Empowering Older Adults: Enhancing Advance Care Planning in Independent Living Facilities

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Abstract

Advance care planning (ACP) is an essential component of healthcare for older adults, enabling them to make informed decisions about their end-of-life (EOL) care. However, ACP completion rates among this population are low, leading to suboptimal care outcomes. The literature suggests that patient-focused educational programs are essential to improving ACP engagement which can improve ACP completion rates among older adults. An evidence-based practice project aims to implement an intervention to address a critical gap in improving healthcare services for older adults residing in a Maricopa County community-based independent living facility in Arizona. The transtheoretical model (TTM) and the intervention mapping (IM) framework guided the intervention's development, implementation, and evaluation. The proposed intervention involved providing residents with a patient education program covering various aspects of ACP, delivered by a healthcare professional. The effectiveness of the intervention was evaluated through the ACP engagement survey (Sudore et al.,2013) to measure outcomes such as overall engagement of ACP and individual's self-efficacy and readiness as they pertain to ACP completion. Results indicated a significant improvement in participants' overall engagement with ACP, with increased median scores in self-efficacy and readiness for ACP completion. These findings underscore the importance of tailored educational interventions in promoting proactive engagement in ACP discussions and decision-making among older adults, ultimately leading to improved ACP completion rates and better EOL care outcomes.

Keywords: advance care planning, older adults, advance directives, community-dwelling, knowledge, patient education

End-of-Life Care Decision-Making: Educating Older Adults in Community Dwellings

Advance care planning (ACP) is imperative because it helps patients, family members, and medical providers plan for end-of-life (EOL) when individuals cannot make their own medical decisions. Older adults face multiple factors that can negatively impact their ability to create an ACP. These factors include cognitive impairment, comorbidities, frailty, and polypharmacy (Yokoya et al., 2018). The most influential factor in changing ACP completion rates in older adults is the need for education. Proper education will ensure this population's confidence in the ACP process and highlight the importance of completing an advance directive (AD).

Problem Statement

ACP is essential to primary medical care (Dibello, 2021). More than 20 nations worldwide have AD laws, which can help promote and initiate simple and easily understandable ACP conversations (Ng et al., 2022). Due to a lack of knowledge, many older adults must participate in ACP conversations. They must know their options and how they can impact their health and EOL care. Globally, AD completion rates are low, with China and Spain reporting the lowest rates (Dalmau-Bueno et al., 2021). Research shows that ADs are completed by fewer than one-third of adults in the United States (Aaron et al., 2022).

An AD is a legally binding document that specifies an individual's preferences for medical treatment in the event that they become unable to make decisions due to a serious illness or injury (National Cancer Institute, 2019). An AD may also give a person the authority to make medical decisions for someone who can no longer make decisions (National Cancer Institute, 2019). Completing an AD allows individuals to receive EOL care consistent with their wishes, goals, and values (Aaron et al., 2022). Due to global advances in medicine, individuals are living

longer. Over 1 million adults aged 60 and older currently reside in Arizona (Ducey et al., 2019). Many of these residents live in a community-dwelling or retirement community. Seventy percent of community-dwelling seniors are willing to complete an AD, but only 14% have completed one (Chiu Wu et al., 2019). Providing effective educational interventions can affect the percentage of newly completed AD.

Purpose and Rationale

Not having an AD at EOL increases a patient's suffering, reduces their quality and duration of life, and increases their medical expenses (Aaron et al., 2022). Effective conversations regarding ACP allows individuals to make decisions regarding their EOL care with their family and healthcare team. At the same time, they can still effectively communicate their medical wishes and desires. The literature shows multiple barriers to AD completion and ACP. To combat low percentage rates of AD completion, awareness of ACP and education must be provided to individuals and healthcare providers (Splendore & Grant, 2017). This paper explores the most effective way to educate older adults on the importance of proactive ACP engagement.

Background and Significance

According to the Centers for Disease Control and Prevention (CDC, 2019), 70% of American adults do not have an ACP. Despite their advantages, expanding AD usage among adults in the US remains challenging. In order to enhance this situation, the Patient Self-Determination Act (PSDA) was enacted by Congress in 1990 (Barker et al., 2021). The PSDA requires all medical facilities receiving funding from Medicare to inform patients about ADs and their option to complete one (Barker et al., 2021). Despite the existence of this law, the percentage of individuals who complete ADs remains low, ranging from 18% to 36% (Barker et

al., 2021). Older adults must be provided with the tools to make informed EOL care decisions before they become too ill to make their own healthcare decisions.

Older Adults in Community-Based Settings

Worldwide as of 2019, there were 703 million older adults aged 65 and older (Ke et al., 2022). Older adults are typically the primary targets for ACP; they are closer to the EOL and are more likely to experience functional and cognitive impairment (Park et al., 2021). According to Park et al. (2021), older adults in community-based settings must be provided the opportunity to discuss EOL care decisions with their families. For older adults to do this, they must be knowledgeable about their options regarding their medical care. EOL care preferences mainly include the place where one may die, life-sustaining treatments, and code status such as full code or do-not-resuscitate (DNR) (Master et al., 2021). It is imperative that older adults are educated on these options and can decide before becoming incapable of doing so. Evidence has shown that if older adults are involved in their EOL care decisions, they are more likely to receive the care they prefer (Master et al., 2021).

Education for Advanced Care Planning

Educational conversations must be individualized for patients to increase ACP completion. Park et al. (2021) conducted an umbrella review examining multiple ACP educational interventions. The interventions were categorized into ACP programs, professional-led discussions, decisional aids, and educational programs (Park et al., 2021). The evidence suggests individualized educational conversations and tailored educational programs can improve ACP completion rates among older adults (Park et al., 2021). According to Chiu wu et al. (2019), there is a gap in research regarding interventions for improving ACP completion.

