

Advance Care Planning in a Primary Care Setting

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Abstract

Purpose: Advance care planning (ACP) allows an individual to discuss and document their personal preferences at end-of-life. ACP has been shown to improve communication and reduce discomfort for patients and their families. The literature supports utilizing formalized, multimodality training programs for healthcare providers in order to increase their confidence in initiating ACP discussions. These findings led to the initiation of an evidence-based practice project in a primary care setting with the purpose of increasing advance care planning discussions between providers and patients with the use of a standardized education tool.

Background and Significance: National regulations mandate that patients are provided information about advance directives in the healthcare setting, but completion rates are not monitored and continue to be low. ACP is now a billable service for healthcare providers, but it has not provided enough incentive to increase completion rates. Barriers for healthcare providers in the outpatient setting include lack of time, protocols, and lack of education on how to initiate and foster advance care planning discussions.

Methods: Healthcare providers in a primary care office attended a 15-minute structured educational session with and a toolkit was provided on the importance of ACP, how to initiate conversations with patients, and bill for the service. Participants completed a portion of the *Knowledge, Attitudinal, and Experiential Survey on Advance Directives* (KAESAD) survey assessing their confidence in ACP before and three months post intervention. Participant confidence (N = 6) in ACP was analyzed using the Wilcoxin test and descriptive statistics. The number of billed ACP services for the office was collected for four months post intervention and compared to the previous four months.

Outcomes: A significant increase in provider confidence after participating in a multimodality

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education program was found in the results ($Z = -2.21$, $p = .03$). There was a 42.1% increase in the number of billed ACP discussions for the office in the four months post intervention.

Conclusion: The future desired state is that ACP discussions become standard practice in primary care leading to the completion of advance directives. This can be accomplished through formalized education sessions and resources for providers in order to increase their confidence in initiating ACP discussions with patients. The ultimate goal is to decrease unnecessary spending at end-of-life while improving patient and family satisfaction with the quality of care received at end-of-life.

Keywords: Advance directive, advance directives, advance care planning, primary care, intervention, education, communication

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Death is inevitable for all, but the discussions surrounding this topic continue to be difficult and are often postponed until it is too late. An advance directive is a written statement by a competent person that indicates their wishes regarding medical decisions at end-of-life if they are unable to communicate due to mental infirmity or unconsciousness (Congressional Research Services (CRS) & Library of Congress (LC), 2016). The two parts of an advance directive are the living will and the health care power of attorney. A living will is utilized when an individual is unable to communicate their wishes and inform health care provider about the type of medical care they wish to receive at the end-of-life (CRS & LC, 2016). The health care power of attorney identifies a health care proxy or decision maker in the event that the patient is unable to make decisions for themselves (CRS & LC, 2016). Advance directives promote patient autonomy, dignity, reassurance, and empowerment (Wissow et al., 2004).

Problem Statement

In the United States (U.S.), advance care planning rates are less than 15%, and healthcare providers have not made progress in improving these rates (Ramsaroop, Reid, & Adelman, 2007; Tung et al., 2014). It is estimated that 40% to 70% of medical inpatients are not capable of making medical decisions at end-of-life (Sullivan & Dickerson, 2016). If a patient has not previously documented their end of life wishes and is unable to do so, it is left up to the patient's family to make those difficult decisions. This can cause stress and uncertainty for those involved. Advance care planning (ACP) has been shown to improve communication, increase knowledge and respect for a patient's wishes at end-of-life, and improve patient and family satisfaction with care (Detering et al., 2014; Sullivan & Dickerson, 2016).

Laws regarding advance directives are individualized by state, but there have been a few

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regulations passed by Congress regarding advance care planning (CRS & LC, 2016). In 1991, Congress approved the Patient Self-Determination Act (PSDA) which requires that all Medicare-participating healthcare facilities provide information to patients on advance directives to give patients autonomy over their care (Ramsaroop, Reid, & Adelman, 2007; Tung et al., 2014). These facilities are also required to provide community education on advance directives, provide information about health care decision making rights, ask all patients if they have an advance directive, educate staff and community on advance directives, and not discriminate against patients based on their advance directive state (Ramsaroop, Reid, & Adelman, 2007). The PSDA mandates that providers distribute advance directives at time of admission to the hospital and on initial receipt of care or plan of enrollment (CRS & LC, 2016). If advance directives are not distributed and documented per the PSDA, the Secretary of Health and Human Services can withhold payment of services to Medicare-certified providers (CRS & LC, 2016).

Additional laws include The National Defense Authorization Act which established a federal advance directive for military personnel and the Medicare Improvements for Patients and Providers Act (MIPPA) (CRS & LC, 2016). The MIPPA added end-of-life planning to the initial preventive physical exam for new Medicare patients (CRS & LC, 2016). The Centers for Medicare and Medicaid Services (CMS) rely on state agencies and internal contract review to monitor advance directive requirements (CRS & LC, 2016). The Institute of Medicine prioritized advance care planning in 2014. Healthcare providers can now bill Medicare for ACP discussions, but this incentive has not provided enough motivation to overcome the barriers (Sullivan & Dickerson, 2016). How advance directive information is addressed can vary, but there are common challenges such as the providers discomfort in talking about end-of-life issues as well

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as the lack of time for discussion (Detering et al., 2014; Lund, Richardson, & May, 2015; Spoelhof & Elliott, 2012).

Purpose and Rationale

Advance care planning is an ongoing process that requires multiple conversations with family members and healthcare professionals (Lum et al., 2016). Primary care clinics have the ability to implement an intervention to engage patients in advance care planning (Lum et al., 2016). However, many providers find advance care planning conversations difficult and feel that they have inadequate training to assist in the process of end-of-life care communication (Clayton et al, 2012; Detering et al., 2014; Tung et al., 2014).

Advance directives are associated with lower levels of Medicare spending, decreased likelihood of in-hospital deaths, and increased hospice use in areas that have high levels of end-of-life spending (Rao, Anderson, Lin, & Laux, 2014). An advance directive allows a patient to have high quality care at end-of-life without unwanted or invasive treatments (Oczkowski, Chung, Hanvey, Mbuagbaw, & You, 2016). The purpose of this evidence-based practice project was to utilize a multimodality educational intervention for healthcare providers in a primary care practice to improve their confidence in their ability to have advance care planning discussions with patients and bill for the service.

Background and Significance

Many barriers that have been identified that may account for the low completion rates of advance directives. Prior to the 17th century, death was accepted as an inevitable part of life and people were prepared, however, life-prolonging technology in the 19th and 20th centuries improved the lives of humankind and attitudes changed (Sullivan & Dickerson, 2016). Death and dying became something to be ashamed of and was hidden to imply the possibility of

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immortality (Sullivan & Dickerson, 2016). Federal funding for research is often focused on finding a cure instead of determining ways in which to manage chronic conditions (Sullivan & Dickerson, 2016). Living wills were initially developed by advocates of euthanasia, and advance care planning may be looked at by some as murder (Sullivan & Dickerson, 2016). Religious or spiritual beliefs may increase the rate of life-prolonging care along with the fee-for-service medical paradigm in the United States (Sullivan & Dickerson, 2016).

Effective communication is a major barrier to end-of-life discussion and can be attributed to a healthcare provider's lack of time and communication skills, lack of education on how to initiate discussions, lack of protocols, and inadequate mutual understanding regarding values and goals (Houben, Spruit, Groenen, Wouters, & Janssen, 2014; Spoelhof & Elliot, 2012). Historical, political, economic, and social beliefs all contribute to the low rates of advance care planning in the United States, and it is important to train healthcare providers on the ways in which to initiate these discussions in the primary care setting (Sullivan & Dickerson, 2016). Factors that may increase the likelihood of having an advance directive include presence of a chronic illness or condition, being 65 years or older, being Caucasian, being female, and having a higher income and education level (Rao et al., 2014). In addition to demographic barriers to completion of ACP, there are legal barriers to consider. Barriers include poor health literacy, health care agent restrictions, execution requirements, inadequate reciprocity, and religious, cultural, and social inadequacies (Hinders, 2012).

A systematic review and meta-analysis compared communication tools such as decision aids, structured meeting plans, and educational interventions to determine the impact on end-of-life decisions of adult patients in the ambulatory care setting (Oczkowski et al., 2016). Low quality evidence was found that supported structured communication tools to assist with end-of-

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life discussions in the outpatient setting (Oczkowski et al., 2016). The lack of supporting evidence was thought to be related to the need for a large sample size over a prolonged period of time with follow-up (Oczkowski et al., 2016). A standardized approach to measuring outcomes and knowledge of advance care planning after implementing an intervention was found to be lacking and made it difficult to objectively compare the interventions (Oczkowski et al., 2016). In another systematic review, it was determined that a combined written, verbal, and video education was significantly more effective than a single written intervention (Durbin, Fish, Bachman, & Smith, 2010).

In a study of community-dwelling adults, lack of awareness was the most frequently reported reason for not having an advance directive but 67.8% reported having concerns about end-of-life care (Rao et al., 2014). The data suggested that most people prefer receiving this information from healthcare providers but their attitude and comfort levels could be a barrier (Rao et al., 2014). Patients have indicated that they would prefer to discuss this topic with a healthcare provider who has known them for some time and for the provider to initiate the advance care planning when they are in good health (Ramsaroop, Reid, & Adelman, 2007; Wissow et al., 2004). In an evaluation of a multimodality education program for healthcare providers it was determined that providers were significantly more confident in their abilities to discuss advance care planning after reading a training manual, viewing a DVD, and participating in an interactive e-simulation (Detering et al., 2014). In a study of internal medicine resident physicians, 70% of the residents reported a lack of confidence in discussing advance directives and avoided the conversation (Tung et al., 2014). Enhanced training for providers, workshops for all members of the health care team, non-physician ACP champions, and standardized documentation were proposed interventions (Tung et al., 2014).

