations, training workshops, lectures, films, and elective courses are all backed by evidence regarding positive effects on student knowledge of palliative care. (Anderson & Puntillo, 2017; Hokka et al., 2022, Kerr et al., 2020). While these methods are backed by current evidence, they often require funding, time, and resources that are not practical for hospitals with the goal of educating a large number of bedside RNs. Fortunately, there are tools available to optimize nursing education for RNs in an affordable manner.

Evidence shows that successful programs for engaging in PCC are composed of a variety of educational tools. According to the literature, successful tools include using mnemonics (Childers et al., 2017), listening exercises, case studies (Popil, 2011), and pre-recorded materials such as podcasts (Buller, 2019). Podcasts give the learner flexibility to access materials on their own time while creating the opportunity for the learner to repeat materials to enhance learning, retain knowledge, and inspire critical thinking about the topics they discuss (Hargett, 2018). Podcasts don't have to occur in a fixed location or time and have shown success when implemented in other areas of nursing education (Abate, 2013; O'Connor, 2020). The format of podcasts makes them a convenient option for nursing education because they can be made on any topic, are easily distributed, and accessible for anyone with an internet connection.

Purpose and Aims

The purpose of this project was to examine the impact of an educational podcast on improving ICU RN knowledge, confidence, and behaviors related to PCC with patients and their caregivers at UK Albert B. Chandler Hospital.

The specific aims of this project were to compare the following items among ICU RNs, before and after listening to an educational podcast:

1. Perceived knowledge of PCC and REMAP framework. REMAP is a mnemonic PCC framework composed of the following parts: Reframe, Expect emotion, Map out patient values, Align with values, and Propose a plan (Childers et al., 2017).
2. Perceived confidence when having PCC and learning new evidence-based tools.
3. Behaviors related to PCC.

Theoretical Framework

Lippitt's 7-Stage Theory of Change was used to guide the implementation of this project (Barrow et al., 2022). Lippitt's Theory of Change is a framework often used for establishing change within acute care settings. This theoretical framework includes seven stages: 1) Become more aware of the need for change, 2) Develop a relationship between the system and change agent, 3) Define a change, 4) Set change goals and action plan for achievement, 5) Implement the change, 6) Staff accept the change; stabilization and 7) Redefine the relationship of the change agent with the system (Barrow et al., 2022).

This project was carried out following the framework outlined above. First, the issue of ICU RNs lacking adequate training in PCC with patients and their caregivers was identified as the primary problem that this project would focus on. A brief review of literature provided background on the importance of the role played by the bedside ICU RN in effective delivery of PC. After becoming more aware of this necessity for change, the Advisory Committee was formed by the Principal Investigator (PI) and change agent throughout the entire process. A relationship between the change agent and the system (UKHC) was already in place due to the change agent's employment status within the system. A formal literature review was conducted and gaps between RN practice knowledge, confidence, and behaviors related to PCC with patients and their caregivers were identified. The review also identified evidence-based educational modalities that have previously been successful in delivering education to RNs. This

defined the change that ultimately needed to be made: the development of an educational podcast specifically for bedside ICU RNs interacting with patients and their caregivers.

The next step in applying Lippitt's Theory was to set change goals/action plan for achievement. The PI utilized resources available through the DNP Advisory Committee and UK Healthcare to set change goals and develop an action plan. In order to implement the DNP project. This included discussions with the DNP Advisory Committee when designing the intervention, as well as the support of the chief nursing officer (CNO) for cardiovascular services, neurosciences, interventional services, and infection prevention and control, ICU staff development coordinators, and ICU patient care managers at UK Albert B. Chandler Hospital in distributing the project materials to bedside ICU RNs. The project's aims were determined, presented, and approved by the DNP Advisory Committee, the University of Kentucky's Institutional Review Board (IRB), and UKHC's Nursing Research Council. The fifth stage included distribution of the surveys, IRB-approved cover letter, and educational podcast via email listserv. Data was collected through Qualtrics and analyzed with the assistance of UK College of Nursing's statistician. Results were presented and discussed via oral presentation to the DNP Candidate's Advisory Committee and colleagues on April 4th, 2023. Stages six and seven will include sharing the project findings with the staff development coordinators for the various ICUs at UK Albert B. Chandler Hospital in hopes of continuation of distribution of the podcast across the entire enterprise.

Review of Literature

Search Methods

Databases utilized in this literature review included PubMed and The Cumulative Index to Nursing and Allied Health Literature (CINAHL). Search terms included palliative, nursing, education, communication, and podcast. Inclusion criteria included all study designs, studies published in English, downloadable in full-text format, and published between 2011 – 2022. Exclusion criteria included studies not published in English with participants < 18 years of age. Separate searches were conducted across these databases to ensure the most pertinent evidence was found. Keywords used for the first search: palliative, education, nursing, communication. PubMed returned 760 results, CINAHL returned 415 results. Results were organized in reverse chronological order to determine the most current evidence. Keywords used for the second search: podcast, nursing, education. PubMed returned 52 results, CINAHL returned 71 results.

Of these results, 12 were identified as the most pertinent to guiding the intervention of this DNP project.

Synthesis of Evidence

10 of these studies identified “nursing students”, “registered nurses”, or “clinicians” as participants. Of these studies, five of them took place in an acute care hospital (Anderson & Puntillo, 2017; Bishop et al., 2019; Buller et al., 2019; Ghaemizade Shushtari et al., 2022; Hargett, 2018) and five of them took place in a nursing school (Abate, 2013; Blum, 2018; Dimoula et al., 2019; Ellis et al., 2019; Hagelin et al., 2022). In these studies, a variety of educational tools were studied as methods of improving nursing education related to PCC. The types of educational tools included case studies (Anderson & Puntillo, 2017; Buller et al., 2019), simulations (Ellis et al., 2019), in-person education (Anderson & Puntillo, 2017; Buller et al., 2019), podcasts (Abate, 2013; Bishop et al., 2019; Blum, 2018; Hargett, 2018), and general education (Dimoula et al., 2019; Ghaemizade Shushtari et al., 2022; Hagelin et al., 2022). Study designs included quasi-experimental (Ghaemizade Shushtari et al., 2022), pilot studies (Abate, 2013; Blum, 2018; Hargett, 2018), cross-sectional (Dimoula et al., 2019), mixed methods (Anderson & Puntillo, 2017; Hagelin et al., 2022), and randomized controlled trials (Bishop et al., 2019; Buller et al., 2019; Ellis et al., 2019). All the studies supported the necessity for increased nursing education related to PCC and further research in this area.

In addition to the studies discussed, there were two pieces of evidence utilized that were not research studies. First, was a clinical guideline that discussed the REMAP framework. This framework incorporates the recommendations of experts and serves as a blueprint for clinicians to use for guiding PCC with patients and their caregivers (Childers et al., 2017). The second was an editorial piece (Mehta, 2022) that discusses how REMAP can be successfully applied and assists patients to reach their PC goals.