However, one study showed that a multimedia education program effectively improved ACP implementation and completion in community-dwelling older adults (Chiu wu et al., 2019).

Current State

Dark-Freudeman and Bensadon (2022) address deficiencies in physician training that leave them inadequately equipped to engage in ACP conversations and highlight the lack of standardized ACP communication education in medical training. Further, the authors purport that uncomfortable, unsupported, and untrained physicians typically avoid discussing ACP (Dark-Freudman & Bensadon, 2022). This lack of preparation hurts the completion rate of ACP because it causes the patients' and families' preferences to go undocumented (Dark-Freudman & Bensadon, 2022).

The World Health Organization emphasizes that ACP should be discussed as a patient's disease progresses, not just at the EOL (Ni et al., 2021). This shows that the lack of ACP is a global problem that can negatively affect EOL care for patients aged 65 or older. Ni et al. (2021) discuss the lack of studies exploring EOL care among older adults in China. A lack of knowledge, public awareness, and openness regarding death and EOL care issues negatively impact ACP completion rates (Ni et al., 2021). Therefore, it is essential to improve the general population's knowledge and attitude toward ADs and EOL care (Ni et al., 2021).

Improving Advance Directive Completion

The desired outcome is to increase the prevalence of ACP education directed toward the older population, specifically in community-dwelling settings. Suppose education is employed to improve ACP completion rates in community-based settings. In that case, older adults can make informed decisions regarding EOL care with less stress and time constraints (Park et al., 2021).

The common theme noted during this literature review was that older adults must gain the knowledge and information necessary to make crucial decisions regarding ACP. A review of the literature indicates that education should be tailored and focus on improving AD completion before older adults become incapable of doing so due to cognitive decline and chronic disease progression.

Internal Data

In an older adult community-based independent living facility in Maricopa County, residents without an ACP face acute, chronic, and terminal illnesses that negatively impact their quality of life. The absence of ACP is due to their lack of knowledge and understanding regarding their wishes at the EOL. When discussing the progression of chronic illnesses and medical crises, residents in this facility cannot make decisions regarding ACP leading to unnecessary suffering, unwanted medical procedures, and excessive medical care costs. The lack of ACP can make it difficult for healthcare providers to meet the residents' EOL care needs.

PICOT Question

A literature review led to the clinically relevant PICOT question: "In the elderly population residing in an independent living community, how does education on advance care planning compared to no education affect advance care planning engagement and completion rates"? This led to the following exhaustive literature search.

Search Strategy

Conducting an exhaustive search and review of the literature was necessary to answer the PICOT question. Searches were completed using three databases PubMed, PsycINFO, and Cumulative Index of Nursing and Allied Health Literature (CINAHL). These databases were

selected due to the reputability and reliability of peer-reviewed articles relevant to the PICOT question.

Keyword Selection

A combination of keywords was used to conduct relevant and effective searches in each database for each component of the PICOT question. The keywords included *geriatric, elderly, older adults, patient, aged, seniors, community-dwelling, independent living, senior living, education, seminar, workshop, advance directive, advance care planning,* and *end of life.* The initial searches included the keyword *code status preferences and advance directive completion rates*, but the acquired articles did not mention code status as a variable therefore the keyword was removed from the search. Medical subject headings (MeSH) terms such as *advance care planning, advance directive, independent living, aged, and patient education* were combined with Boolean connectors such as "AND," "OR" to refine the searches further.

Initial and Final Search Yields

The initial search was conducted with a combination of keywords and Boolean operators. The keywords and Boolean operators utilized were *elder*, *elderly, old people, older adults, patient, aged, seniors, geriatric, community-dwelling, independent living, senior living, education, seminar, program, workshop, advance directive, advance care planning,* and *end of life.* These keywords yielded 102 articles from CINAHL, 1,281 articles from PubMed, and 194 from PsycInfo. Before conducting the final search, the keywords *elder,* and *old people* were removed because the terms could be viewed as derogatory and unprofessional. The final search included the keywords *geriatric, elderly, older adults, patient, aged, seniors, community-dwelling, independent living, senior living, education, seminar, workshop, program, advance*

directive, advance care planning, and *end of life;* this search yielded 102 articles from CINAHL, 182 articles from PsycInfo, and 365 articles from PubMed.

Limitations, Inclusion, and Exclusion Criteria

Titles, abstracts, discussions, and results were further evaluated to determine the reliability and relevance of each study. Limitations and exclusion criteria included the English language, and publication dates between 2016-2023. These limitations and exclusions yielded 58 articles from CINAHL, 83 articles from PsycInfo, and 716 articles from PubMed. Rapid critical appraisals were then completed on multiple articles, and the 10 most reliable and applicable studies were selected, including nine randomized control trials (RCTs) and one systematic review/meta-analysis (Appendix A).

Critical Appraisal and Synthesis of Evidence

The rapid critical appraisal technique developed by Melnyk and Fineout-Overholt (2019) was applied to determine the quality and strength of the chosen articles. Most of the studies exhibited a high level of evidence, as nine studies were level II, and one was the highest level of evidence as level I (Appendix A, Table A2). The purpose, sample/setting, and inclusion and exclusion criteria were reviewed for all 10 studies. The purpose of each study was clearly stated; nine of the selected studies were conducted to determine how to improve ACP completion rates amongst older adults. One study employed a knowledge scale to examine the lack of ACP knowledge among middle-aged and older adults (van Dyck et al., 2021). Overall, the absence of ACP knowledge contributes to its underutilization. Each study had an adequate sample size; however, there was homogeneity within the sample demographics. Most participants in each study were women 65 years and older (Appendix A, Table A2). The authors did not clearly state the disproportionate involvement of women compared to men in each study. There was a small

degree of heterogeneity within the studies' settings. Participants were selected from multiple settings, such as hospitals, primary care clinics, community dwellings, and nursing homes. Five of the studies were conducted in a primary care setting (Appendix A, Table A2). These results show a gap in ACP completion rates within primary care. Interventions must be initiated in this setting to improve ACP knowledge and completion rates.