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Interactive interventions in which patients can ask questions have also been shown to be more effective than didactic interventions (Spoelhof & Elliott, 2012). Group visits to discuss advance care planning are an alternative option which allow patients to interact with one another and discuss end-of-life decisions in a safe and supportive environment (Lum et al., 2016). An intervention to improve advance directive completion rates in a primary care setting will need to first focus on provider education and comfort levels with the material. Overcoming barriers to starting these difficult conversations can be done through interactive education and standardized workflows. An example of a comprehensive resource is The Conversation Project (Bisognano & Goodman, 2013). When implemented within several health systems in La Crosse, Wisconsin, patients and families were routinely engaged in conversations regarding their wishes (Bisognano & Goodman, 2013). In a study of 540 adults who died from April 1995 to March 1996 in La Crosse, 85% of them had written advance directives (Bisognano & Goodman, 2013). Impacting advance directive rates will require increased education for providers to initiate the conversation and patient-friendly materials to further the discussion.

Internal Evidence

In a primary care setting within an Accountable Care Organization in Phoenix, Arizona, there were new efforts to increase advance care planning discussions during annual physical exams. The plan was to empower providers to not only initiate these conversations, but also properly document and bill for the service. The goal was that these conversations would meet quality measures, increase revenue, decrease end-of-life care costs, and improve quality of care for their patients at end-of-life. Within the Accountable Care Organization, there were 16,415 patients on Medicare, but only 1,590 advance care planning discussions were billed in 2016 (L. Donkerbrook, personal communication, April, 18, 2017). Only 9.68% of eligible patients

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participated in advance care planning discussions, and there is a need for further evaluation and change in current practice (L. Donkerbrook, personal communication, April, 18, 2017). After review of the background and clinical significance of advance care planning along with effective interventions, the clinically relevant PICOT question was developed, “In patients in a primary care setting, does a multimodality training program for providers in comparison to current practice impact the completion rates of advanced directives after the completion of the program?”.

Search Strategy

Electronic database searches were completed to obtain relevant studies to answer the clinical PICOT question. The databases searched for this literature review included CINAHL (Appendix A), PubMed (Appendix B), Web of Science (Appendix C) and Cochrane Library (Appendix D). Keywords included; *advance directive, advance directives, advance care planning, primary care, evidence-based interventions, intervention, education, communication, conversation project, respecting choices, next steps, and prepared*. The initial search of the keywords (‘*advance directive*’ or ‘*advance care planning*’) yielded 6,463 results in CINAHL (Appendix A), 953 in PubMed (Appendix B), 9,204 in Web of Science (Appendix C) and 752 in Cochrane Library (Appendix D). Keywords were searched independently and then combined using “AND” with additional keywords to obtain a manageable yield in each database.

The initial yield in CINAHL was narrowed by searching the original terms with AND ‘*education*’ AND ‘*primary care*’. Limitations included published dates before 2012 and studies outside of the U.S. The final yield was 25 articles that were then reviewed for inclusion in the literature review (Appendix A).

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The initial PubMed search was limited by searching the original terms with AND *'primary care'* AND (*'provider education'* OR *'evidence-based interventions'*) with a yield of 17 articles (Appendix B). An additional search was conducted within PubMed using the original key terms AND (*'conversation project'* OR *'respecting choices'* OR *'next steps'* OR *'prepared'*) with the limitation of being published in the last 5 years. This resulted in a yield of 85 articles.

The Web of Science database search was limited by using the original key terms AND (*'intervention'* AND *'communication'*) and a timespan from 2012 to 2017 yielding 182 results (Appendix C). Article titles and abstracts were reviewed for inclusion in literature review. A search of the Cochrane Library initially yielded 25 results (Appendix D). Exclusions included published dates prior to 2012 and study protocols with a yield of 18. The only article that was relevant to the PICOT was excluded because it focused solely on hemodialysis patients.

Exclusion criteria in each database included published dates before 2012 apart from one landmark systematic review. Additional exclusion criteria were studies written in a language other than English, study protocols, doctoral dissertations, studies focused on patients under 18 years of age, or studies focused on specific patient populations (i.e. congestive heart failure, dialysis). A hand ancestry search was also completed and yielded one study. The majority were found to be irrelevant or outside of the published date guidelines. The ten studies chosen for inclusion were relevant to the PICOT question. They were independently reviewed for validity, reliability, and applicability (Appendix E).

Critical Appraisal and Synthesis

Ten studies were selected in this literature review. Each study was evaluated using Melnyk and Fineout-Overholt's (2015) rapid critical appraisal tool and was presented in evidence tables for analysis of data (Appendix E). The strength of the studies varied from level

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one through level six evidence. There were three systematic reviews (SR) with two of them also being a meta-analysis (MA), three quasi-experimental studies (QE), one retrospective chart review (RCR), one qualitative systematic review, and two mixed-method research studies (MMR). There was minimal bias reported amongst the studies with only one study reporting that an author received royalties from the educational tool (Appendix E). Additional biases to consider were that several of the study's participants were volunteers and may have already had positive beliefs about advance care planning or wanted to provide socially desirable answers on surveys. There was moderate heterogeneity in the measurable outcomes for each study but homogeneity in the fact that they each assessed the effect of a structured tool to address advance care planning (Appendix F).

The sample size for each study was adequate and patient demographics were consistent in focusing on patients over 21 years of age and excluding studies or interventions that were disease-specific or involved psychiatric care planning (Appendix E). Interventions across all studies had at least two components, but there was a wide variety of measurement tools utilized. Eight of the studies did not report the specificities or sensitivities of their measuring tools (Appendix E). Seven studies assessed patient or provider satisfaction and confidence through pre and post questionnaires or phone interviews. Two studies focused on advance directive completion rates, and two studies measured both outcomes (Appendix F). Transferability may be impacted by the fact that only four of the studies were completed in the United States. Other countries may have different views on end of life, but the patient population and clinical settings are similar. There were significant results or positive outcomes in each study to support the use of multimodality education tools for advance care planning.

There is currently not a standardized approach for discussing or completing advance

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directives. Healthcare providers are encouraged to initiate advance care planning conversations with their patients, but studies have indicated that lack of provider comfort and time are barriers. Healthcare providers currently do not receive additional training or tools to help them facilitate these important discussions. The evidence indicates that standardized, multimodality education tools can improve provider confidence in having advance care planning discussions. Additionally, standardized education tools for patients are shown to improve patient satisfaction and can positively impact the number of advance directives completed.

Conceptual Framework and Evidence-Based Practice Model

The self-efficacy theory was the conceptual framework that guided this evidence-based project (Appendix G). Self-efficacy is an individual's beliefs in their ability to complete an action (Resnick, 2014). Behavior is believed to be influenced by environment, person, and informational sources as well as self-efficacy and outcome expectations (Resnick, 2014). This theory was appropriate for this project design because the project was focused on increasing healthcare provider's confidence in having advance care planning discussions with patients. The project was designed to promote self-efficacy for healthcare providers while addressing current behavior and potential barriers.

The Model for Evidence-Based Practice Change facilitated this proposed practice change (Appendix H). The model guides healthcare professionals through a systematic process for change and supports a combination of quantitative and qualitative data, clinical expertise, and contextual evidence (Rosswurm & Larrabee, 1999). This model provides a six-step approach for implementing an evidence-based practice (EBP) that starts with identifying a need for change and ends with implementing and evaluating that change (Melnik & Fineout-Overholt, 2015). The model provided a solid framework to guide this project through the steps of evaluating,

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analyzing, and synthesizing the evidence for the purpose of designing a practice change (Melnyk & Fineout-Overholt, 2015). A need for increasing advance care planning discussions was identified within the Accountable Care Organization and the goal was to implement an intervention that would assist providers in having advance care planning discussions with patients and evaluate the outcomes.

Methods

Ethical Considerations

An approval letter from the Vice President of Case Management of the Accountable Care Organization was obtained (Appendix G). Arizona State University Institutional Review Board approved the project as an Initial Study (Appendix H). The practice was selected by the Case Management team at the Accountable Care Organization and the practice verbally consented to host the project. Informed consent was obtained from participants prior to their engagement in project (Appendix I).

Practice Setting and Participants

The project site was a primary care clinic in a metropolitan area in the southwestern United States. The office had two physicians, one nurse practitioner, two physician assistants, one registered nurse, one office manager, and several front and back office staff members. The educational session time was planned with the office manager and all members of the staff were invited to participate in the educational session over a lunch break.

The participants donated their time and did not receive any direct compensation for participating in this educational program. Inclusion criteria included providers and clinical staff who were English speaking and at least 18 years of age. Exclusion criteria were minors, adults unable to consent, and were non-English speaking. There were six participants.

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Intervention

This project consisted of a pre-post design with an educational component and follow up data collection on billable advance care planning rates in an accountable care organization. Staff in an internal medicine office voluntarily attended a 15-minute structured educational session about Advance Care Planning, that included verbal and written material. The written materials included the *Five Wishes Physician Toolkit* and an additional information about the laws and regulations surrounding ACP, barriers, and a list of additional resources. Participants completed a Level of Confidence subscale of the *Knowledge, Attitudinal, and Experiential Survey on Advance Directives* (KAESAD) survey to assess their confidence in Advance Care Planning before the intervention and three months post intervention (Jezewski et al., 2005). The total time required to complete the survey before and after the completion of the project was approximately five minutes each.

The educational session provided participants with information about the background and importance of ACP, how to initiate conversations with patients, implement into practice, and bill for the service. The proposed program educated participants through verbal instruction and written materials. There was additional time allowed to answer questions about the education material and surveys.

Outcome Measures

The primary outcome of this project was to assess the change in participant confidence in advance care planning after the educational session. The secondary outcome was tracking the number of billed Advance Care Planning services for each provider. This data was collected from quality data reported to the organization from Medicare for four months post intervention and compared to the data four months before the intervention.

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Instruments

A demographic questionnaire was developed to collect information on participant's demographics, role, and years of experience (Appendix J).

Staff completed a Level of Confidence subscale of the *Knowledge, Attitudinal, and Experiential Survey on Advance Directives* (KAESAD) originally developed by Mary Ann Jezewski, RN, PhD, FAAN to assess their confidence in Advance Care Planning (Jezewski et al., 2005). Permission was given by Dr. Jezewski to reproduce the instrument for the project with the understanding that it would not be published or attached to this final report. The portion of the survey utilized consisted of 10 questions on a five-point Likert scale designed to measure confidence in Advance Care Planning. The reliability and validity of the entire survey was established for use by registered nurses and not the general public.