Summary of Findings

The evidence revealed that a variety of educational tools can be used to improve the knowledge and confidence of nursing students and RNs related to PCC (Anderson & Puntillo, 2017; Bishop et al., 2019; Buller et al., 2019; Dimoula et al., 2019; Ellis et al., 2019; Ghaemizade Shushtari et al., 2022; Hagelin et al., 2022). However, there is more research needed regarding which type of educational model is best to educate RNs on PCC. While there has been success with in-person educational models (Anderson & Puntillo, 2017; Buller et al., 2019), this

is not a feasible option for all organizations that need to provide RNs with PCC education. In-person education can be expensive, as well as both labor and time intensive. A good alternative to this is podcast education, which has demonstrated equal and sometimes greater success in providing RN education. Podcasts are a flexible, affordable way to carry out education to a large number of nurses (Abate, 2013; Bishop et al., 2019). In one study, 66.6% of participants reported that they would recommend podcasting be utilized in future educational courses (Hargett, 2018). Podcasts are very versatile and can incorporate a variety of educational tools within the podcast itself. Case studies have been successful in providing communication skills education to RNs (Buller et al., 2019; Kopka et al., 2016) and are easily incorporated into a podcast format. In addition to case studies, the REMAP mnemonic framework has been identified as another tool that can easily be included in a podcast format. REMAP consists of the following parts: Reframe, Expect emotion, Map out patient values, Align with values, and Propose a plan. This framework was created and originally utilized by experts in PC and can equip RNs with knowledge that will increase confidence and behaviors related to PCC with patients and their caregivers (Childers et al., 2017; Mehta, 2022).

Gaps in Practice

The literature review revealed two gaps: 1) ICU RNs are lacking skills in PCC that are necessary when caring for critically ill patients and their caregivers and 2) Evidence is lacking when it comes to which type of educational intervention is most successful in providing ICU RNs with adequate PCC education. The practice gaps found in the literature are reflective of the gaps found within UK Albert B. Chandler Hospital. This project addressed these gaps by using an educational podcast as a platform to deliver PCC education to nurses. The podcast's approach to PCC education involved working through a case study utilizing the REMAP framework. The case study involved a scenario of a PCC between an ICU RN and a patient/caregiver that was modeled after experiences that commonly occur for RNs in the ICU. The success of this intervention was measured by pre- and post- intervention surveys to measure the knowledge, confidence, and behaviors of ICU RNs related to PCC with patients and caregivers.

Methods

Design

This study used a one group pre-post survey design to examine the effect of an educational podcast on the knowledge, confidence, and behaviors of ICU RNs related to

engaging in PCC with patients and their caregivers. The outcome variables were assessed before and after listening to the educational podcast.

Setting

The University of Kentucky Albert B. Chandler Hospital is a 945-bed academic medical center and the only Level I trauma center in Central and Eastern Kentucky. There are approximately 100 ICU beds composed of multiple specialty ICUs including neurosurgical, cardiovascular, medical, and surgical/trauma. This hospital is located in Lexington, KY and is a part of UK Healthcare, a Magnet organization recognized for nursing excellence by the American Nurses Credentialing Centers. The PI was formerly a RN in the critical care float pool and rapid response team at UK Healthcare.

Agency Description/ Organizational Values

The mission of UK Healthcare (UKHC) is a commitment to patient care, education, and research. The institution is driven by the DIRECT values: Diversity, Innovation, Respect, Compassion, and Teamwork (UKHealthcare, 2021). This DNP project aimed to align with these values through improving ICU RN knowledge, confidence, and behaviors related to PCC with patients and caregivers using an innovative educational modality in the form of a podcast. The results from this project will be distributed to staff development coordinators, ICU patient care managers, and other members of the interprofessional healthcare team to aid future research projects and promote the utilization of podcast education across the enterprise.

Stakeholders

This project utilized several stakeholders to assist with the planning, implementation, execution, and sustainability of this DNP project. The DNP project committee consisted of five people: Dr. Jean Edward (Advisor/Committee Chair), Brittany Estridge (DNP student and PI), Sandra Reagan, APRN (Clinical Mentor), Dr. Tamra Langley (Committee Member), and Dr. Holly Chitwood (Committee Member). Dr. Kim Blanton, CNO for cardiovascular services, neurosciences, interventional services, and infection prevention, approved the DNP project (see Appendix A). Additionally, the ICU patient care managers agreed to assist with distribution of project materials to RNs via email listserv and staff development coordinators agreed to support the project implementation and assist with dissemination of result findings upon completion of data analysis.

Facilitators and Barriers

In addition to the stakeholders listed above that served as facilitators for this project, RN colleagues also served to help make this project a success by encouraging coworkers to participate in the study. A barrier in this study was the fact that the educational podcast was introduced to ICU RNs for voluntary completion and could have been affected by time constraints and work-related responsibilities of the participants. To overcome this barrier, patient care managers, staff development coordinators, and nurse colleagues encouraged participation throughout the study and the incentive to win a gift card was offered for participation in the study. Another potential barrier in this study was difficulty in accessing the podcast. To overcome this barrier, the PI prioritized making the intervention as user-friendly and accessible as possible.

Sample

The target population of this project included all ICU RNs that provided direct patient care at UK Albert B. Chandler Hospital. On November 16, 2022 an email was sent to a listserv of ICU RN's via the ICU patient care managers. This email invitation included the cover letter describing the project's objectives, voluntary participation, gift card incentive, survey response deadline, and link to the online pre-intervention survey/podcast. Participants expressed consent to participate by clicking the button to move past the cover letter and on to the pre-intervention survey questions. The cover letter clearly stated that the subject's choice for voluntary participation would not affect their current employment (refer to Appendix B for project cover letter and consent details). The post-intervention survey was distributed via the same procedure on December 16, 2022.

Inclusion criteria for participation in this study was: ICU RNs at UK Albert B. Chandler Hospital regardless of age, sex, gender-identity, health status, race, ethnicity; bedside RNs; full time and/or part-time status; hired working in ICUs; and travel RNs hired working in ICUs. Exclusion criteria included: non-RNs, nursing students, non-bedside RNs, management, staff development, and non-ICU RNs.

Research Procedure

Consent and IRB Approval

Approval from both UKHC's Nursing Research Council and Institutional Review Board (IRB) (protocol #80062) was obtained prior to contacting participants, project implementation,

and data collection (refer to Appendix C and Appendix D for approval letters from each individual body).

Evidence-Based Intervention

This intervention was developed to find a practical method to provide ICU RNs with education to improve knowledge, confidence, and behaviors related to PCC with patients and caregivers. The intervention had three main components to include: 1) pre-intervention survey, 2) 10-minute podcast, 3) post-intervention survey to be administered approximately one month after the podcast was implemented. An educational podcast intervention was created using the GarageBand App on the PI's password-encrypted phone and then uploaded to 'Spotify for Podcasters, a podcast platform free for all to use and access. The podcast was uploaded on November 16, 2022 and was available to any person with internet access. The podcast lasted for approximately 10 minutes and included education on the REMAP framework. The podcast also applied this framework by using it to discuss a case study dealing with a PCC scenario in an ICU environment. The REMAP framework was reviewed at the end of the podcast to reiterate the mnemonic meaning to listeners. As a result of this intervention, it is expected that ICU RNs at UK Albert B. Chandler Hospital will demonstrate improved knowledge, confidence, and behaviors related to PCC.

Measures and Instruments

Since no validated tools were available in the current, relevant literature, the PI created both pre- and post- intervention surveys to measure the knowledge, confidence, and behaviors of ICU RNs related to PCC with patients and caregivers. Both surveys were approved for use in implementing this DNP project by UKHC's Nursing Research Council and Institutional Review Board (IRB). While both pre-intervention and post-intervention surveys used a 3-item Likert scale, the items included on each survey differed slightly.