The 10 studies selected discuss different methods for developing the utilization of ACP among older adults. All studies, except for one, implemented different educational approaches to help improve the execution of ACP in older adults. The most common approach was an educational program for older adult patients in a primary care setting or community-dwelling (Appendix A, Table A2). The primary outcome of the analyzed studies was improved completion rates for ACP or ADs (Appendix A, Table A2). The feasibility and generalizability of the 10 studies were high, indicating the seamless implementation in multiple settings. Regarding limitations, participation bias was prevalent among most included studies (Appendix A, Table A1). Overall, the studies utilized quality assessment and data analysis tools to ensure reliability and strength among their results.

Implications for Practice Change

ACP is a critical issue that can significantly impact older adults as they near the end of their lives. According to the CDC (2019), only 70% of Americans have completed an ACP. Research shows that providing educational programs for older adults in primary care and community-dwelling settings can help improve ACP conversations between patients and their providers, resulting in an increase in ACP documentation. To engage adults in the ACP process, the primary care clinic located within a community-dwelling can provide an educational program to current residents. The evidence has indicated that when patients and healthcare providers

engage in discussions about ACP, there is a notable increase in discussions concerning EOL wishes and documentation of ACP.

Theory/Theoretical Framework Application

Older adults tend to only take the ACP steps that align with their decision-making process and that they feel comfortable with. In order to promote ACP engagement among this population, it is useful to apply the primary constructs of the Transtheoretical Model (TTM) which offer individuals tools for intentional change. Developed in the late 1970s by Prochaska and DiClemente, the TTM focuses on individual decision-making and comprises six stages of change: pre-contemplation, contemplation, preparation, action, and maintenance (Appendix B, Figure B1; Prochaska & Velicer, 1997). Different intervention strategies are relevant in each stage of change, thereby enabling individuals to achieve positive change and complete the model successfully.

The research shows that people are unaware of the significance of ACP and the reasons why it is imperative to complete their plan proactively. In response, an evidence-based project will aim to provide educational interventions to community-dwelling older adults in the pre-contemplation and contemplation stages of change. A lack of intent to change characterizes these stages because individuals are unaware that their current behavior is problematic and can lead to negative consequences. Implementing this intervention and following the TTM process can effectively address this population's lack of ACP engagement.

Implementation Framework

Professionals such as researchers, healthcare workers, and policymakers rely on implementation frameworks to facilitate the execution of evidence-informed health interventions (Fernandez et al., 2019; Moullin et al., 2015). These frameworks serve as a blueprint to guide the

process of implementing these interventions in various settings (Moullin et al., 2015). The Intervention Mapping (IM) framework employs a process to facilitate comprehensive decision-making in *developing, implementing, and evaluating* evidence-based interventions (Appendix B, Figure B2; Fernandez et al., 2019). IM was developed on community-based participatory research principles to ensure the interventions align with the target population (Fernandez et al., 2019). The framework addresses and aims to intervene at various levels, such as individual, interpersonal, organizational, and community (Fernandez et al., 2019).

The IM framework will be applied to the development of an evidence-based project because it can ensure that the education program is well-planned, effectively implemented, and rigorously evaluated. This project aims to enhance ACP engagement among residents of a community-dwelling independent living facility in Maricopa County. The *developing* phase of the IM framework will involve a stakeholder task force comprising residents, family members, staff members, administration, primary care providers, and community members to discuss strategies for addressing the identified problem. The current percentage of documented ACPs or ADs among primary care residents will be ascertained through the generation of reports in the electronic health record (EHR). The implementation phase will involve delivering an established patient education program by a healthcare professional to enhance residents' understanding of ACP and its significance. Lastly, standardized data collection methods such as surveys and telephone calls, will be used during the *evaluating* phase to assess the intervention's effectiveness, with outcomes measured including overall engagement of ACP.

Setting and Stakeholders

This project is set in a community-dwelling independent living facility in Maricopa County, Arizona. The facility provides housing and support services for older adults who can live independently but may require assistance with daily activities. The key stakeholders of this project are the residents of the community. As the target audience of the intervention, they hold the utmost importance in the project's goals and outcomes.

In addition to residents, other stakeholders include family members who may be involved in the decision-making process and provide support to the residents. The facility's staff members, including the licensed nurse practitioners, office managers, and front desk personnel, are essential stakeholders as they play an important role in implementing and supporting the educational intervention. The facility's administration also holds a stake in the project's success as they oversee the overall functioning of the facility and may provide resources and support for the intervention. Lastly, community members who may be involved in supporting and advocating for ACP initiatives are also considered stakeholders.

The comprehensive nature of this project involves engaging multiple stakeholders to ensure the successful implementation of the educational intervention. This project aims to create a collaborative and inclusive approach toward improving ACP engagement in this primary population by involving the residents, family members, staff members, administration, primary care providers, and community members.

Planning the Intervention

The answerable evaluation question for this quality improvement (QI) project is: "Does implementing a patient-focused education program on ACP improve self-efficacy and readiness for ACP completion among older adults residing in a community-dwelling independent living

facility?" The TTM and IM framework were utilized to develop the educational intervention for this project on ACP among older adults. The development and implementation of the project occurred over the course of four months. The first step of this QI project was to conduct a thorough needs assessment to identify the specific gaps and challenges in ACP completion rates among the target population. This involved reviewing existing literature, analyzing data, and gathering stakeholder input. Once the need assessment was completed and a clear and pertinent problem was identified, the next step was to set clear and specific goals for the intervention. These goals were measurable, achievable, and aligned with the overall objectives of improving ACP engagement. This project focused on overall engagement of ACP as a measurable outcome. The Advance Care Planning (ACP) Engagement Survey was provided to the residents as a pre- and post-intervention survey to evaluate their self-efficacy, and readiness related to completing EOL care planning (Sudore et al., 2013, see Appendix C, Figure C1). The data gathered from this survey was employed in both the development and evaluation stages of the IM framework to assess the measurable outcomes.