Data Collection and Analysis

Post surveys were administered, and data collected from subjects before the intervention and three months post intervention. The rate of advance care planning codes billed by the providers was tracked through quality data reported to the organization's chief financial officer each month. All data analysis was performed using IBM SPSS® Statistics Version 24. Data was analyzed using the Wilcoxin test with intent to treat. Descriptive statistics and cross-tabulation were used to describe the sample and outcome variables. Non-parametric statistics were used to analyze the data using a two-tailed test and the critical value was set at $p > .05$.

Budget

Total costs for the project were estimated to be \$1365.00 USD (Appendix K). In-kind support in the amount of \$1215.00 USD was provided by the project site and Accountable Care

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Organization. Education materials were \$5.00 per person. Lunch was provided by the DNP student during the education session and was \$10.00 per person.

Results

Demographic data

The respondents were clinic personnel at a primary care practice in Arizona (N = 6). The respondents were 2 (33.3%) males, 4 (66.7%) females and all Caucasian (100%). The average years of age of the respondents was 42.5 (SD = 19.25) and ranged from 25 to 68 years. The respondents were 1 (16.7%) Nurse Practitioner (NP), 2 (33.3%) Physician Assistants (PA), 1 (16.7%) Medical Doctor/Doctor of Osteopathic Medicine (MD/DO), 1 (16.7%) Office Manager, and 1 (16.7%) Medical Student. The level of education of the respondents were 2 (33.3%) Bachelor's degrees, 3 (50%) Master's degrees and 1 (16.7%) Doctorate degree. The average years of experience and the years in current role were both 13 (SD = 17.05) years with the same range of 1 to 35 years.

Outcomes

Confidence. A Wilcoxon test examined the results of the pre and post survey conducted to measure the provider's level of confidence related to advance care planning (Appendix L). A significant increase in provider confidence was found in the results ($Z = -2.21$, $p = .03$). Provider confidence in advance care planning improved after participating in a multimodality education program. The NP had a high initial score of 88% and the same score post intervention. The PAs and MD/DO all had improved scores post intervention. The PAs had initial scores of 62% and 86% which increased to 72% and 100% confidence respectively. The MD/DO had an initial score of 80% that increased to 84%. Years of experience or time in current role did not have any clinical significance.

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Billed ACP codes. The billed ACP codes were measured from quality data reported to the organization from Medicare for four months post-intervention and compared to the data four months pre-intervention. The practice had billed for 19 ACP codes between June 2017 to September 2017 and 27 ACP codes between October 2017 to January 2018. Providers within the Accountable Care Organization (ACO) averaged 4.48 billed ACP codes during the four months pre-intervention. The selected practice had billed for 19 ACP codes accounting for 4.49% of the total codes billed within the organization. During the four months post intervention, providers within the ACO averaged 4.22 billed codes and the selected practice billed for 27 accounting for 6.63% of the total billed codes. There was a 42.1% increase in the number of billed ACP discussions for the selected practice in the four months post intervention.

Discussion

The evidence indicated that a formalized, multimodality training program would increase provider confidence in advance care planning. This evidence-based practice project was successful in significantly increasing provider confidence regarding advance care planning after a formalized education session. The rate of billed advance care planning rates within the practice increased post intervention. ACP is a billable service but was underutilized within the entire organization and can be attributed to lack of time, provider confidence, and patient resistance. This project was successful in addressing provider confidence surrounding advance care planning. The educational session provided them with the resources to help them quickly discuss the topic and ways in which to address a patient's resistance or concerns.

The goal of the organization was to meet quality measures, increase revenue, and decrease end-of-life care costs while improving quality of care at end-of-life. This project suggests that if providers receive education on advance care planning their confidence in

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initiating conversations with patients improves and more patients will receive this important information. The developed education session is sustainable and could be easily implemented at other practices within the organization as the materials are both cost effective and time efficient. This project directly impacted the organization and providers and indirectly impacted patients and their families.

Limitations and Implications

One of the limitations of this project was a small sample size. The practice that was selected by the ACO to participate in the intervention was a small practice and each of the providers on site the day of the presentation participated. The initial aim was that a well performing practice would be selected and this project would be conducted as a pilot project for a larger roll-out within the organization. The educational session was short but the time with the participants was rushed because coordinating schedules over a lunch hour on a Friday afternoon was difficult. However, this time was selected by the practice as they felt it would be the best time.

The ACP billed rates were also only tracked by the organization for Medicare patients. ACP discussions may have occurred with patients who had a different insurance and there was not a way to track this information at this time. A limitation of the project was that there was a significant delay in how the data is reported back to the organization from Medicare so that only four months post data could be collected with the timeline of the project. A better measure of the impact of the project would have been to examine at data six months pre and six months post intervention. Also, implementing the project at the beginning of a calendar year and monitoring for a longer period of time would have allowed the data to be collected for a full year of annual Medicare physicals and compared to the previous year.

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There is also the possibility that ACP discussions were initiated with patients but that the providers did not remember to bill for the service. While provider confidence increased in ACP it is difficult to assess if this directly impacted their practice. Future practice sites may benefit from weekly check-ins with providers and staff to answer questions, audit charts, and assess facilitators or barriers to ACP conversations with patients.

Material cost were minimal but may be a limiting factor for the organization or future practices. The educational packets were \$5 each and the organization would have to pay staff to participate in the educational session and block appointment times. The materials could be redesigned and reproduced at a lower cost but there would be initial costs associated with developing the material. It is important for the organization and providers to recognize billing for ACP has the potential to both increase revenue for the practice as well as improve quality of care for their patients at end-of-life.

Conclusion

Advance care planning has been shown to decrease unnecessary spending while improving patient and family satisfaction with the quality of care received at end-of-life. The future desired state is that advance care planning will become a standard practice in primary care. Death is both inevitable and unpredictable. Advance care planning discussions need to be initiated in the primary care setting long before a patient's health declines or they have an unexpected event. American society is focused on planning for the future but fails to plan for the end. Healthcare providers have a unique opportunity to encourage their patients to make decisions surrounding end-of-life. This will ensure that the care that each patient receives is within their wishes and can decrease the amount of stress and burden on friends and family. The literature and this project indicate that all healthcare providers can benefit from additional

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education and training about advance care planning on how to initiate and have these critical conversations with patients.

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Appendix A

Search Strategy 1

CINAHL

← → ↻ web.b.ebscohost.com.ezproxy1.lib.asu.edu/ehost/resultsadvanced?vid=11&sid=b1467023-314b-455e-bace-c38af4caa94b%40sessionmgr120&bquery=(advance+d... ☆

AND ▾

Select a Field (option... ▾

AND ▾

Select a Field (option... ▾

+ -

[Basic Search](#) | [Advanced Search](#) | [Search History ▾](#)

Search History/Alerts

[Print Search History](#) | [Retrieve Searches](#) | [Retrieve Alerts](#) | [Save Searches / Alerts](#)

☐ Select / deselect all

[Search with AND](#) | [Search with OR](#) | [Delete Searches](#)

Refresh Search Results

Search ID#	Search Terms	Search Options	Actions
☐ S4	(advance directive OR advance directives) OR advance care planning AND education	Limiters - Published Date: 20070101-20171231 Narrow by SubjectGeographic: - usa Search modes - Boolean/Phrase	View Results (1,769) View Details Edit
☐ S3	(advance directive OR advance directives) OR advance care planning AND education	Limiters - Published Date: 20070101-20171231 Search modes - Boolean/Phrase	View Results (2,687) View Details Edit
☐ S2	(advance directives OR advance directive) AND primary care AND education	Limiters - Published Date: 20070101-20171231 Search modes - Boolean/Phrase	View Results (17) View Details Edit
☐ S1	(advance directives OR advance directive) AND primary care AND education	Search modes - Boolean/Phrase	View Results (25) View Details Edit

Refine Results

Current Search ▾

Boolean/Phrase:

(advance directive OR advance directives) OR advance care plann...

Search Results: 1 - 50 of 1,769

Relevance ▾ | Page Options ▾ | [Share](#) ▾ | [Plum Print](#) ▾

- Academic Journal

1. Assessing a Nurse-Led Advance Directive and Advance Care Planning Seminar.

(includes abstract) Hinderer, Katherine A.; Mei Ching Lee; Applied Nursing Research, Feb2014; 27(1): 84-86. (3p) (Journal Article - research) ISSN: 0897-1897 PMID: 24290237 AN: 104028882

Abstract: Background: **Advance directives (AD)** and **advance care planning (ACP)** are critical to making patient-centered end-of-life decisions. Despite their importance, completion rates for AD in the United States remain low at about 18-36%. Lack of **education** related to AD and not understanding AD have been cited as key reasons for not participating in ACP or completing AD. Purpose: The purpose of this quasi-experimental pilot study was to assess the effectiveness of a nurse led educational AD

ADVANCE CARE PLANNING

Appendix B

Search Strategy 2

PubMed 1

NCBI Resources How To PubMed Home More Resources Help Sign In to NCBI

PubMed Advanced Search Builder [YouTube Tutorial](#)

Filters activated: published in the last 5 years. [Clear all](#)

Use the builder below to create your search

Edit [Clear](#)

Builder

All Fields [Show index list](#)

AND All Fields [Show index list](#)

Search or [Add to history](#)

History [Download history](#) [Clear history](#)

Search	Add to builder	Query	Items found	Time
#2	Add	Search ((advance directive OR advance care planning)) AND (conversation project OR respecting choices OR next steps OR prepared) Filters: published in the last 5 years	85	19:10:07
#1	Add	Search ((advance directive OR advance care planning)) AND (conversation project OR respecting choices OR next steps OR prepared)	177	19:09:56

You are here: NCBI > Literature > PubMed [Support Center](#)

PubMed 2

Advanced search x Completing an ad x Promoting advanc x The completion o x A Pilot Feasibility x Teaching general x Efficacy of a traini x Arsenal

NCBI Resources How To PubMed Home More Resources Help aelopez My NCBI Sign Out

PubMed Advanced Search Builder [YouTube Tutorial](#)