The pre-intervention survey consisted of the following categories: 7 demographics, 2 knowledge, 2 confidence, 2 behavior, and 3 anonymous identifiers used to link the pre- and post-intervention surveys. Categories included on the post-intervention survey included the same anonymous identifiers, knowledge, confidence, and behaviors questions that were on the pre-intervention survey with the addition of an open-ended question for additional comments, 3 REMAP application questions, and 5 intervention evaluation questions. The 5 intervention evaluation items included likelihood to engage in PCC as a result of the intervention,

convenience of accessing intervention materials, relevance of intervention related to role as an ICU RN, likelihood of utilizing intervention materials, and likelihood of recommending intervention to a colleague. All items were scored on a Likert scale of 1-3 with '1' being 'Not at all likely/convenient/relevant', '2' being 'Somewhat likely/convenient/relevant', and '3' being 'Very likely/convenient/relevant'.

Data Collection

Data was collected in two web-based surveys (See Appendices E and F) through Qualtrics, a secure web-based survey tool accessible through the University of Kentucky. IP addresses were not collected. This software aided the PI in creating questions related to the project's aims. The post-intervention survey included a separate link for participants to provide an optional entry for their preferred email address to be entered for a chance to receive a gift card reward for completing both pre- and post-intervention surveys. The details of the incentive are described in the study's cover letter (Appendix B).

The email containing the cover letter, pre-intervention survey, and podcast was sent out via email listserv on November 16, 2022. The pre-intervention survey was open for collection of responses for 30 days between November 16, 2022 – December 16, 2022. The podcast was also made available throughout this duration. The pre-intervention survey was closed for responses and the podcast was taken down on December 16, 2022. The post-intervention survey was distributed via listserv on December 16, 2022, and was open for collection of responses for 30 days between December 16, 2022 – January 15, 2023.

Data Analysis

Data collected via Qualtrics was downloaded and saved into secure files within the PI's and statistician's password-protected laptops. The data was coded to match participants anonymous identifiers to use for paired data analysis. Frequency distributions summarized the demographic characteristics, REMAP application questions, and podcast specific questions for the study participants. Paired sample t-tests were used to evaluate changes in ICU RN knowledge, confidence, and behaviors from pre- and post- survey scores after listening to the educational podcast intervention. Data was analyzed using SPSS version 28 and an alpha level of $p < 0.05$ signified statistical significance.

Results

Sample Characteristics

Of the 33 participants who completed the pre-intervention survey, the majority identified as female (78.8%, n=26), were white (90.9%, n=30), under age 37 (84.8%, n=28), had been practicing as a RN for less than 6 years (57.6%, n=19), worked in the ICU for less than 6 years (78.8%, n=26), worked dayshift (69.7%, n=23), and held a bachelor's degree (90.9%, n=30). (See Table 1 for full demographic data).

Of the 33 participants completing the pre-intervention survey, 66.7% (n=22) felt that they were very experienced in PCC and 90.9% (n=30) felt either somewhat confident or very confident when participating in PCC. 81.8% (n=27) were not familiar with REMAP at all, 93.9% (n=31) were either somewhat confident or very confident in their ability to learn new, evidence-based tools. 97% (n=32) have been involved in PCC at least one time in the past 6 months and believe it is either somewhat important or very important for bedside RNs to be involved in PCC. (See Table 2).

Pre-Post Intervention Changes in Knowledge, Confidence and Behaviors

18 participants went on to complete the post-intervention. Comparative analysis was based on these 18 participants. The paired t-test comparing pre- to post-intervention knowledge score revealed a statistically significant increase ($p < .001$). With a potential range of 2 – 9, the mean increased while standard deviation (SD) decreased from 3.67 (SD=1.19) to 4.89 (SD=0.83). The pre- to post-intervention confidence score revealed a statistically significant increase ($p < .001$). With a potential range of 2 – 9, the mean increased while SD decreased from 4.56 (SD=1.15) to 8.33 (SD=0.84). The pre- to post-intervention behaviors score did not reveal a statistically significant change ($p = .072$). With a potential range of 2 – 9, the mean increased slightly while the SD decreased from 5.23 (SD=1.07) to 5.72 (SD=0.57). See Table 3 for results displayed in full.

Post-Intervention REMAP Knowledge and Confidence

83.3% (n=15) of participants responded correctly to the knowledge questions related to REMAP. Knowledge questions asked participants to correctly answer two items directly related to REMAP. A third item included on the post-intervention survey was specific to confidence. 55.6% (n=10) of participants felt 'very confident' in their ability to correctly use REMAP.

Intervention Evaluation

At least 55% of participants gave a score of '3' (Very likely/convenient/relevant) for each of the evaluation items related to convenience, relevance, likelihood of utilization, and likelihood of recommending the intervention. (See Figure 1). Open-ended question responses on intervention feedback included: "This was helpful to me as a newer nurse;" "Podcasts would be a good alternative for CEs;" "I think providing nursing education through podcast is a really good idea;" and "Great podcast!"

Discussion

The results from this project revealed that an educational podcast intervention had a statistically significant effect on ICU RN knowledge and confidence related to PCC with patients and caregivers. This is consistent with current literature that shows improved nursing staff/nursing student knowledge and confidence after being exposed to an educational intervention. Prior to this DNP project, a major barrier was present in distributing educational materials to bedside RNs due to limited time and resources within hospital systems. This podcast intervention has established a successful educational method for bedside RNs by providing a flexible and inexpensive option for providing education to a large number of RNs. While there was no statistically significant change in the behaviors of ICU RNs related to PCC with patients and their caregivers, this was not necessarily a negative reflection of the intervention. On the pre-intervention survey, the items related to PCC behaviors had high mean scores. This indicates that participants presented positive behaviors related to PCC with patients and their caregivers even before listening to the educational podcast.

Study participants showed a significant increase in knowledge related to PCC with patients and their caregivers from pre- to post-intervention. Prior to listening to the educational podcast, participants had little to no knowledge of REMAP. However, after participating in the intervention, participants indicated increased familiarity with the REMAP framework. Knowledge relating to the REMAP mnemonic and its application were evident. Additionally, this increase in REMAP knowledge also led to an increase in the amount of experience participants had in PCC with patients and their caregivers. These findings align with current findings from the existing research that mnemonic tools (Childers, et al., 2017; Mehta, 2022), case studies (Anderson & Puntillo, 2017; Buller et al., 2019; Kopka et al., 2016, Popil, 2011), and podcast education (Abate, 2013; Bishop et al., 2019; Blum, 2018; Hargett, 2018; O'Connor,

2020) are effective methods of providing education for RNs. Many of the current PCC educational methods are lengthy and complicated (Anderson & Puntillo, 2017). This podcast was able to successfully meet the needs of RNs with varying schedules while minimizing the amount of resources needed from the organization (Bishop et al., 2019).

Participant confidence related to engaging in PCC with patients and their caregivers increased from pre- to post-intervention. Although, the participants were confident prior to the educational podcast, the intervention led to even higher confidence levels when applying REMAP during PCC with patients and their caregivers as well as confidence in their ability to use new evidence-based educational tools. This educational podcast shows consistency with the current evidence by providing the learner with the flexibility to access materials on their own time while creating the opportunity to repeat materials to enhance learning, retain knowledge, and inspire critical thinking (Hargett, 2018).