Based on the literature review and data analysis findings, a multidisciplinary team consisting of primary care providers, staff members, and administration was formed. This team collaborated to develop the content and structure of the educational intervention. The intervention was designed to address the specific needs and preferences of the target population, factors such as health literacy, cultural diversity, and communication styles were considered. Next, a comprehensive plan was developed to raise the participants' awareness about the educational intervention. This involved various channels, such as flyers, newsletters, and announcements through community organizations. Prior to implementation, the background of the problem and plan for the project was submitted to the Institutional Review Board (IRB) for

review. Once approval was obtained from IRB, participants were selected, and a healthcare professional delivered the educational intervention using PowerPoint in an easily accessible conference room. The intervention consisted of these objectives: define terms such as advance care plan, advance directive, code status, and medical decision maker; discuss necessary steps for completing an advance directive; discuss different types of code statuses and other medical decisions to consider for advance care planning; discuss things to consider when appointing a medical decision maker; and discuss tips to consider when having an advance care planning conversation with your healthcare provider.

This project upholds ethical principles to ensure the well-being and rights of the participants involved. First and foremost, informed consent was obtained from each participant, providing them with comprehensive information about the purpose, procedures, potential risks and benefits, and their rights to participate voluntarily and withdrawal without consequence (National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research, 1979). To maintain anonymity, any identifiable information collected was securely stored and only accessible to authorized personnel. The project also prioritized participant autonomy and respect for their decisions. Ethical considerations remained at the forefront of all project activities, promoting the well-being and rights of the participants throughout the entire process.

Participants and Recruitment

The participants for this project are older adults residing in a community dwelling located in Phoenix, Az. The inclusion criteria for participation included being 65 years or older, capable of providing informed consent and having the ability to understand and communicate in the language of the educational intervention. The exclusion criteria involved individuals who cannot

actively participate due to cognitive impairments or severe medical conditions that may hinder their engagement.

These parameters were in place to ensure that the intervention reaches the intended population who can actively engage in the educational program and make informed decisions regarding ACP. By including individuals aged 65 or older, the project aims to focus on the specific needs and concerns of older adults who may be more likely to face EOL care decisions. Recruitment materials such as flyers, posters, newsletters, and announcements through community organizations were utilized to promote the project and invite eligible participants. Informed consent was obtained from each participant before their inclusion in the project, ensuring their voluntary participation and protection of their rights throughout the project. Using various recruitment strategies and collaborating with relevant stakeholders, the project aims to attract a diverse sample of older adults who can benefit from the educational intervention.

Instrumentation and Outcomes Measurement

Engaging in ACP activities involves different stages of change behaviors and individuals who engage in ACP conversations are often in one of these stages (Sudore et al., 2013). To effectively address patients' needs during these conversations, healthcare providers must comprehensively understand their patients' knowledge, contemplation, self-efficacy, and readiness to complete their ACP (Sudore et al., 2013; see Appendix C, Figure C1). To address this challenge, Sudore et al. (2013) developed the ACP Engagement Survey, which assesses individuals' behaviors in conjunction to change and various ACP actions. This survey serves as a valuable instrument to evaluate and measure individuals' progress and engagement in ACP, providing important insights for healthcare providers to tailor their approach and support patients in completing their ACP effectively. The validity and reliability of the survey have been

extensively evaluated and established through various methods. Sudore et al. (2013) conducted a comparison of data from two different study cohorts to assess the survey's validity. Additionally, Cronbach's alpha coefficient of 0.97 was calculated, indicating high internal consistency and reliability of the survey (Sudore et al., 2013).

The foundation of this project draws upon the TTM as a guiding framework. The TTM is centered around individual decision-making and encompasses six distinct stages of change: pre-contemplation, contemplation, preparation, action, and maintenance (Prochaska & Velicer, 1997; see Appendix B, Figure B1). The TTM provides valuable change concepts that can be effectively applied when utilizing the ACP engagement survey. By incorporating the principles and strategies derived from the TTM into the implementation of the ACP engagement survey, this project aims to facilitate meaningful progress during the stages of change. The goal is to achieve the measurable outcome, of improved ACP engagement amongst older adults, leading to better outcomes in EOL care planning.

Data Collection and Analysis

The ACP engagement survey was utilized to collect demographic data to provide a clear understanding of the participants involved in the project. The demographic information collected includes age, gender, race/ethnicity, education level, and marital status. These variables helped characterize the sample population and examine potential associations between demographics and ACP engagement.

All data collected through the survey was handled with strict confidentiality and stored securely. Personal information was not collected for this project. The data was stored from November 2023 to April 2024 in a password-protected electronic database only accessible by authorized personnel. Data analysis was conducted using descriptive statistics to examine the

relationship between demographic variables and ACP engagement. An inferential statistical test, such as a two-tailed Wilcoxon was used to explore associations between demographic data and ACP engagement after participants received the educational intervention.

Results

Intellectus statistics (2023) was used to store, manage, and analyze the data. Older adults residing in an independent living facility (n=19). The average age of the sample is 83 (SD=7.26), and the ages range from 71 to 93 years of age (see Appendix F, Table F1). Most of the subjects were female 12 (63%) and 7 (37%) were male (see Appendix F, Table F1). All the subjects were Caucasian and English-speaking (see Appendix F, Table F1).