((((((advance directive OR advance directives)) OR advance care planning) AND primary care)) AND evidence based intervention)

Edit [Clear](#)

Builder

All Fields (((((advance directive OR advance directives)) OR advance care planning) AND primary ca [Show index list](#)

AND All Fields [Show index list](#)

Search or [Add to history](#)

History [Download history](#) [Clear history](#)

Search	Add to builder	Query	Items found	Time
#5	Add	Search (((((advance directive OR advance directives)) OR advance care planning) AND primary care)) AND evidence based intervention	17	23:46:37
#2	Add	Search (((((advance directive OR advance directives)) OR advance care planning) AND primary care)) AND provider education	21	23:44:15
#1	Add	Search (((((advance directive OR advance directives)) OR advance care planning) AND primary care	953	23:42:07

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Genetic Testing Registry

NCBI INFORMATION
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Appendix C

Search Strategy 3

Web of Science

apps.webofknowledge.com.ezproxy1.lib.asu.edu/summary.do?product=WOS&parentProduct=WOS&search_mode=GeneralSearch&qid=5&SID=1EJ15S1z5RnsD97zi4&... ☆

WEB OF SCIENCE™ THOMSON REUTERS™

Search My Tools Search History Marked List

Results: 182
(from Web of Science Core Collection)

You searched for: **TOPIC:** (advance directive OR advance care planning) AND **TOPIC:** (intervention)
Refined by: **TOPIC:** (communication)
Timespan: 2012-2017. Indexes: SCI-EXPANDED, SSCI, A&HCI, ESCI.
...Less
Create Alert

Sort by: Relevance Page 1 of 19

Select Page Save to EndNote online Add to Marked List

1. **The effects of advance care planning on end-of-life care: A systematic review**
By: Brinkman-Stoppelenburg, Arianne; Rietjens, Judith A. C.; van der Heide, Agnes
PALLIATIVE MEDICINE Volume: 28 Issue: 8 Pages: 1000-1025 Published: SEP 2014
Get It! @ASU View Abstract

2. **Doctors' Decisions When Faced With Contradictory Patient Advance Directives and Health Care Proxy Opinion: A Randomized Vignette-Based Study**
By: Escher, Monica; Perrier, Arnaud; Rudaz, Sandrine; et al.
JOURNAL OF PAIN AND SYMPTOM MANAGEMENT Volume: 49 Issue: 3 Pages: 637-645 Published: MAR 2015
Get It! @ASU Full Text from Publisher View Abstract

3. **Efficacy of Advance Care Planning: A Systematic Review and Meta-Analysis**
By: Houben, Carmen H. M.; Spruit, Martijn A.; Groenen, Miriam T. J.; et al.
JOURNAL OF THE AMERICAN MEDICAL DIRECTORS ASSOCIATION Volume: 15 Issue: 7 Pages: 477-489
Published: JUL 2014
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Analyze Results
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Times Cited: 65 (from Web of Science Core Collection)
Highly Cited Paper
Usage Count

Times Cited: 2 (from Web of Science Core Collection)
Usage Count

Times Cited: 49 (from Web of Science Core Collection)
Usage Count

Refine Results
Search within results for...

Web of Science Categories

- HEALTH CARE SCIENCES SERVICES (49)
- MEDICINE GENERAL INTERNAL (28)
- PUBLIC ENVIRONMENTAL OCCUPATIONAL HEALTH (18)


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Appendix D

Search Strategy 4

Cochrane

← → ↻ onlineibrary.wiley.com.ezproxy1.lib.asu.edu/cochranelibrary/search ☆ ⋮

 **Cochrane Library** Trusted evidence. Informed decisions. Better health. [Log in / Register](#)

Search Search Manager Medical Terms (MeSH) Browse

+ Title, Abstract, Keywords advance care planning OR advance directive [Go](#) [Save](#)

[Search Limits](#) [Search Help](#) Publication Year from 2012 to 2017, in Cochrane Reviews (Reviews only) (Word variations have been searched) [Add to Search Manager](#)

[Clear](#) [Clear limits](#)

All Results (18)

Cochrane Reviews (18)

Review

All

Current Issue

Me Methodology

Dx Diagnostic

Ov Overview

Pg Prognosis

Qu Qualitative

Cc Conclusions changed

Ns New search

Mc Major change

Un Undated

Cochrane Database of Systematic Reviews : Issue 3 of 12, March 2017

Issue [updated daily](#) throughout month

There are 18 results from 9780 records for your search on 'advance care planning OR advance directive in Title, Abstract, Keywords , Publication Year from 2012 to 2017 in Cochrane Reviews'

Sort by [Relevance: high to low](#)

Select all | [Export all](#) | [Export selected](#)

[Advance care planning for haemodialysis patients](#)
Chi Eung Danform Lim , Rachel WC Ng , Nga Chong Lisa Cheng , Maria Cigolini , Cannas Kwok and Frank Brennan
Online Publication Date: July 2016 [Review](#)

[Palliative care interventions in advanced dementia](#)
Edel Murphy , Katherine Froggatt , Sheelah Connolly , Eamon O'Shea , Elizabeth L Sampson , Dymna Casey and Declan Devane
Online Publication Date: December 2016 [Review](#)

[End-of-life care pathways for improving outcomes in caring for the dying](#)

ADVANCE CARE PLANNING

Appendix E

Evaluation Table

Citation	Conceptual Framework	Design/ Method	Sample/ Setting	Major Variables & Definitions	Measurement	Analysis	Finding	Decision for Use
Butler et al., (2014). Decision Aids for advance care planning: An overview of the state of science Funded by MN EPC under contract HHS/AHRQ Bias: Author affiliations at acponline.org/authors but unable to be viewed U.S.	CLT	Design: MMR Method: Review of both gray and published literature along with semi-structured interviews for technical brief Purpose: Overview of advance care planning decision aids for adults	N= 16 studies n= 9 RCT n=7 case series Demographic: Adult PTs with and without serious or advance illness. Setting: OP (15), IP (1) Exclusion: Studies with children, psychiatric care planning, or current EOL decisions, interventions without	IV: MyDirectives IV1: Five Wishes IV2: Consumer’s Toolkit for ACP IV3: EOL Decisions IV4: Caring Conversations IV5: ACP Conversation Guide IV6: The Conversation Project IV7: The One Slide Project IV8: CRITICAL IV9: Preferred Priorities of Care	Semi-structured telephone interviews Standardized data extraction form by IPDAS to collect information about population, decision aids, and outcomes Technical brief methods used	NA	DV1: PF to support decisions aids (12) DV2: PF to support clarity (5- all video interventions) DV3: Knowledge of AD or disease process (9) DV4: Medium effect PREPARE and Making Your Wishes Known	LoE: VI Strength: Evaluated multiple ACP tools Weakness: Technical brief methods used and outcomes not synthesized, risk of bias not assessed or strength of evidence. Individual studies measured satisfaction rather than IPDAS effectiveness measures.

Key: **ASA** - agreed or strongly agreed; **ACP** - advance care planning; **AD** - advance directive; **AHRQ** - Agency for Healthcare Research and Quality; **AR** - attrition rate; **AU** - Australia; **CLT** - cognitive learning theory; **CI** – confidence interval; **CST** - Conversation Starter Tool; **DN** - authors declared none; **EB** – evidence based; **ED** - emergency department; **EOL** - end of life; **EMR** – electronic medical record; **EPC** - evidence-based practice center; **ERA** - Elder Risk Assessment; **ES** – effect size; **FRNR** - funders report no role in study design, data collection or analysis; **GHS** - Gundersen Health System; **GRADE** - grading recommendations, assessment, development, and evaluation; **HC** - healthcare; **HCP** - health care provider; **HCP** - healthcare providers; **IM** - internal medicine; **IP** - inpatient; **IPDAS** - international patient decision aids standards; **LQE** - low quality evidence; **LoE** - level of evidence; **LS** - Likert Scale; **MA** - meta-analysis; **MBI** - Maslach Burnout Scale; **MMR** - mixed methods research; **MN** - Minnesota; **MNT** – McNemar Test; **N/A** - not applicable; **ND** - not disclosed; **NIHR CLAHRC** - National Institute for Health Research Collaboration for Leadership in Applied Health Research and Care; **NP** - nurse practitioner; **NPT** – Normalization process theory; **NR** - narrative review; **NRT** - nonrandomized trials; **OP** - outpatient; **OR** – odds ratio; **PASW** - Predictive Analytics Software; **PC** - palliative care; **PEDRO** – Physiotherapy evidence based database; **PGY** - post-graduate year; **PF** – positive findings; **PT** - patient; **QE** - quasi-experimental; **QOE** - quality of evidence; **RC** - Respecting Choices; **RCR** - retrospective chart review; **RCT** - randomized controlled trials; **RN** - nurse; **SE** – standard error; **SR** - systematic review; **U.S.** - United States; **UTD** - unable to determine; **WSRT** – Wilcoxon Signed Ranks Test

ADVANCE CARE PLANNING

			educational component	IV10: PREPARE				Feasibility: Tools assessed were publically available and appropriate in ambulatory setting
			Inclusion: English studies that assessed effect of decision aid from 1990-2014	DV1: Satisfaction with decision aid DV2: Clarity of patient preferences DV3: Knowledge of AD and disease process DV4: Effectiveness of decision aids.				
			AR: n/a					
Citation	Conceptual Framework	Design/ Method	Sample/ Setting	Major Variables & Definitions	Measurement	Analysis	Finding	Decision for Use
Blackford et al., (2013). Facilitating advance care planning in community palliative care: Conversation starters across the client journey	PC practice framework	Design: MMR Method: Multi-site action research with observation, semi-structured interviews, medical record audits,	N=7 service locations n= 390 medical record audits n=27 semi-structured interviews n=35 focus group	IV:CST-ACP DV: PC team initiating ACP discussions in practice	60 hours of participant observations Medical record audits to identify potential cues for ACP Semi-structured interview with	Directed content analysis NVivo Ver 8 (QSR International)	The tool was helpful reminder for PC team to initiate ACP. Experienced staff relied more on clinical judgment and less-experienced PC staff	LoE: VI Strength: Useful reminder and educational tool for HCP to initiate ACP Weakness: May not be applicable to other