Due to the nature of their position at the bedside, ICU RNs play a vital role in engaging in PCC with patients and caregivers (Anderson & Puntillo, 2017; Milic et al., 2015; Smith, 2018) and must possess the communication skills required to be effective in these conversations. PCC are vital to providing holistic patient care that places the patient's beliefs, values, needs, and desires at the center of decision-making (Bernacki et al., 2014; Kmetec et al., 2020; Lin et al., 2021). Current evidence shows that educational interventions; particularly podcasts, can improve behaviors of the learner (Abate, 2013; Buller, 2019; Hargett, 2018; O'Connor, 2020). While there was not a significant increase in the positive behaviors of ICU RNs following the intervention, it is important to note that almost all the participants displayed positive behavior related to PCC prior to the intervention. All but one of those completing the pre-intervention survey had participated in PCC within the past month and believed the role of the RN in PCC with patients and their caregivers is very important. Therefore, there was essentially no room for a statistically significant increase in the positive behaviors of ICU RNs participating in the intervention.

The project revealed that educational podcasts can be an effective educational modality preferred by many learners due to its flexible, informal nature and ability to fit any schedule (Abate, 2013; Blum, 2018; Buller et al., 2019, O'Connor, 2020). Additionally, podcasts are a very appealing educational option for several reasons. Podcasts can include a variety of educational methods such as mnemonic tools (Childers et al., 2017; Mehta, 2022) and case studies (Anderson & Puntillo, 2017; Buller et al., 2019; Popil, 2011) and can be easily

distributed to a large number of participants with the click of a button (Bishop et al., 2019). The majority of the ICU RNs participating in this intervention felt that using a podcast for educational purposes was relevant, convenient, and effective for their learning purposes. The findings from this DNP project reveal that podcast education can be successfully implemented to a large group of participants in a timely and inexpensive manner. It would also be of interest to conduct a study that measures patient satisfaction related to PCC as a result of providing podcast education for ICU RNs.

Implications for Future Nursing Research

Based on current literature and study results, the increasing average life expectancy of the aging population is increasing the demand for PC specialty care (Kmetec et al., 2020). Bedside RNs are going to be the ones to meet this demand, as they are in the unique position of building the closest relationships with patients and their caregivers so it is vital they have the PCC skills to rise to the occasion. The issue is that RNs feel that inadequate communication education/training is a barrier to being frequently involved in PCC (Anderson & Puntillo, 2017; Fuoto & Turner, 2019). Therefore, it is necessary to provide RNs with the training they need to become experts in PCC and podcasts are a great method to fulfill this need (Abate, 2013; Blum, 2018). Podcasts can incorporate a variety of educational tools such as case studies (Popil, 2011) and mnemonics (Childers et al., 2017) that are backed by evidence in order to fill this gap RNs frequently experience in PCC education.

In this DNP Project, stages 1-5 of Lippitt's 7-Stage Theory of Change have been completed thus far. Moving forward, stages 6) staff accept the change; stabilization and 7) redefine the relationship of change agent with the system (Barrow et al., 2022) will be implemented utilizing the help of the various facilitators and stakeholders, as well as future nurse researchers. While this project did not have widespread impact on UK Healthcare, the concept of podcast education has potential to make a significant impact across the enterprise. Educational podcasts should be implemented across various service lines and in both nursing and non-nursing continuing education due to ease of distribution, proven effectiveness, and flexibility for the learner. This study revealed that podcasts are both enjoyable for the learner and effective in improving their knowledge and confidence regarding the educational topic.

Limitations

Several factors limited the strength of the results from this DNP project. These factors included a relatively small sample size when compared to the number of potential participants and of those participants, the sample was rather homogenous. Potential for bias was also a limiting factor, due to the PI's position as a former bedside RN at UK Albert B. Chandler Hospital. The non-mandatory nature of the podcast and the fact that many RNs do not check their email also may have limited participation in this project.

Conclusion

The bond that ICU RNs make with patients and their caregivers during their stay in the ICU puts them in the unique position to identify PC needs and coordinate PCC (Anderson & Puntillo, 2017; Milic et al., 2015). The communication skills required to be effective in these conversations are vital to providing holistic patient care that places the patient's beliefs, values, needs, and desires at the center of decision-making (Bernacki et al., 2014; Kmetec et al., 2020; Lin et al., 2021). A formal literature review revealed gaps in RN knowledge and confidence when involved in PCC with patients and their caregivers, as well as the type of education best suited to provide PCC education to bedside ICU RNs. It was the purpose of this DNP project utilizing Lippitt's 7-Stage Change Theory (Barrow et al., 2022) to address both gaps and find an educational intervention that can be successfully implemented, creating significant change in the knowledge, confidence, and behaviors for ICU RNs at UK Albert B. Chandler Hospital regarding PCC with patients and their caregivers.

Overall, the project findings are consistent with current literature and serve as an opportunity to incorporate podcast education across a wide variety of areas in nursing and nursing education at UK Healthcare. Future research should focus on the delivery of this podcast to RNs in other areas, as well as the development of educational podcasts in other subject areas. The foundation created by this DNP project and its findings have the potential to establish a lasting educational modality that can be utilized by bedside RNs to enhance their skills not only in PCC, but in all practice areas.

References

- Abate K. S. (2013). The effect of podcast lectures on nursing students' knowledge retention and application. *Nursing Education Perspectives*, 34(3), 182–185.
<https://doi.org/10.5480/1536-5026-34.3.182>
- Anderson, W. G., Puntillo, K., Cimino, J., Noort, J., Pearson, D., Boyle, D., Grywalski, M., Meyer, J., O'Neil-Page, E., Cain, J., Herman, H., Barbour, S., Turner, K., Moore, E., Liao, S., Ferrell, B., Mitchell, W., Edmonds, K., Fairman, N., Joseph, D., ... Pantilat, S. Z. (2017). Palliative care professional development for critical care nurses: A multicenter program. *American Journal of Critical Care: An Official Publication, American Association of Critical-Care Nurses*, 26(5), 361–371.
<https://doi.org/10.4037/ajcc2017336>
- Barrow, J. M., Annamaraju, P., & Toney-Butler, T. J. (2022). Change Management. In *StatPearls*. StatPearls Publishing.
- Bernacki, R. E., Block, S. D., & American College of Physicians High Value Care Task Force (2014). Communication about serious illness care goals: a review and synthesis of best practices. *JAMA Internal Medicine*, 174(12), 1994–2003.
<https://doi.org/10.1001/jamainternmed.2014.5271>
- Bishop, C. T., Mazanec, P., Bullington, J., Craven, H., Dunkerley, M., Pritchett, J., & Coyne, P. J. (2019). Online end-of-life nursing education consortium core curriculum for staff nurses: An education strategy to improve clinical practice. *Journal of Hospice and Palliative Nursing: JHPN: The Official Journal of the Hospice and Palliative Nurses Association*, 21(6), 531–539. <https://doi.org/10.1097/NJH.0000000000000593>
- Blum C. A. (2018). Does podcast use enhance critical thinking in nursing education? *Nursing Education Perspectives*, 39(2), 91–93.
<https://doi.org/10.1097/01.NEP.0000000000000239>
- Buller, H., Virani, R., Malloy, P., & Paice, J. (2019). End-of-life nursing and education consortium communication curriculum for nurses. *Journal of Hospice and Palliative Nursing: JHPN: The Official Journal of the Hospice and Palliative Nurses Association*, 21(2), E5–E12. <https://doi.org/10.1097/NJH.0000000000000540>