A two-tailed Wilcoxon signed rank test was conducted to examine whether there was a significant difference between the average scores of advance care planning engagement before and after the intervention. The two-tailed Wilcoxon signed rank test is a non-parametric alternative to the paired samples t-test and does not share its distributional assumptions (Conover & Iman, 1981).

The median score of pre-advance care planning engagement was 63 (see Appendix G, Figure G1). The median score of the post-advance care planning engagement increased significantly; the score was 67, (see Appendix G, Figure G1). There are two domains self-efficacy and readiness. The pre-self-efficacy median score was 27, and the post-self-efficacy median score was 30. The pre-readiness median score was 36, and the post-readiness median score was 38. The two-tailed Wilcoxon signed rank test results were significant, $V = 21.50$, $z = -2.19$, $p = .029$ (see Appendix G, Figure G1).

Ethical Considerations

Three ethical principles guided this project: respect for person(s), beneficence, and justice. Respect for a person is treating participants as independent individuals and safeguarding the well-being of those with limited autonomy (Office for Human Research Protections, 2018). The project ensured adherence to the principle of respect for participants by educating and empowering them without any attempts to influence participants' judgments or restrict their decision-making rights. By promoting transparency and openness, participants were consistently informed about the project and reminded of their right to withdraw at any point (Office for Human Research Protections, 2018). Moreover, the project addressed other ethical considerations, such as clearly explaining the project's purpose, outlining inclusion and exclusion criteria, and obtaining informed consent from all participants involved.

Beneficence is the commitment to promote the well-being of research participants by maximizing potential benefits and minimizing risks. (Office for Human Research Protections, 2018). This project implemented an educational intervention to improve ACP engagement among older adults. By providing comprehensive and tailored education, participants will be empowered to make informed decisions about their EOL care, enhancing their autonomy and ensuring their preferences and values are respected. The project prioritized participants' well-being by offering support, resources, and guidance throughout the process (Varkey, 2020).

As the final principle, justice involves treating all individuals equitably, ensuring fairness, and respecting their right to privacy (Office for Human Research Protections, 2018). The project will strive to include participants from diverse backgrounds and demographics to ensure representation and fairness (Varkey, 2020). Additionally, the educational materials and interventions were culturally sensitive and tailored to meet the specific needs of the participants.

All individuals involved in the project had an equal opportunity to engage in the ACP educational program and receive the necessary information and resources to make informed decisions about their EOL care. Faculty mentors and the IRB reviewed the project's methodology to assess all ethical considerations.

Sustainability

The significance of formulating a sustainability plan for this project is apparent. The iterative nature of quality improvement shows that a well-defined strategy to sustain the project's achievements is imperative. The sustainability plan aims to establish a framework that fosters ongoing integration of ACP practices within the organization. By outlining clear guidelines and processes, the plan seeks to ensure the project's continued success and its lasting impact on improving EOL care for community-dwelling older adults.

The key element of the sustainability plan is the identification of a site champion who will serve as a leader and advocate for ACP within the organization. In this project, the owner of the clinic located within the community-dwelling will serve as the designated site champion. As the owner, they bring a deep commitment to advancing ACP and possess the necessary skills to effectively guide the team in implementing the sustainability plan.

The organization will benefit from several tangible deliverables that contribute to a larger plan and yield long-term outcomes. One significant deliverable is the comprehensive ACP education program. This program encompasses a range of educational materials, training resources, and guidelines, facilitating effective ACP discussions. To ensure consistency and efficiency, standardized processes and workflows for documenting ACP preferences will be established. Moreover, a data collection system will be implemented, enabling the organization to monitor ACP completion rates, comprehension levels, and documentation. These deliverables

will be seamlessly integrated into the organization's long-term plan, solidifying ACP as a priority and leveraging the project's outcomes for continuous evaluation and improvement.

Enhancing ACP practices within the organization will foster a culture of proactive and informed decision-making regarding EOL care. The long-term outcomes of this initiative include increased ACP completion rates among residents, improved comprehension of ACP concepts, and enhanced documentation of individuals' preferences and goals of care. These outcomes contribute to a larger plan of promoting individualized care and ensuring that residents' wishes and values guide their medical treatment in the future.

Discussion

The findings of this project shed light on the effectiveness of an educational intervention in enhancing ACP engagement among older adults residing in an independent living facility. Through the implementation of comprehensive educational sessions grounded in evidence-based practices, participants demonstrated improvements in ACP self-efficacy and readiness. These findings highlight the significance of educational initiatives in empowering individuals to make informed decisions about their EOL care preferences.

The use of the Intellectus statistics platform facilitates the storage, management, and analysis of the data collected from a sample of 19 older adults, with an average age of 83 years. The majority of the participants are female, reflecting the demographic composition of the facility, which aligns with national trends indicating a higher proportion of women in older age groups (Caplan, 2023). All participants are Caucasian and English-speaking, reflecting the demographic makeup of the facility's population.

The pre- and post-intervention surveys reveal a significant increase in ACP engagement median scores, as indicated by the two-tailed Wilcoxon signed rank test results. Specifically,

both domains, self-efficacy and readiness median scores show significant improvement following the intervention. These findings suggest that the educational program successfully enhances participants' confidence and preparedness to engage in ACP discussions and decision-making with their healthcare provider.

However, several limitations were encountered during the implementation of the project. One significant limitation is the lack of supplemental resources available to participants, which may hinder their ability to fully engage with the educational materials provided. Additionally, the educational session is only available to residents at the project site, limiting the reach of the intervention to a broader population. Moreover, only one educational session is completed, potentially limiting the sustainability and long-term impact of the intervention.