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Funding: Department of Health and Ageing, Commonwealth of AU	and focus group interviews	interviews with PC staff	key informants comprising medical staff, RN managers, NPs, and educators	required more ACP education to develop skills and confidence.	cultures/setting s Practice relevant tool but not validated research tool
Bias: DN AU	Purpose: Development and implementati on of a tool to facilitate ACP in community palliative care practices	Demographi c: Majority of care was provided by PC RNs. RN managers (6), NP (6), PC RN specialists (45), RN (33), and enrolled RN (14)	Focus group interviews with PC staff	Tool is a starting point for staff. Participative natures of action research the CST was a practice- relevant tool rather than a validated research tool and would require more formal testing.	Feasibility: CST-ACP tool can assist HCP in developing relationship with PTs to facilitate ACP discussions
		Setting: Community PC locations: eastern states (5), urban (3), regional sites (2); northern AU (2) with service to regional and remote areas			
		Exclusion: ND			
		Inclusion: ND			

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ADVANCE CARE PLANNING

AR: ND								
Citation	Conceptual Framework	Design/ Method	Sample/ Setting	Major Variables & Definitions	Measurement	Analysis	Finding	Decision for Use
Clayton et al., (2012). Evaluation of a novel individualized communication-skills training intervention to improve doctors' confidence and skills in end-of-life communication Funding: Cancer Institute NSW Clinical Research Fellowship for author. Bias: ND AU	CLT	Design: QE Purpose: Determine if an individualized training program to discuss EOL issues will improve MDs confidence, communication skills, and attitudes	N=21 Demographic: Junior-doctors Setting: Teaching hospital in AU Exclusion: MDs with competing commitments Inclusion: MDs who volunteered to internal advertisements about study AR: 9%	IV: Brief training program (3 sessions, 2 individual sessions with expert facilitator and simulation) DV1: MD communication skills DV2: MD confidence in EOL discussion DV3: Attitude towards psychosocial care DV4: MD sense of accomplishment	Pre and post video recorded consultation and de-identified questionnaires pre/post training measuring self-assessed confidence, attitudes to psychosocial care, and MBI Communication- 21 specific skills rates on four-point scale and recoded using Cohen's Kappa with Landis and Koch's standard for interpretation	PASW DS to summarize demographics NPT to analyze pre and post self-reports (WSRT) and behavior/skills WSRT –ordinal items MNT-dichotomous items	DV1: Communication significantly improved Clarity of information (p<0.001), pacing of information (p=0.002), empathy and support (p=0.022) DV2: Confidence significantly increased (Z= -3.923, p<0.001) DV3: Attitude significantly improved (Z= -2.155, p=0.031) DV4: Personal accomplishment	LoE:III Strength: Short total teaching time in comparison to other workshops with one-on-one and face-to-face interaction Weakness: Small, non-randomized sample, involvement of only one institution and lack of longer follow-up, participants were volunteers Feasibility: One-to-one training intervention (1

Key: **ASA** - agreed or strongly agreed; **ACP** - advance care planning; **AD** - advance directive; **AHRQ** - Agency for Healthcare Research and Quality; **AR** - attrition rate; **AU** - Australia; **CLT** - cognitive learning theory; **CI** – confidence interval; **CST** - Conversation Starter Tool; **DN** - authors declared none; **EB** – evidence based; **ED** - emergency department; **EOL** - end of life; **EMR** – electronic medical record; **EPC** - evidence-based practice center; **ERA** - Elder Risk Assessment; **ES** – effect size; **FRNR** - funders report no role in study design, data collection or analysis; **GHS** - Gundersen Health System; **GRADE** - grading recommendations, assessment, development, and evaluation; **HC** - healthcare; **HCP** - health care provider; **HCP** - healthcare providers; **IM** - internal medicine; **IP** - inpatient; **IPDAS** - international patient decision aids standards; **LQE** - low quality evidence; **LoE** - level of evidence; **LS** - Likert Scale; **MA** - meta-analysis; **MBI** - Maslach Burnout Scale; **MMR** - mixed methods research; **MN** - Minnesota; **MNT** – McNemar Test; **N/A** - not applicable; **ND** - not disclosed; **NIHR CLAHRC** - National Institute for Health Research Collaboration for Leadership in Applied Health Research and Care; **NP** - nurse practitioner; **NPT** – Normalization process theory; **NR** - narrative review; **NRT** - nonrandomized trials; **OP** - outpatient; **OR** – odds ratio; **PASW** - Predictive Analytics Software; **PC** - palliative care; **PEDRO** – Physiotherapy evidence based database; **PGY** - post-graduate year; **PF** – positive findings; **PT** - patient; **QE** - quasi-experimental; **QOE** - quality of evidence; **RC** - Respecting Choices; **RCR** - retrospective chart review; **RCT** - randomized controlled trials; **RN** - nurse; **SE** – standard error; **SR** - systematic review; **U.S.** - United States; **UTD** - unable to determine; **WSRT** – Wilcoxon Signed Ranks Test

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					Satisfaction: Four-point LS		nt significantly improved (p=0.043); no significant differenced in emotional exhaustion (p=0.115) or depersonalization (p=0.48)	hr) total teaching (3 hrs face-to-face and 2 hrs reviewing material); difficult to schedule times
					Self-assessed confidence: 15-item, five-point LS (Cronbach's alpha 0.934)			
					Attitude: 20-item questionnaire using five-point LS			
					Stress and burnout: 22-item MBI			
Citation	Conceptual Framework	Design/ Method	Sample/ Setting	Major Variables & Definitions	Measurement	Analysis	Finding	Decision for Use
Detering, et al., (2014). Teaching general practitioners and doctors-in-training to discuss advance care planning: Evaluation of a brief multimodality education programme	CLT	Design: QE Sampling: Convenience Purpose: Develop and evaluate an interactive ACP educational program for HCP	N=148 n=69 HCP who participated in training and completed pre and post workshop evaluations	IV1: Completion of the multimodality education ACP program (DVD, interactive e-simulation, 2 hr workshop and training manual)	Pre-education and post-education questionnaires E-simulation scores	X ² tests- demographics Paired sample t test- comparing knowledge MNT- general knowledge and attitudes/confidence	DV1: Improved confidence in six of eight area surveyed (p<0.001) DV2: Significant improvement of knowledge of ACP (p=0.001)	LoE: III Strength: Significant results with strong design Weakness: Amount of missing data from surveys, participants volunteered,

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<p>Funding: Development and evaluation of Next Step programme by Victorian Quality Council, Department of Health Victoria</p>	<p>Demographics: Majority 40 years in age with more than 10 years of experience. 63% not trained in AU.</p>	<p>DV1: HCP confidence in having ACP conversations DV2: Change in ACP knowledge DV3: Attitude</p>	<p>Wilcoxon-assessed e-simulation scores Bonferroni correction to adjust for multiple statistical comparisons</p>	<p>DV3: No significant changes in attitude (p>0.05)</p>	<p>unsure if less experienced facilitators would produce similar results</p>
<p>Bias: ND AU</p>	<p>Setting: 8 workshops: Metropolitan (4) Rural (4) Inclusions: HCP and doctors-in-training Exclusion: Not completing both pre and post survey AR: n/a</p>	<p>DV4: Satisfaction with program DV5: E-simulation performance</p>	<p>$\alpha \leq 0.05$</p>	<p>DV4: 90% of participants ASA the workshop was well presented, 88% pace was appropriate, 85% group discussion helpful</p>	<p>Feasibility: Practical, relatively short, need facilitators</p>
				<p>65% ASA that reading material was useful, 85% DVD was valuable, 69% that e-simulation was helpful</p>	
				<p>DV5: (n=64) completed e-simulation at least once, (n=46) completed e-simulation</p>	

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ADVANCE CARE PLANNING

								more than once Score pre-education (7) and post-education (60) (max score=85) (p<0.001)
Citation	Conceptual Framework	Design/ Method	Sample/ Setting	Major Variables & Definitions	Measurement	Analysis	Finding	Decision for Use
Durbin et al., (2010). Systematic review of educational interventions for improving advance directive completion Funding: ND Bias: ND U.S.	Clinical decision-making theory	Design: Systematic review Purpose: Analyze effectiveness of educational interventions for improving advance directive completion	N=12 studies n= 8 RCT n= 4 NRT Demographic: Ages 26 to 93. Eight of 12 samples predominantl y women. Three studies Caucasian only, 2 majority African American, and 4 included both races. Setting: Two studies IP, 9	IV: Educational interventions IV1: written discussions IV2: verbal discussions IV3: videos DV: AD completion	Systematic review based on Cochrane review and grading criteria Effectiveness of types of educational interventions	ND for individual studies $\alpha < 0.05$	In 3 RCTs combined written and verbal interventions were more effective than single written interventions in completion of AD (p<0.05)	LoE: I Strength: High quality evidence Weakness: Low number of studies for types of educational interventions Feasibility: Findings can be generalized to adult clinic outpatients and hospitalized elderly

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<p>OP, 1 community based.</p> <p>Exclusion: Only dates 1991 -2009. Specific PT populations (i.e. HIV). RCTs that lacked sufficient data.</p> <p>Inclusion: Studies in nursing, medicine, and social work written in English, educational intervention, AD completion as outcome, and AD for general population</p> <p>AR: n/a</p>								
Citation	Conceptual Framework	Design/ Method	Sample/ Setting	Major Variables & Definitions	Measurement	Analysis	Finding	Decision for Use