- Childers, J. W., Back, A. L., Tulsy, J. A., & Arnold, R. M. (2017). REMAP: A framework for goals of care conversations. *Journal of Oncology Practice, 13*(10), e844–e850.
<https://doi.org/10.1200/JOP.2016.018796>
- Dimoula, M., Kotronoulas, G., Katsaragakis, S., Christou, M., Sgourou, S., & Patiraki, E. (2019). Undergraduate nursing students' knowledge about palliative care and attitudes towards end-of-life care: A three-cohort, cross-sectional survey. *Nurse Education Today, 74*, 7–14. <https://doi.org/10.1016/j.nedt.2018.11.025>
- Ellis, B., Winn, S., MacMillan, D., Bouthillet, K., & Purcell, C. (2021). Simulated learning experience in advance care planning conversations. *Journal of Hospice and Palliative Nursing: JHPN: The Official Journal of the Hospice and Palliative Nurses Association, 23*(4), 339–345. <https://doi.org/10.1097/NJH.0000000000000760>
- Fuoto, A., & Turner, K. M. (2019). Palliative care nursing communication: An evaluation of the COMFORT Model. *Journal of Hospice and Palliative Nursing: JHPN: The Official Journal of the Hospice and Palliative Nurses Association, 21*(2), 124–130.
<https://doi.org/10.1097/NJH.0000000000000493>
- Ghaemizade Shushtari, S. S., Molavynejad, S., Adineh, M., Savaie, M., & Sharhani, A. (2022). Effect of end-of-life nursing education on the knowledge and performance of nurses in the intensive care unit: A quasi-experimental study. *BMC Nursing, 21*(1), 102.
<https://doi.org/10.1186/s12912-022-00880-8>
- Hagelin, C. L., Melin-Johansson, C., Ek, K., Henoch, I., Österlind, J., & Browall, M. (2022). Teaching about death and dying- A national mixed-methods survey of palliative care education provision in Swedish undergraduate nursing programmes. *Scandinavian Journal of Caring Sciences, 36*(2), 545–557. <https://doi.org/10.1111/scs.13061>
- Hamdan Alshehri, H., Olausson, S., Öhlén, J., & Wolf, A. (2020). Factors influencing the integration of a palliative approach in intensive care units: A systematic mixed-methods review. *BMC Palliative Care, 19*(1), 113. <https://doi.org/10.1186/s12904-020-00616-y>
- Hargett, J.L. (2018). Podcasting in nursing education: Using commercially prepared podcasts to spark learning. *Teaching and Learning in Nursing, 13*(1), 55–57.
<https://doi.org/10.1016/j.teln.2017.08.003>
- Hökkä, M., Rajala, M., Kaakinen, P., Lehto, J. T., & Pesonen, H. M. (2022). The effect of teaching methods in palliative care education for undergraduate nursing and medical

- students: A systematic review. *International Journal of Palliative Nursing*, 28(6), 245–253. <https://doi.org/10.12968/ijpn.2022.28.6.245>
- Kerr, D., Ostaszkiwicz, J., Dunning, T., & Martin, P. (2020). The effectiveness of training interventions on nurses' communication skills: A systematic review. *Nurse Education Today*, 89, 104405. <https://doi.org/10.1016/j.nedt.2020.104405>
- Kmetec, S., Štiglic, G., Lorber, M., Mikkonen, I., McCormack, B., Pajnkihar, M., & Fekonja, Z. (2020). Nurses' perceptions of early person-centred palliative care: A cross-sectional descriptive study. *Scandinavian Journal of Caring Sciences*, 34(1), 157–166. <https://doi.org/10.1111/scs.12717>
- Kopka, J. A., Aschenbrenner, A. P., & Reynolds, M. B. (2016). Helping students process a simulated death experience: Integration of an NLN ACE.S evolving case study and the ELNEC Curriculum. *Nursing Education Perspectives*, 37(3), 180–182.
- Lin, H. Y., Chen, C. I., Lu, C. Y., Lin, S. C., & Huang, C. Y. (2021). Nurses' knowledge, attitude, and competence regarding palliative and end-of-life care: A path analysis. *PeerJ*, 9, e11864. <https://doi.org/10.7717/peerj.11864>
- Mehta, A., & Chai, E., Associate Editor (2022). There are no shortcuts: Eliciting explicit values to provide goal-concordant care. *Journal of Palliative Medicine*, 25(12), 1754–1755. <https://doi.org/10.1089/jpm.2022.0485>
- Milic, M. M., Puntillo, K., Turner, K., Joseph, D., Peters, N., Ryan, R., Schuster, C., Winfree, H., Cimino, J., & Anderson, W. G. (2015). Communicating with patients' families and physicians about prognosis and goals of care. *American Journal of Critical Care: An Official Publication, American Association of Critical-Care Nurses*, 24(4), e56–e64. <https://doi.org/10.4037/ajcc2015855>
- O'Connor, S., Daly, C. S., MacArthur, J., Borglin, G., & Booth, R. G. (2020). Podcasting in nursing and midwifery education: An integrative review. *Nurse Education in Practice*, 47, 102827. <https://doi.org/10.1016/j.nepr.2020.102827>
- Popil I. (2011). Promotion of critical thinking by using case studies as teaching method. *Nurse Education Today*, 31(2), 204–207. <https://doi.org/10.1016/j.nedt.2010.06.002>
- Smith, M. B., Macieira, T. G. R., Bumbach, M. D., Garbutt, S. J., Citty, S. W., Stephen, A., Ansell, M., Glover, T. L., & Keenan, G. (2018). The use of simulation to teach nursing students and clinicians palliative care and end-of-life communication: A systematic

review. *The American Journal of Hospice & Palliative Care*, 35(8), 1140–1154.

<https://doi.org/10.1177/1049909118761386>

UKHealthCare. (2021, January 11). *UK HealthCare: Mission, vision, and values* [video].

YouTube. Retrieved April 25, 2022, from,

<https://www.youtube.com/watch?v=5JjgohgRtPM>

Visual Data

Tables

Table 1. Descriptive Summary of Participant Demographics (*n* =33)

	<i>n</i> (%)
Age	
Less than 28	10 (30.3%)
28 – 36	18 (54.5%)
37 – 43	2 (6.1%)
44 – 51	2 (6.1%)
52 – 57	1 (3.0%)
Gender	
Female	26 (78.8%)
Male	7 (21.2%)
Ethnicity	
Black	2 (6.1%)
White	31 (93.9%)
Years as RN	
Less than 3	4 (12.1%)
3 – 6	15 (45.5%)
6 – 10	10 (30.3%)
10 – 15	2 (6.1%)
Over 15	2 (6.1%)
Years as ICU RN	
Less than 3	9 (27.3%)
3 – 6	17 (51.5%)
6 – 10	5 (15.2%)
10 – 15	2 (6.1%)
Shift	
Dayshift	23 (69.7%)
Nightshift	10 (30.3%)
Highest Education Completed	
Associate’s	2 (6.1%)
Bachelor’s	30 (90.9%)
Master’s	1 (3.0%)

Table 2. Pre-Intervention Survey Characteristics (n=33)