Relating these findings to existing literature, the results of this project align with previous research indicating the effectiveness of educational interventions in improving ACP engagement among older adults in an independent living facility (Chiu wu et al., 2019; Overbeek et al., 2018; van Dyck et al., 2021). These findings underscore the importance of targeted educational initiatives in promoting proactive decision-making regarding EOL care.

Considering the project's limitations, several recommendations for further research are warranted. Future studies could explore the feasibility of incorporating supplemental resources, such as multimedia tools or informational handouts, to enhance the effectiveness of educational interventions. Additionally, efforts should be made to expand the reach of educational sessions beyond the project site to reach a more diverse population of older adults. Longitudinal studies are also needed to assess the sustainability of intervention effects over time and to evaluate the long-term impact on ACP engagement and decision-making.

Overall, this project contributes to our understanding of effective strategies for promoting ACP engagement among older adults and highlights the importance of ongoing research and intervention efforts in this area.

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Appendix A

Evaluation and Synthesis Tables

Table A1

Evaluation Table for Quantitative Studies

Citation	Theoretical/ Conceptual Framework	Design/ Method/ Purpose	Sample/Setting	Variables	Measurement/ Instrumentation	Data Analysis	Results/ Findings	Level of Evidence; Application to practice. Generalization
Chiu wu et al., (2019) Advance care planning and advance directives: A multimedia education program in community-dwelling older adults. **Country**: Taiwan **Funding**: The authors received no financial support. **Bias**: Social Desirability Bias between groups.	The Theory of Planned Behavior and the Transtheoretical Method	**Design/Method:** A community-based cluster randomized controlled trial with a longitudinal research design. **Purpose:** To research how a multimedia educational intervention affects AD completion.	**N**= 123 **Demographics:** individuals who are between the ages of 55 and 65, literate, and have not previously signed an advance directive, but have a score of 8 or lower on the SPMSQ, are eligible to participate. The study will be conducted in five community centers, but those who are over 65 years old or have organic brain illnesses	**IV:** 4-week multimedia educational intervention followed by telephone consultations at Weeks 12 and 24 **DV:** Increase AD completion. **Definitions** **AD:** Document specifying wishes for treatments should a patient be unable to communicate their wishes. **ACP:** The process of discussion between a person and their healthcare providers to assess how their medical condition might impact their future, and to make	**Tools:** 7-point Likert-type scale. **Validity/ Reliability:** validity scores of 0.94, 0.92, 0.91, and 0.94, Cronbach's alpha values were.85, .88, .81, and .88.	**Statistical Tests Used:** Descriptive Statistics.	**IG:** 78.8% at Week 0 to 100% at Week 12 to Week 24. **CG:** Remained constant between Week 0 and Week 4, but it significantly decreased to 67.6% at Week 12 and continued to decline until it reached 22.5% at Week 24.	**Level of Evidence**: Level II **Strengths**: Low Attrition rate. No missing data. Randomized sampling. No outside funding, reducing conflict of interest. **Weakness**: Generalizability is limited. Small sample size. Differences in participant characteristics at baseline. **Feasibility**: The study is feasible because the cost of the intervention is low, and it can

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			diagnosed by a doctor will be excluded from participating. **Attrition:** 1	choices and plans for their future care, is a voluntary process.				be easily duplicated in multiple settings. **Application**: Providing education over time can help patients make decisions regarding ACP and AD completion.
Overbeek et al., (2018) Advance Care Planning in Frail Older Adults: A Cluster Randomized Controlled Trial. **Country**: Netherlands **Funding**: Netherlands Organization for Health Research and Development, Foundation Theia, and Laurens, a care organization in	Hibbard's conceptual model of patient activation	**Design/Method:** A cluster randomized controlled trial. **Purpose:** To determine the effectiveness of ACP in frail older adults.	**N**= 201 **IG**: n= 101 **CG:** n= 100 **Demographics:** Care home residents and community-dwelling adults, aged 75 and older, and frail. **Setting:** 16 Residential care homes in the Netherlands **Exclusion:** Frail (Tilburg Frailty Index score >5, MMSE score >17, Individuals	**IV:** Adjusted Respecting Choices ACP program. **DV:** Increase AD completion. **Definitions:** **AD:** A document that outlines a patient's treatment preferences in the event that they are unable to communicate their wishes is referred to. **ACP:** A process that allows people to establish objectives and personal preferences for their	**Tools:** 13-item PAM 12-item Short-Form Health Survey PSQ **Validity/ Reliability:** The validity and reliability of the tools utilized were not implicitly stated.	**Statistical Tests Used:** Chi-square tests and analysis of variance. Multilevel analyses.	**IG:** participants, 93% completed an AD. **CG:** had 34% completed an AD.	**Level of Evidence**: Level II **Strengths**: Standardized ACP program. High engagement from participants. Personal interviews. Randomized sampling. **Weakness**: The power calculations did not consider the anticipated loss of participants during the study. Attrition in the

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Rotterdam, the Netherlands. **Bias**: Bernard Hammes, who was involved in the creation of Respecting Choices, states that he has received personal fees from Gundersen Health that are not related to this project.			younger than 75 years. **Attrition:** 24% and 17%.	future medical treatment and care. It also involves discussing these goals and preferences with healthcare providers and family members, as well as documenting and reviewing them as necessary.				intervention group was higher (24%) compared to the control group (17%). The sample size was small, and two clusters had only one participant. The response rate was moderate. Due to the nature of the follow-up assessment, outcome assessors could not be blinded. **Feasibility**: Cost of the intervention is low. Can be easily duplicated in multiple settings. **Application**: Although the authors did not observe any impact on patient activation with the particular intervention, they did observe an increase in AD completion. This