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ADVANCE CARE PLANNING

Houben, et al., (2014). Efficacy of advance care planning: A systematic review and meta-analysis Funding: Grant of Lung Foundation Netherlands, Leusden. FRNR. Bias: DN Netherlands	CLT	Design: SR and MA Purpose: Systematically review the efficacy of ACP interventions in various adult patient populations	N=56 RCT Demographics: Cancer (3), Cardiac diseases (4), COPD (1), CRF (4), Dementia (1), HIV (2), Comorbidities (24), nursing home residents (4), elderly & healthy (8), HCP (4), and unknown (1) Setting: IP (15), OP (37), both (4) Inclusion: Described original data, RCT, and written in English. Exclusion: Pts <21 years and studies	IV1: Structured intervention tools focused on AD completion IV2: Structured tools to initiate conversations about EOL planning DV1: Completion of AD and EOL discussions DV2: Concordance of pt preferences and delivered care, knowledge of ACP, EOL preferences, quality of communication, satisfaction with HC, decisional	Study details recorded using predefined data abstraction form Quality-PEDro scale	X ² test-relationship between interventions IBM SPSS statistics 21.0 Meta-analytic technique used random effects model in RevMan 5. Pooled OR with 95% CI $\alpha \leq 0.05$	Agreement between 2 reviewers=0.89 95% CI=0.86-0.93; p<0.001 DV1: OR 3.26; 95% CI 2.00-5.32; p<0.00001 DV2: OR 4.66; 95% CI 1.20-18.08; P=0.03 DV3: OR 2.82; 95% CI 2.09-3.79; p<0.0001	LoE: I Strength: SR and MA of RCTs; Good validity Weakness: Multiple instruments available to assess quality of RCTs, nature of interventions makes it difficult to blind patients, Feasibility: Applicable to practice
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ADVANCE CARE PLANNING

			about psychiatric AD	conflict, use of HC services and symptoms				
			AR: n/a	DV3: Occurrence of EOL discussions				
Citation	Conceptual Framework	Design/ Method	Sample/ Setting	Major Variables & Definitions	Measurement	Analysis	Finding	Decision for Use
Lund et al., (2015). Barriers to advance care planning at the end of life: An explanatory systematic review of implementation studies Funding: Author (Lund) is a post doctoral research fellow supported by South Central Strategic Health Authority. (Richardson & May) partly supported by NIHR CLAHRC	Normalizati on Process Theory	Design: Explanatory SR of qualitative implementati on studies Purpose: Investigate barriers and facilitators to implementin g ACPs in clinical practice	N=13 studies Demographi c: Adults in healthcare setting without mental health problems Setting: HC: OP (8), IP (5) Exclusion: Interventions aimed at children and those with mental health problems Inclusion: Implementati	IV: Trained staff utilizing a structured approach to ACP DV: Effective ACP discussions	Variable per study: individual measurement tools not listed but reported that they were highly structured	Data extraction developed by NPT Coding frame and taxonomy items related to intervention types, clinical contexts, and HC systems	Data from individual articles was not disclosed. Interventions most likely to facilitate ACP are those that provide a simple, structured tool for HCP to take action.	LoE: V Strength: SR Weakness: Information is lacking about the process of implementing and delivering ACPs, inadequate reporting of intervention design and methods of evaluation Feasibility: Requires time and trained staff

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ADVANCE CARE PLANNING

with a partnership between Wessex and NHS organizations and partners of University of Southampton. FRNR.		on of intervention intended to support ACP		AR: n/a				
Bias: DN								
United Kingdom (6) Canada (2), AU (4) U.S. (1)								
Citation	Conceptual Framework	Design/ Method	Sample/ Setting	Major Variables & Definitions	Measurement	Analysis	Finding	Decision for Use
Oczkowski et al., (2016). Communication tools of end-of-life decision making in ambulatory care settings: A systematic review and meta-analysis Funding: Grant from Technology Evaluation in the Elderly Network. FRNR.	CLT	Design: SR and MA Purpose: Determine effects of structured communication tools for end of life decision making on completion of ACP	N=76 studies n= 46 RCTs Demographic: Patients age >50 with no specific medical conditions. Many specifically evaluated populations with cancer, lung, heart, neurologic, or renal disease.	IV: Structured communication tools for EOL decision making and ACP IV1: Verbal discussions IV2: Paper tools IV3: Verbal discussion with paper tools IV4: Videos	SR using GRADE with GradePRO software Ottawa-Newcastle Scale for Cohort studies	Revman 5.3 software 95% CI Clinical heterogeneity reported using I ² calculations	Structured communication tools increased DV1: ACP (RR 2.31, 95% CI 1.25-4.26, p=0.007, LQE) Completion of AD (RR 1.92, 95% CI 1.43-2.59, p<0.001, LQE) DV2: AD care desired and	LoE: I Strength: Rigorous search strategy with GRADE, wide variety of interventions Weakness: Lack of consistent terminology for interventions which may have led to

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<p>Bias: DN</p> <p>U.S.</p>	<p>Setting: Ambulatory care</p> <p>Inclusion: RCT or prospective observational studies with control group published in peer-reviewed journals in English. PTs > 18 years and evaluated a communication tool to assist patients in EOL decision making compared to a control group.</p> <p>Exclusion: Duplicate references, conference abstracts, study</p>	<p>IV5: Computer programs</p> <p>IV6: multimodal interventions</p> <p>IV7: interventions directed at HCP vs PTs</p> <p>DV1: Completion of ACP</p> <p>DV2: Quality of communication between PT, family, and HCP; PT and family knowledge about EOL care and available resources; HC resource utilization; PT and family satisfaction with EOL care; acceptability</p>	<p>care received (RR 1.17, 95% CI 1.05-1.30, p=0.004, LQE, 2 RCTs)</p>	<p>relevant articles being missed; review limited by highly heterogenous nature of the populations and interventions</p> <p>Feasibility: Structured communication tools should be considered for ACP discussions in practice</p>
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<p>protocols, outcomes of interest not specifically stated, pediatric studies, no comparison arm, qualitative, or not based in ambulatory settings</p> <p>AR: n/a</p>								
Citation	Conceptual Framework	Design/ Method	Sample/ Setting	Major Variables & Definitions	Measurement	Analysis	Finding	Decision for Use
<p>Pecanac, K. (2014). Respecting Choices and advance directives in a diverse community Funding: ND Bias: Author BJS is an employee of GHS who owns the copyright to RC.</p>	<p>CLT</p>	<p>Design: RCR Purpose: Determine if RC would improve AD in a racially and ethnically diverse community</p>	<p>N= 732 Demographic: Decedents from 2005-2010 Setting: 300-bed Midwestern metropolitan hospital Exclusion: Decedents</p>	<p>IV- RC in community DV1- AD completion rates for whites DV2- AD completion rates for racial/ethnic minority DV3: DV1 and DV2</p>	<p>Data collected from manual chart review about prevalence and utilization of ADs Data included date of admission and discharge, age at discharge, gender, length of hospital stay,</p>	<p>Stata’s TEFFECTS program Regression analysis and matching to analyze RC on AD prevalence Proportional difference tests to compare consistency of wishes by race/ethnicity</p>	<p>DV1: β= 0.026 SE= 0.06 TS= 0.46 p= 0.648 95% CI= -0.09-0.14 DV2: β=0.136 SE= 0.05 TS=2.53 p= 0.011 95% CI= 0.03-0.24</p>	<p>LoE: III Strength: RC is culturally sensitive and respects individual and spiritual needs, EB ACP Weakness: RCR and difficult to know if decedents were personally</p>

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ADVANCE CARE PLANNING

<p>He also a coauthor of RC and is entitled to a small royalty if a profit is made on the materials.</p> <p>U.S.</p> <p>who died in ED</p> <p>Inclusion: Decedent > 18 years who died during hospitalization 2005-2010</p> <p>AR: n/a</p> <p>diagnosis, unit where care was provided and race/ethnicity</p> <p>$\alpha = 0.05$</p> <p>DV3: $\beta = 0.071$ SE= 0.04 TS= 1.82 p= 0.069 95% CI= -0.01-0.15</p> <p>impacted by RC program, only included legal documents as AD, data only collected in one hospital and did not include patients discharged from hospital</p> <p>Feasibility: Applicable to diverse community, cost of program that includes multiple components</p>								
Citation	Conceptual Framework	Design/ Method	Sample/ Setting	Major Variables & Definitions	Measurement	Analysis	Finding	Decision for Use
Tung et al., (2014). Improved resident physician confidence with advance care planning after an	CLT	Design: QE Purpose: Assess internal medicine residents' ACP practices and	N= 144 Demographic: IM residents: PGY-1 (35), PGY-2 (39), PGY-3 (32).	IV: Quality improvement workshop (interactive presentation & chart audit)	Pre- and post intervention surveys to assess ACP practices in clinic, barriers to effective ACP, confidence	Descriptive summary statistics for survey results and chart audits Pearson chi-square test and 2-sample t test	Residents reported significant improvement in confidence in finding AD in EMR (Scores 4.8 vs 6.46 on 7-point	LoE: III Strength: Significant results and applicable to other settings, mandatory participation

Key: **ASA** - agreed or strongly agreed; **ACP** - advance care planning; **AD** - advance directive; **AHRQ** - Agency for Healthcare Research and Quality; **AR** - attrition rate; **AU** - Australia; **CLT** - cognitive learning theory; **CI** – confidence interval; **CST** - Conversation Starter Tool; **DN** - authors declared none; **EB** – evidence based; **ED** - emergency department; **EOL** - end of life; **EMR** – electronic medical record; **EPC** - evidence-based practice center; **ERA** - Elder Risk Assessment; **ES** – effect size; **FRNR** - funders report no role in study design, data collection or analysis; **GHS** - Gundersen Health System; **GRADE** - grading recommendations, assessment, development, and evaluation; **HC** - healthcare; **HCP** - health care provider; **HCP** - healthcare providers; **IM** - internal medicine; **IP** - inpatient; **IPDAS** - international patient decision aids standards; **LQE** - low quality evidence; **LoE** - level of evidence; **LS** - Likert Scale; **MA** - meta-analysis; **MBI** - Maslach Burnout Scale; **MMR** - mixed methods research; **MN** - Minnesota; **MNT** – McNemar Test; **N/A** - not applicable; **ND** - not disclosed; **NIHR CLAHRC** - National Institute for Health Research Collaboration for Leadership in Applied Health Research and Care; **NP** - nurse practitioner; **NPT** – Normalization process theory; **NR** - narrative review; **NRT** - nonrandomized trials; **OP** - outpatient; **OR** – odds ratio; **PASW** - Predictive Analytics Software; **PC** - palliative care; **PEDRo** – Physiotherapy evidence based database; **PGY** - post-graduate year; **PF** – positive findings; **PT** - patient; **QE** - quasi-experimental; **QOE** - quality of evidence; **RC** - Respecting Choices; **RCR** - retrospective chart review; **RCT** - randomized controlled trials; **RN** - nurse; **SE** – standard error; **SR** - systematic review; **U.S.** - United States; **UTD** - unable to determine; **WSRT** – Wilcoxon Signed Ranks Test