	<i>n (%)</i>
Knowledge: How experienced are you in having PCC?	
No experience	4 (12.1%)
Somewhat experienced	7 (21.2%)
Very experienced	22 (66.7%)
Knowledge: How familiar are you with REMAP?	
Not familiar	27 (81.8%)
Somewhat familiar	3 (9.1%)
Very familiar	3 (9.1%)
Confidence: How confident are you in having PCC?	
Not confident	3 (9.1%)
Somewhat confident	15 (45.5%)
Very confident	15 (45.5%)
Confidence: How confident in your ability to learn new educational tools?	
Not confident	2 (6.1%)
Somewhat confident	7 (21.2%)
Very confident	14 (42.4%)
Behaviors: How many times in past 6 months have you been involved in PCC?	
0	1 (3.0%)
1 – 3	10 (30.3%)
>3	22 (66.7%)
Behaviors: How important do you feel it is for RNs to be involved in PCC?	
Not important	1 (3.0%)
Somewhat important	7 (21.2%)
Very important	25 (75.8%)

Table 3. Comparison of Knowledge, Confidence and Behavior Pre- and Post-Intervention (n = 18)

	Pre-education <i>Mean (SD)</i>	Post-education <i>Mean (SD)</i>	<i>P</i>
Knowledge	3.67 (1.19)	4.89 (0.83)	<.001
Confidence	4.56 (1.15)	8.33 (0.84)	<.001
Behavior	5.72 (0.57)	5.28 (1.07)	.072

Note: Potential range for total scores 2-9, with higher scores representing higher levels of knowledge, confidence, and behavior

Figures

Figure 1: Intervention Specific Post-Intervention Survey Items (n=18)

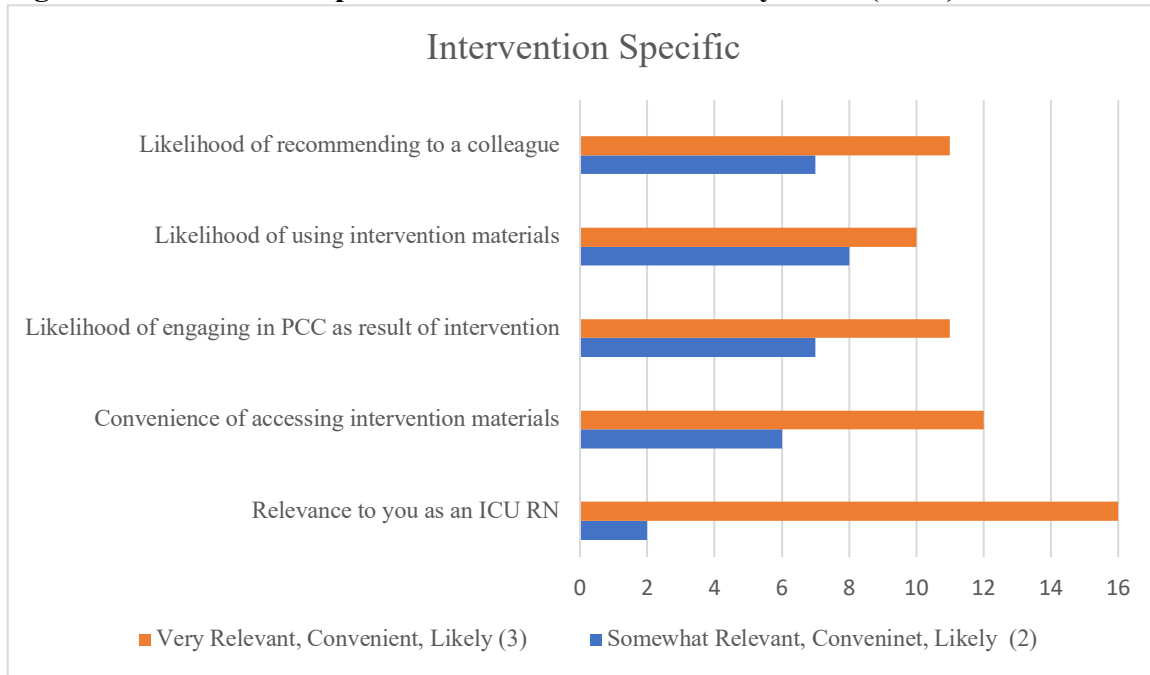
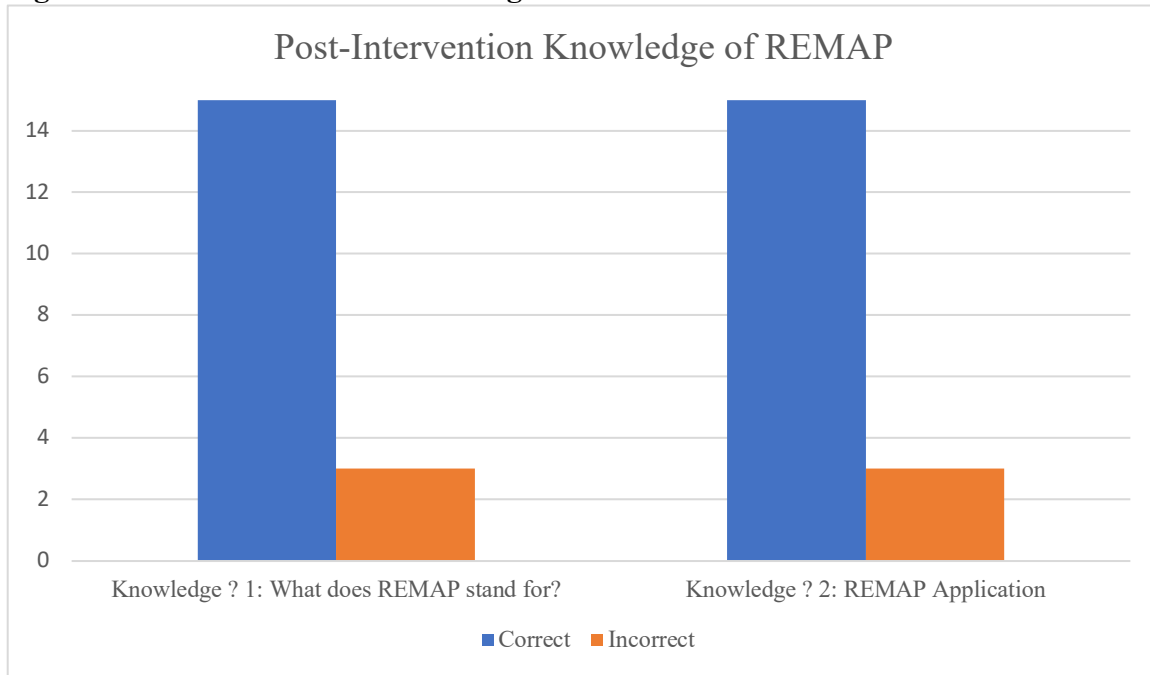


Figure 2. Post-Intervention Knowledge of REMAP



Appendix A. Letter of Support from UK Albert B. Chandler Chief Nursing Officer



July 6, 2022

University of Kentucky
Lexington, KY 40536

RE: Letter of Support for DNP Project

To Whom It May Concern:

I am writing in support of Brittany Estridge's DNP project regarding educational podcast for intensive care nurses related to palliative care. Nurses are recognized as skilled clinicians that interpret patient responses to disease and treatments while advocating for holistic and effective care. Integration of palliative care in healthcare is essential to allow patients with serious illness to have a holistic experience. Most nurses are not comfortable or confident in their ability to discuss end of life care with patients and their families. The proposed study would provide intensive care nurses a framework for goals of care conversations.