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								suggests that an ACP program could be beneficial for older adults.
Chan et al., (2018) Effects of a nurse-led post-discharge advance care planning programme for community-dwelling patients nearing the end of life and their family members: A randomised controlled trial. **Country**: China **Funding**: The Health and Medical Research Fund, Food and Health Bureau, Hong Kong SAR Government. **Bias**: Participation bias because the	The Let Me Talk framework	**Design/Method:** A two-arm parallel-group randomized controlled trial. **Purpose:** The purpose of this study is to examine how an arranged, nurse-led program for advance care planning after discharge from the hospital impacts the similarity between patients' and their family members' preferences for end-of-life care, decisional conflicts, and documentation of care preferences.	**N**= 230 **CG:** n= 115 **IG:** n= 115 (Conducted in dyad format) **Demographics:** Living at home, being at least 18 years old, being mentally competent, and satisfying one of the three screening tool triggers. If a family member had at least one interaction with the patient within the past three months and was	**IV:** A nurse will provide a structured ACP program by visiting the patient's home three times a week following hospital discharge **DV:** To improve the rate of completion of advance directives and documentation of do-not-attempt cardiopulmonary resuscitation orders in the electronic medical record, compared to the control group. **Definitions:** **ACP:** involves motivating individuals to identify their own values concerning	**Tools:** The Activities of Daily Living-Staircase Scale. Likert Scale The Charlson Comorbidity Index. The Life-Support Preferences Questionnaire. The SURE Test. **Validity/ Reliability:** Good construct validity and reliability of the	**Statistical Tests Used:** Descriptive statistics. Chi-square and Independent t-tests. GEE models.	**Results:** Experimental group showed a larger increase than the control group after six months (Ps 0.04).	**Level of Evidence**: Level II **Strengths**: Solid study design, data analysis techniques, and the inclusion of patient-family member dyads. Included non-cancer patients an understudied population in ACP studies, Randomized sampling. **Weakness**: Participation bias. Requirement for patients and their family members to engage as dyads.

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voluntary participants may have been more receptive to the concept of advance care planning than those who chose not to participate.			18 years of age or older, they were considered eligible for nomination. **Setting:** 8 medical wards and an outpatient clinic of 425-bed rehabilitation hospital in Hong Kong. **Exclusion:** Unable to nominate a family member to join the study, prior referral for palliative care service or had completed an advance directive before the study **Attrition:** 9	future medical care, have conversations with their family members and healthcare team about their desired care goals and preferences in end-of-life situations, and record these preferences ahead of time, before they are unable to make decisions.				Low participation rate and high attrition rate. Only using one hospital to find the participants. Could not ascertain if the family members selected by the patients to participate in the study would have ultimately been granted control over the patients' end-of-life care. **Feasibility**: The cost of the intervention is low, and it can be easily duplicated in multiple settings. **Application**: If a structured program for advance care planning is integrated into primary care services, it could

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								ensure a consistent and organized method for honoring patients' choices regarding end-of-life care decision-making. This approach would offer all patients sufficient time and access to consider their end-of-life care options.
Leung et al., (2019) A video-supported nurse-led advance care planning on end-of-life decision-making among frail older patients: Protocol for a randomized controlled trial. **Country**: China **Funding**: Supported by a	TTM	**Design/Method:** Double-blinded randomized controlled trial with parallel arms. **Purpose:** To examine the outcomes of end-of-life decision-making in patients and their caregivers after a nurse-led advance care planning session, which is	**N=** 298 **CG:** n= 149 **IG:** n= 149 (Conducted in dyad format) **Demographics:** Age ≥60, frail as measured by a score of FRAIL scale≥1 able to communicate, MMSE score >17 at the time of recruitment.	**IV:** One group of participants will receive a nurse-led advance care planning program with video support over a period of two weeks. **DV:** Increase in completion of AD. **Definition:** **ACP:** This voluntary process of dialogue empowers	**Tools:** The Activities of Daily Living (ADL)-Staircase Scale. EOL Care Preferences Questionnaire Quality of Communication Questionnaire The SURE Test.	**Statistical Tests Used:** Descriptive Statistics Independent t-tests. Chi-square test	**Results:** 5% significance level of a 2-sidedchi-square test.	**Level of Evidence:** Level II **Strengths:** Large sample size Low attrition rate P-Value 5% Randomized sampling. **Weakness:** Subject recruitment difficult. Unable to prevent participation bias.

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grant from the Research Grants Council of the Hong Kong Special Administrative Region, China **Bias**: Participation bias.		reinforced by videos, with frail elderly patients.	**Setting:** Medical unit of a hospital in Hong Kong. **Exclusion:** Have already signed an AD or have been referred to palliative care service before the study. **Attrition:** 20% attrition rate at 6 months.	individuals to communicate their beliefs and preferences, receive care based on the probability of future deterioration, and ensure that their desires and preferences are conveyed to family members, guardians, and healthcare providers.	**Validity/ Reliability:** Good construct validity and reliability of the scales and questionnaires were demonstrated.			Increased risk of abrupt decline and mental incapacity. Framework inferred. **Feasibility:** Low cost and can be repeated in any setting where nurses have contact with this population. **Application:** Nurses and advance practice nurses are significant healthcare providers in the healthcare system and are in a prime position to promote advance care planning. They possess the necessary medical expertise to facilitate conversations about end-of-life treatment options