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ambulatory clinic intervention	improve their confidence in discussing ACP	Avg age 28.4; 47% female. Setting: Mayo Clinical ambulatory clinic in Rochester, MN Exclusion: IM residents who were away from Mayo campus during scheduled sessions were excused Inclusion: Required for all IM residents AR: 8%	DV: IM resident's confidence with ACP discussions	with ACP tasks (8 items on 7-point Likert scale) Patient's classified using ERA score	Multivariate logistic regression models to determine association between ACP completion and PT and HCP variables SAS version 9.3 $\alpha < 0.05$	Likert scale) p<0.001 Improved confidence in 7 of 8 ACP related practices following interventions (p value range 0.028 to <0.002)	Weakness: HCP at single institution, recall bias and respondents' tendency to provide socially desirable answers, did no measure impact of intervention on the quality of ACP Feasibility: Multidimensional educational intervention is feasible way to improve HCP ACP confidence. Generalizable to other OP clinics.
Funding: Mayo Clinic							
Bias: DN							
U.S.							

Key: **ASA** - agreed or strongly agreed; **ACP** - advance care planning; **AD** - advance directive; **AHRQ** - Agency for Healthcare Research and Quality; **AR** - attrition rate; **AU** - Australia; **CLT** - cognitive learning theory; **CI** - confidence interval; **CST** - Conversation Starter Tool; **DN** - authors declared none; **EB** - evidence based; **ED** - emergency department; **EOL** - end of life; **EMR** - electronic medical record; **EPC** - evidence-based practice center; **ERA** - Elder Risk Assessment; **ES** - effect size; **FRNR** - funders report no role in study design, data collection or analysis; **GHS** - Gundersen Health System; **GRADE** - grading recommendations, assessment, development, and evaluation; **HC** - healthcare; **HCP** - health care provider; **HCP** - healthcare providers; **IM** - internal medicine; **IP** - inpatient; **IPDAS** - international patient decision aids standards; **LQE** - low quality evidence; **LoE** - level of evidence; **LS** - Likert Scale; **MA** - meta-analysis; **MBI** - Maslach Burnout Scale; **MMR** - mixed methods research; **MN** - Minnesota; **MNT** - McNemar Test; **N/A** - not applicable; **ND** - not disclosed; **NIHR CLAHRC** - National Institute for Health Research Collaboration for Leadership in Applied Health Research and Care; **NP** - nurse practitioner; **NPT** - Normalization process theory; **NR** - narrative review; **NRT** - nonrandomized trials; **OP** - outpatient; **OR** - odds ratio; **PASW** - Predictive Analytics Software; **PC** - palliative care; **PEDRo** - Physiotherapy evidence based database; **PGY** - post-graduate year; **PF** - positive findings; **PT** - patient; **QE** - quasi-experimental; **QOE** - quality of evidence; **RC** - Respecting Choices; **RCR** - retrospective chart review; **RCT** - randomized controlled trials; **RN** - nurse; **SE** - standard error; **SR** - systematic review; **U.S.** - United States; **UTD** - unable to determine; **WSRT** - Wilcoxon Signed Ranks Test

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Appendix F

Synthesis Table

Author	Butler	Blackford	Clayton	Detering	Durbin	Houben	Lund	Oczkowski	Pecnac	Tung
Year	2014	2013	2012	2014	2010	2014	2015	2016	2014	2014
Level of Evidence	VI	VI	III	III	I	I	V	I	III	III
Design	MMR	MMR	QE	QE	SR	SR and MA	SR Qualitative	SR & MA	RCR	QE
Country	AU	AU	AU	AU	US	Netherlands	UK, CA, AU, US	US	US	US
Setting										
Inpatient	X (15)		X		X (2)	X (15)			X	
Outpatient	X (1)	X		X	X (9)	X (37)	X (8)	X		X
Community or Mixed					X (1)	X (4)	X (5)			
HCP focused education		X	X	X						X
E-Simulation			X	X						X
Lecture			X	X						X
Reading			X	X						X
Observation		X								
Individual training			X							X
Video				X						
Structured tools	X	X	X	X	X	X	X	X	X	X
Discussion	X (3)					X				
Written					X			X (9)		
Video	X (5)									
Computer Program	X (6)							X (4)		
Multiple interventions	X (2)	X	X	X	X	X	X	X (21)	X	X

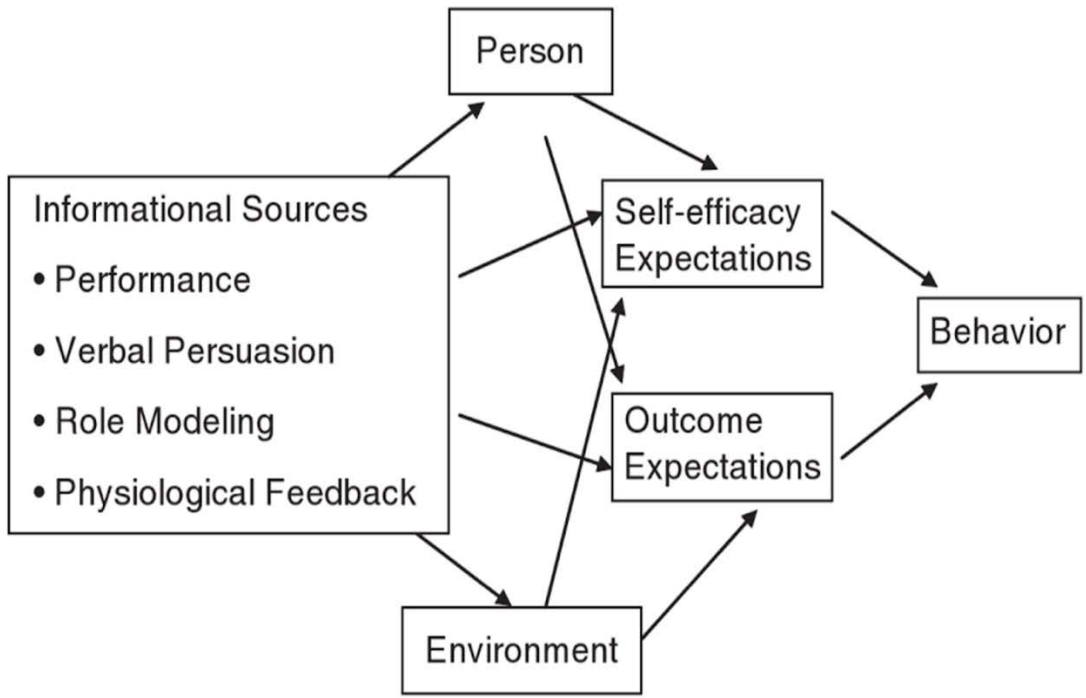
Key: **AU** – Australia; **CA** – Canada, **MA** - meta-analysis; **MMR** - mixed methods research; **RCR** - retrospective chart review; **QE** - quasi-experimental; **SR** - systematic review; **U.S.** - United States; **X**- applicable to study; \uparrow - positive finding; * - significant; \neq - no significance

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Outcomes Evaluated										
Patient satisfaction	↑*					↑*		↑*		
AD Completion rates					↑*	↑*		↑*	↑*	↑*
Rate of ACP Discussions		↑				↑*	↑*			
Provider Pre/post survey			X	X						
Communication skills			↑*	↑*						
Confidence		↑	↑*	↑*						↑*
Attitude			↑*	≠						↑*

Key: **AU** – Australia; **CA** – Canada, **MA** - meta-analysis; **MMR** - mixed methods research; **RCR** - retrospective chart review; **QE** - quasi-experimental; **SR** - systematic review; **U.S.** - United States; **X**- applicable to study; ↑ - positive finding; * - significant; ≠ - no significance