This research will provide valuable feedback regarding goals of care and how to help improve nurses' confidence and knowledge around this sensitive subject. I support this work and look forward to working with Brittany on this project. Please reach out to me if you need any further information.

Sincerely,

Kimberly Blanton

Kimberly Blanton, DNP, MHA, RN, NEA-BC
Chief Nursing Officer, Chandler
UK Healthcare
800 Rose Street, N112
Lexington, KY 40536
Email: kblanton3@uky.edu

Appendix B. Cover Letter for Waived Informed Consent (1/2)

IRB Approval
10/12/2022
IRB # 80062
IRB1

To Potential Research Participant:

Researchers at the University of Kentucky are inviting you to take part in a survey about how podcast education effects the confidence, knowledge, and attitude of ICU RNs related to palliative care conversations with patients and their families.

Although you may not get personal benefit from taking part in this research study, your responses may help us understand more about the impact of podcast education on the confidence, knowledge, and attitudes of ICU RNs related to palliative care conversations with patients and their families. Some volunteers experience satisfaction from knowing they have contributed to research that may possibly benefit others in the future.

Participation is entirely voluntary and confidential. You may withdraw at any time from participation and the podcast is free of cost and accessible to all ICU RNs within the UK Healthcare system. Participation in the study is at no cost to you except for the time taken to complete the surveys and listen to the podcast. If you do not want to be in the study, there are no other choices except not to take part in the study.

Your participation will involve answering survey questions about your knowledge, confidence and attitudes related to palliative care conversations with patients and their families. There are three surveys; pre-survey to take before listening to the podcast, post-survey to take after listening to the podcast, and optional incentive survey for potential to be rewarded for study participation. The pre-survey will take 10 minutes to complete, podcast lasts 10 minutes, post-survey will take 10 minutes to complete, and incentive survey will take 1 minute to complete for a total of 31 minutes. Following completion of both surveys, you have the opportunity to participate in an incentive survey. If you choose to participate, you will be required to enter your email address to enter to win one of four \$25 Amazon gift cards. Your email address will not in any way be linked to your survey responses and will not be retained for research purposes.

The risks involved in this study are minimal. There is potential for breach of confidentiality, however, this is minimal as both the pre-and post-survey are confidential and do not collect any identifying information. The incentive survey does collect email addresses, but the incentive survey is separate from both the pre-and post-survey. Your response to the survey will be kept confidential to the extent allowed by law. When we write about the study you will not be identified.

We hope to receive completed questionnaires from 75 people, so your answers are important to us. Of course, you have a choice about whether to complete the surveys or not, but if you do participate, you are free to skip any questions or discontinue at any time. You will not be penalized in any way for skipping or discontinuing the survey.

Please be aware, while we make every effort to safeguard your data once received from the online survey company, given the nature of online surveys, as with anything involving the Internet, we can never guarantee the confidentiality of the data while still on the survey company's servers, or while en route to either them or us. It is also possible the raw data collected for research purposes will be used for marketing or reporting purposes by the survey/data gathering company after the research is concluded, depending on the company's Terms of Service and Privacy policies.

Appendix B. Cover Letter for Waived Informed Consent (2/2)

80062

To ensure your responses/opinions will be included, please submit your completed survey by December 31, 2022.

If you have any questions about the study, please feel free to ask; my contact information is given below.

Sincerely,

Brittany E. Estridge
Graduate College of Nursing, University of Kentucky PHONE: 606-275-0048
E-MAIL: beestr2@uky.edu

Faculty Advisor Contact Information:
Jean Edward, PhD, RN, CHPE
PHONE: 859-323-5815 E-MAIL: jean.edward@uky.edu

If you have complaints, suggestions, or questions about your rights as a research volunteer, contact the staff in the University of Kentucky Office of Research Integrity at 859-257-9428 or toll-free at 1-866-400-9428.

Appendix C. Letter of Approval From University of Kentucky Nursing Research Council



August 15, 2022

Dear Brittany E. Estridge,

Your proposal entitled, *“Utilizing Podcast Education to Improve Nurse Knowledge, Confidence, and Attitudes Related to Palliative Care Conversations”* was reviewed during our August 10th meeting of the Nursing Research Council at the University of Kentucky Medical Center, and we are happy to report that your proposal has been approved. If you have not yet obtained approval for your research through the University of Kentucky Institutional Review Board (IRB), you must complete this process as well.

The Nursing Research Council reviews all proposals to conduct scientific inquiry that involve UK nursing staff in an effort to assess for a number of indicators: to determine the feasibility of conducting the proposed research, to establish the level of support from nursing management or administration to conduct the research, to determine the applicability to nursing, to facilitate IRB review ensuring proper protections are present, and to assess the completeness of the proposal. If your proposal is amended in any way such that the methods or procedures are modified significantly, your proposal must be re-submitted for review by this Council. **You are required to provide your IRB approval date, study status and completion date to this council for compliance with Magnet verification requirements.**

Please contact me if you need further assistance, have questions, or wish to discuss anything.

Sincerely,

Jonathan High, BSN, RN, CCRN, RN-BC
Chair, Nursing Research Council

Madison Matlock, BSN, RN
Co-Chair Nursing Research Council

Caroline Browning, MSN, RN
Co-Chair Nursing Research Council

Office of the Executive Vice President for Health Affairs

University of Kentucky • 317 Wethington Building • 900 South Limestone • Lexington, Kentucky 40536-0200
Phone: (859) 323-5126 • Fax: (859) 323-1918 • www.ukhealthcare.uky.edu

Appendix D. University of Kentucky IRB Approval Letter



Initial Review

Approval Ends:
10/11/2023

IRB Number:
80062

TO: Brittany Estridge, RN, BSN
College of Nursing
PI phone #: 606-275-0048
PI email: bestridge@uky.edu
FROM: Chairperson/Vice Chairperson
Medical Institutional Review Board (IRB)
SUBJECT: Approval of Protocol
DATE: 10/13/2022

On 10/12/2022, the Medical Institutional Review Board approved your protocol entitled:

Utilizing Podcast Education to Improve Nurse Knowledge, Confidence, and Attitudes Related to Palliative Care Conversations

Approval is effective from 10/12/2022 until 10/11/2023 and extends to any consent/assent form, cover letter, and/or phone script. If applicable, the IRB approved consent/assent document(s) to be used when enrolling subjects can be found on the approved application's landing page in E-IRB. [Note, subjects can only be enrolled using consent/assent forms which have a valid "IRB Approval" stamp unless special waiver has been obtained from the IRB.] Prior to the end of this period, you will be sent a Continuation Review (CR)/Annual Administrative Review (AAR) request which must be completed and submitted to the Office of Research Integrity so that the protocol can be reviewed and approved for the next period.

In implementing the research activities, you are responsible for complying with IRB decisions, conditions and requirements. The research procedures should be implemented as approved in the IRB protocol. It is the principal investigator's responsibility to ensure any changes planned for the research are submitted for review and approval by the IRB prior to implementation. Protocol changes made without prior IRB approval to eliminate apparent hazards to the subject(s) should be reported in writing immediately to the IRB. Furthermore, discontinuing a study or completion of a study is considered a change in the protocol's status and therefore the IRB should be promptly notified in writing.