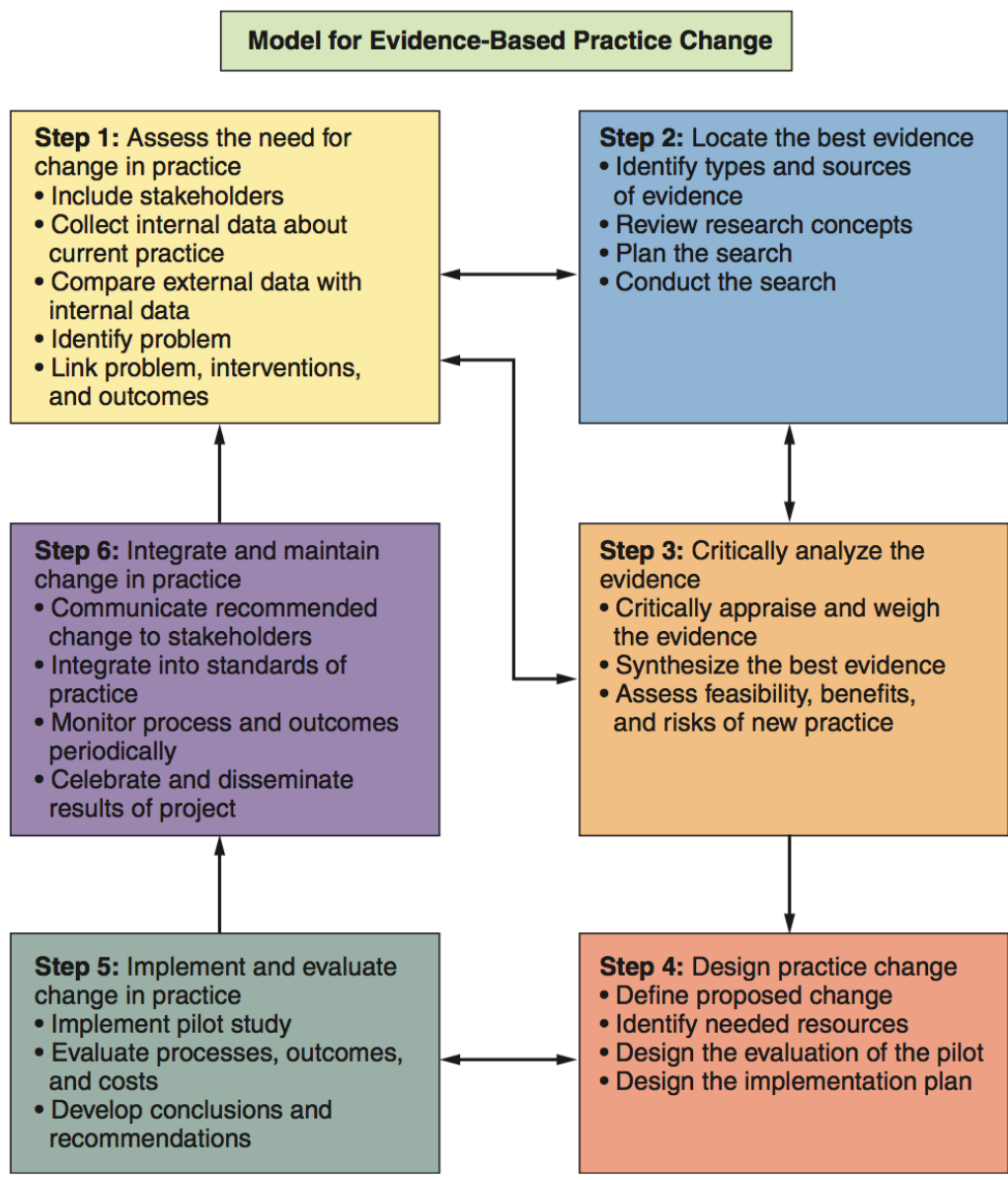
Appendix G
Self-Efficacy Model



The Theory of Self-Efficacy (Resnick, 2014)

Appendix F

Model for Evidence-Based Practice Change



The Model for Evidence-Based Practice Change (Melnik & Fineout-Overholt, 2015)

Appendix G
Letter of Support



July 10th, 2017

To Whom It May Concern:

On behalf of Commonwealth Primary Care ACO, I am pleased to support the quality improvement project titled "Advance Care Planning in the Primary Care Setting" as proposed by Dr. Diane Nuñez, DNP, RN, ANP-BC, FNAP and Arseña Smith, BSN, RN, DNP graduate student.

Our organization agrees to serve as the quality improvement project site for data collection, education sessions, and data analysis.

Thank you for allowing the primary care practice(s) identified by the ACO to be a part of this evidence-based project.

Sincerely,

A handwritten signature in black ink that reads 'Susie Rodriguez'.

Susie Rodriguez RN, BSN, MHA
Vice President of Care Management
Commonwealth Primary Care ACO
4801 S Lakeshore Dr #106
Tempe, AZ 85282
Phone: 480-749-5000
Email: srodriguez@commonwealthaco.com

Appendix H

Institutional Review Board Approval Letter



EXEMPTION GRANTED

Diane Nunez
 CONHI - DNP
 602/496-0751
 DIANE.NUNEZ@asu.edu

Dear Diane Nunez:

On 7/27/2017 the ASU IRB reviewed the following protocol:

Type of Review:	Initial Study
Title:	Advance Care Planning in Primary Care
Investigator:	Diane Nunez
IRB ID:	STUDY00006510
Funding:	None
Grant Title:	None
Grant ID:	None
Documents Reviewed:	<ul style="list-style-type: none"> • Smith_ACP_IRBApplication.docx, Category: IRB Protocol; • Smith_ACP_CoverLetter.pdf, Category: Recruitment Materials; • Smith_ACP_RecruitmentFlyer.pdf, Category: Recruitment Materials; • Smith_ACP_EducationSessionOutline.pdf, Category: Technical materials/diagrams; • Smith_ACP_LetterOfSupport.pdf, Category: Off-site authorizations (school permission, other IRB approvals, Tribal permission etc); • Smith_ACP_ParticipantQuestionnaire.pdf, Category: Measures (Survey questions/Interview questions /interview guides/focus group questions); • Smith_ACP_DemographicQuestionnaire.pdf, Category: Measures (Survey questions/Interview questions /interview guides/focus group questions); • Smith_ACP_InstrumentPermission.pdf, Category: Off-site authorizations (school permission, other IRB approvals, Tribal permission etc);

ADVANCE CARE PLANNING

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The IRB determined that the protocol is considered exempt pursuant to Federal Regulations 45CFR46 (1) Educational settings, (2) Tests, surveys, interviews, or observation on 7/27/2017.

In conducting this protocol you are required to follow the requirements listed in the INVESTIGATOR MANUAL (HRP-103).

Sincerely,

IRB Administrator

cc: Arsena Smith
 Arsena Smith

ADVANCE CARE PLANNING

Appendix I

Participant Informed Consent

Advance Care Planning in Primary CareJune 18th, 2017

Dear Participant,

I am a family nurse practitioner graduate student under the direction of Professor Dr. Diane Nuñez, DNP, RN, ANP-BC, FNAP in the College of Nursing and Health Innovation at Arizona State University. I am inviting you to participate in an educational project regarding advance care planning in primary care.

I will be providing an educational session that will include a brief review of advance care planning and tools to assist primary care providers and staff members in having advance care planning discussions with patients during scheduled office visits.

The educational session and surveys will be delivered during a scheduled meeting for all participating staff members within the practice. The total time required to complete the survey before the presentation and at the completion of the project will be approximately 5 minutes each and the presentation will be 15 minutes. There will be additional time allowed to answer questions about the education material and surveys.

Your participation in the survey and education session is voluntary. You can skip any question on the survey and if you choose to not participate or withdraw from the program at any time, there will be no penalty. It will not affect your work or team role in the agency prior to, during, or after your participation in the program. You must be 18 years of age or older to participate. Responses to the questionnaires will be to gather demographic information, evaluate knowledge, attitude, and behaviors regarding advance care planning. There are no known risks associated with participation in this education program.

Your responses to the questionnaires are anonymous. The pre and post-survey responses will be linked using an identified code of the first four numbers of your mailing address but backwards. If less than four digits, remaining numerals will be replaced with zero(s). We will not collect your name or other personal identifying information. The results of this study will be used in reports, presentations, or publications as aggregate data only.

Attending the education session and completing the pre-education and post-education surveys will be considered your consent to participate. If you have any other questions concerning this program, please contact the following team members:

Dr. Diane Nuñez, DNP, RN, ANP-BC, FNAP at (602) 496-0751
Arsefia Smith, BSN, RN, DNP Student at (928) 533-5444

If you have any questions about your rights as a subject or participant in this research, or if you feel you have been placed at risk, you can contact the Chair of the Human Subjects Institutional Review Board through the ASU Office of Research Integrity and Assurance, at (480) 965-6788.

Sincerely,

Arsefia Smith, BSN, RN, DNP Student
Dr. Diane Nuñez DNP, RN, ANP-BC, FNAP

ADVANCE CARE PLANNING

Appendix J

Demographic Questionnaire


 ID # _____
 4-digit identified code
Advance Care Planning: Demographics and Pre-Survey

Directions: Please answer the following questions. In the top right corner, please select and fill in an identified code that you will place on all surveys and questionnaires related to this project. **The 4-digit code is the first four numbers of your mailing address but backwards, if less than 4-digits, remaining numerals will be replaced with zero(s).**

Please check the box to the left of your response or write in number.

1. Age _____

2. Gender Male Female

3. Race/Ethnicity

Caucasian Hispanic/Latino Black/African American

Asian Native American Other _____

4. Highest Educational Level

High School Degree Associate's Degree Bachelor's Degree Doctorate

Other _____

5. Role

Medical Assistant Registered Nurse Nurse Practitioner Physician Assistant

MD/DO Other _____

6. Years of Experience _____

7. Years in Current Role _____

For Official Use Only:

Data Entry _____

Data Validation _____

Data Analysis _____

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Appendix K

Budget

Table 1

<i>Projected cost</i>		
Expense Items	Expenses	In-Kind Support
Personnel		
Project director (DNP Student) 20 hrs @ \$40/hr		\$800.00
ACO Chief Operating Officer 1 hrs/month x 2 months @ \$35/hr		\$70.00
Primary Care Providers (1) Initial training 1 hr @ \$75/hr		\$75.00
Advance practice providers (3) Initial training 1 hr @ \$45/hr		\$135.00
Office Manager Initial training and organization of event 3 hr @ \$20/hr		\$60.00
Equipment/Materials		
Provider resource materials \$5/each x 10	\$50.00	
Office/Operations		
Utilizing physician's office for implementation of project		\$75.00
Lunch at initial meeting & training 10 people at \$10 pp	\$100.00	
Total Expenses	\$150.00	\$1215.00

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Appendix L

Statistical Analysis

Table 2

<i>Demographics</i>	Percent (%)	Frequencies	Mean (SD)
Age			42.5 (19.25)
Gender:			
Female	66.7	4	
Male	33.3	2	
Race/Ethnicity			
Caucasian	100	6	
Hispanic/Latino	0	0	
Black/African American	0	0	
Asian	0	0	
Native American	0	0	
Other	0	0	
Highest Level of Education			
High School degree	0	0	
Associate's degree	0	0	
Bachelor's degree	33.3	2	
Master's degree	50	3	
Doctorate degree	16.7	1	
Other			
Role			
Office Manager	1	16.7	
Registered Nurse	0	0	
Nurse Practitioner	1	16.7	
Physician Assistant	2	33.3	
MD/DO	1	16.7	
Medical Student	1	16.7	
Other	0	0	
Years of Experience			13 (17.05)
Years in Current Role			13 (17.05)

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Table 3

Pre and Post Intervention Confidence Score Results^a

<i>POSTTS-PRETS</i>	
Z	-2.207 ^a
Asymp. Sig (2-tailed)	.027

a. Wilcoxin Signed Ranks Test

b. Based on negative ranks