For information describing investigator responsibilities after obtaining IRB approval, download and read the document "[PI Guidance to Responsibilities, Qualifications, Records and Documentation of Human Subjects Research](#)" available in the online Office of Research Integrity's [IRB Survival Handbook](#). Additional information regarding IRB review, federal regulations, and institutional policies may be found through [ORI's web site](#). If you have questions, need additional information, or would like a paper copy of the above mentioned document, contact the Office of Research Integrity at 859-257-9428.

see blue.

405 Kinkead Hall | Lexington, KY 40506-0057 | P: 859-257-9428 | F: 859-257-8995 | www.research.uky.edu/ori/

An Equal Opportunity University

Appendix E. Qualtrics Pre- Intervention Questionnaire (1/3)

Utilizing Podcast Education to Improve Nurse Knowledge, Confidence, and Behavior Related to Palliative Care Conversations in the Intensive Care Unit Pre – Intervention Questionnaire

What is your age?

- Under 28
- 28 – 36
- 37 – 43
- 44 – 51
- 52 – 57
- Over 57

Select the option that best describes how many years you have worked as a Registered Nurse?

- 3 years or less
- 3 – 6 years
- 6 – 10 years
- 10 – 15 years
- Over 15 years

Select the option that best describes the amount of experience you have working in critical care as a Registered Nurse:

- 3 years or less
- 3 – 6 years
- 6 – 10 years
- 10 – 15 years
- Over 15 years

Please specify whether you work primarily dayshift or nightshift:

- Dayshift
- Nightshift

Please specify your ethnicity:

- White
- Black
- Latino or Hispanic
- Asian
- Native American
- Other/Unknown (Fill in the blank)
- I prefer not to say

What gender do you identify as?

- Male
- Female
- Non-binary/third gender
- I prefer not to say

Appendix E. Qualtrics Pre- Intervention Questionnaire (2/3)

What is the highest level of education you have completed?

- Associate's Degree
 - Bachelor's Degree
 - Master's Degree
 - Doctoral Degree
-

On a scale of 1 – 3, how would you rate your experience level in having end of life conversations with the patients that you care for and/or their family?

- 1 – No experience at all.
- 2 – Somewhat experienced.
- 3 – Very experienced.

Using a scale of 1 – 3, how familiar are you with the REMAP mnemonic tool for palliative care conversations?

- 1 – Not familiar at all.
- 2 – Somewhat familiar.
- 3 – Very familiar.

Using a scale of 1 – 3, how confident are you in having palliative care conversations with the patients that you care for and/or their family?

- 1 – Not confident at all.
- 2 – Somewhat confident.
- 3 – Very confident.

Using a scale of 1 – 3, how confident are you in your own ability to learn about new evidence based told and utilize them in your daily nursing practice?

- 1 – Not confident at all.
- 2 – Somewhat confident.
- 3 – Very confident.

How many times in the past 6 months have you been involved in a palliative care conversation with the patients that you care for and/or their family?

- 0 times.
- 1 – 3 times.
- More than 3 times.

Using a scale of 1 – 3 how important do you personally feel that it is for you, as the registered nurse to be involved in palliative care conversations with the patients that you care for and/or their family?

- 1 – Not at all important.
- 2 – Somewhat important.
- 3 – Very important.

The following questions will be used to create an anonymous identification to protect your identity:

Appendix E. Qualtrics Pre- Intervention Questionnaire (3/3)

First two letters of your first name
Last two digits of your phone number
Two-digit birth month

Appendix F. Qualtrics Post-Intervention Questionnaire (1/3)

Utilizing Podcast Education to Improve Nurse Knowledge, Confidence, and Behavior Related to Palliative Care Conversations in the Intensive Care Unit Post – Intervention Questionnaire

On a scale of 1 – 3, how would you rate your experience level in having end of life conversations with the patients that you care for and/or their family?

- 1 – No experience at all.
- 2 – Somewhat experienced.
- 3 – Very experienced.

Using a scale of 1 – 3, how familiar are you with the REMAP mnemonic tool for palliative care conversations?

- 1 – Not familiar at all.
- 2 – Somewhat familiar.
- 3 – Very familiar.

What does REMAP stand for?

- Reframe, Emphasize, Map out patient goals, Assign roles, Propose a plan
- Reframe, Expect emotion, Map out patient goals, Align with goals, Propose a plan
- Realign, Empathize, make the best of the situation, Alter goals, Propose a plan
- Realign, Empathize, Map out patient goals, Align with goals, Propose a plan

Which of the following would be an example of a question that you could ask a patient to encourage them to “Map out their goals:”

- “What are you most worried about?”
- “What is your understanding of your prognosis?”
- “How are you feeling today?”
- “What are some of the things that are most important to you?”

Using a scale of 1 – 3, how confident do you feel in your ability to apply the REMAP mnemonic tool to palliative care conversations that you have with patients that you care for and/or their families?

- 1 – Not at all confident.
- 2 – Somewhat confident.
- 3 – Very confident.

Using a scale of 1 – 3, how confident are you in having palliative care conversations with the patients that you care for and/or their family?

- 1 – Not confident at all.
- 2 – Somewhat confident.
- 3 – Very confident.

Using a scale of 1 – 3, how confident are you in your own ability to learn about new evidence based told and utilize them in your daily nursing practice?

- 1 – Not confident at all.

Appendix F. Qualtrics Post-Intervention Questionnaire (2/3)

- 2 – Somewhat confident.
- 3 – Very confident.

How many times in the past 6 months have you been involved in a palliative care conversation with the patients that you care for and/or their family?

- 0 times.
- 1 – 3 times.
- More than 3 times.

Using a scale of 1 – 3 how important do you personally feel that it is for you, as the registered nurse to be involved in palliative care conversations with the patients that you care for and/or their family?

- 1 – Not at all important.
- 2 – Somewhat important.
- 3 – Very important.

Using a scale of 1 – 3, how likely are you to engage in palliative care conversations with patients and/or families as a result of listening to this podcast?

- 1 – Not at all likely.
- 2 – Somewhat likely.
- 3 – Very likely.

Using a scale of 1 – 3, how convenient was it for you to access the podcast and surveys?

- 1 – Not at all convenient.
- 2 – Somewhat convenient.
- 3 – Very convenient.

Using a scale of 1 – 3, how relevant was the podcast to you and your current role as a Registered Nurse in the ICU?

- 1 – Not at all relevant.
- 2 – Somewhat relevant.
- 3 – Very relevant.

Using a scale of 1 – 3, how likely is it that you will use materials learned from the podcast?

- 1 – Not at all likely.
- 2 – Somewhat likely.
- 3 – Very likely.

Using a scale of 1 – 3, how likely are you to recommend the podcast to one of your colleagues?

- 1 – Not at all likely.
- 2 – Somewhat likely.
- 3 – Very likely.

Please state what you did and did not like about being involved in this study, plus any additional feedback that may help with the improvement of future educational podcasts:

Appendix F. Qualtrics Post-Intervention Questionnaire (3/3)

The following questions will be used to create an anonymous identification to protect your identity:

First two letters of your first name
Last two digits of your phone number
Two-digit birth month