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								that are relevant to the elderly patient's specific health condition.
Ng et al., (2022) The effects of advance care planning intervention on nursing home residents: A systematic review and meta-analysis of randomised controlled trials. **Country:** China **Funding:** There was no specific funding. **Bias:** Low risk bias in the randomization procedure, in the measurement of outcomes, or in	TTM	**Design/Method:** Systematic review and meta-analysis of randomized controlled trials. **Purpose:** To examine the impact of advance care planning interventions on end-of-life outcomes among nursing home residents.	**Sample: N**= 9 studies **Demographic:** Nursing home residents. **Setting:** Nursing homes. **Exclusion:** The analysis excluded studies that incorporated advance care planning as only one component of a broader intervention, such as those examining the impact of palliative care interventions. Additionally,	**IV:** Formal education or training for the staff, including nurses, social workers, or other allied healthcare staff. **DV:** Improvement of documentation of end-of-life preferences. **Definition:** **ACP:** Ongoing conversations and decision-making are maintained among patients, families, and healthcare providers concerning their goals and preferences for end-of-life care and future	**Tools:** A meta-regression. **Validity/ Reliability:** The Cochrane Risk of Bias Tool 2.0.	STATA version 16.0. A meta-regression.	**Results:** Meta-analyses indicated that ACP intervention significantly increased the documentation of end-of-life preferences.	**Level of Evidence:** Level I **Strengths:** Highest level of evidence. Adequate sample size. **Weakness:** Framework inferred. Results of meta-analyses need to be interpreted. Limited generalizability of the findings. Instruments varied across studies, and they are not all formally validated. **Feasibility:** Low cost.

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the choice of the reported result.			editorials, letters, conference abstracts, case reports, qualitative research studies, systematic reviews, and meta-analyses were excluded from consideration. **Attrition:** Not indicated.	medical treatment and care.				Can be easily duplicated. **Application:** Increases awareness of the importance of advance care planning in clinical settings.
van Dyck et al., (2021) Understanding the Role of Knowledge in Advance Care Planning Engagement. **Country:** United States **Funding:** This work was supported by the	TTM	**Design/Method:** This cross-sectional study utilized baseline data from 921 participants age ≥55 years enrolled in the STAMP randomized controlled trial. **Purpose:** To investigate the correlation between ACP knowledge and	**Sample: N**= 921 **Demographic:** Mean age of 68.3 years. The majority were female and white. Half of the participants were married, and a third lived alone. **Setting:** Primary care and specialty outpatient	**IV:** Computer-tailored feedback with a behavior stage-matched brochure. **DV:** Increasing ACP engagement. **Definition:** **ACP-** Patients can plan for the care they will receive if they become incapable of participating in	**Tools:** The knowledge scale included seven questions that required a true or false response and covered fundamental information related to the purpose and processes of completing healthcare proxies and living wills **Validity/**	**Statistical Tests Used:** Descriptive Statistics. ANOVA.	**Results:** 25.6% of participants demonstrated low ACP knowledge.	**Level of Evidence:** Level II **Strengths:** High level of evidence. Large sample size. **Weakness:** Framework inferred. **Feasibility:** Low cost. Can be easily duplicated. **Application:** Can be easily

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National Institute of Nursing Research (and National Institute on Aging. **Bias:** Not indicated.		participation in middle-aged and elderly individuals.	practices and senior living sites. **Exclusion:** Severe hearing impairment, cognitive impairment that would prevent the ability to provide informed consent, primary language other than English, current symptoms of depression, anxiety, substance use disorder or psychosis, lack of regular access to a telephone, absence of a permanent mailing address, completion of all ACP activities, or lack of permission from	medical decision-making.	**Reliability:** Three experts in geriatric medicine reviewed the items to assess their face validity. After this, cognitive testing was conducted to determine whether the items were easily understood and could accurately assess the knowledge they were intended to measure.			implemented in family practices.

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Citation	Theoretical/ Conceptual Framework	Design/ Method/ Purpose	Sample/Setting	Variables	Measurement/ Instrumentation	Data Analysis	Results/ Findings	Level of Evidence; Application to practice. Generalization
			the physician to participate. **Attrition:** Not indicated.					
Barker et al., (2021) The Effect of Health Literacy on a Brief Intervention to Improve Advance Directive Completion: A Randomized Controlled Study. **Country:** United States. **Funding:** The University of Florida Research Fund and the University of Florida JHMHC Self-Insurance Program Gatorade Trust and the W. Martin Smith Multidisciplinary Patient Safety Award.	TTM	**Design/Method:** Randomized Control Study **Purpose:** The study aimed to determine if the impact of a brief intervention to enhance advance directive (AD) completion varies depending on an individual's health literacy level, as AD completion is one aspect of advanced care planning.	**Sample:** n= 529 **Demographic:** Participants were over 50, had no history of dementia or documented AD, and spoke English. **Setting:** This study was conducted in 2 outpatient clinics associated with a large academic medical center, namely University of Florida Health located in Gainesville, Florida. **Exclusion:** Not indicated.	**IV:** The research assistant provided instructions to the IG on how to fill out the AD by reading a brochure to each participant. The brochure was written with a reading level of 7th grade and aimed to be understandable by individuals with insufficient health literacy. The assistant used a standard script for all participants. **DV:** Improve AD completion. **Definition:** **AD-** Written documents that empower patients to retain	**Tools:** Rapid Estimation of Adult Literacy in Medicine instrument. **Validity/ Reliability:** The tool has been validated in general internal medicine and specialist clinics.	**Statistical Tests Used:** t-tests. Chi-square tests. Logistics regression.	**Results:** AD completion rate was 21.7% and was similar in the intervention vs. the control group (22.4% vs 22.2%, P = .94).	**Level of Evidence:** Level II **Strengths:** Large sample size, randomization real-time delivery of an intervention. **Weakness:** Inability to systematically inform the patient's primary care physician that their patients were enrolled in the trial. Limited generalizability. Only looked at whether participants added an AD document to their medical records. **Feasibility:**

Key: **ACP** Advance Care Planning, **AD** Advanced Directives, **CG** Control Group, **DV** Dependent Variable, **EHR** Electronic Health Record, **ENACT** Engaging in Advance Care Planning Talks, **EOL** End-of-Life, **GEE** Generalized estimating equation, **IG** Intervention Group, **IV** Independent Variable, **MMSE** Mini Mental Status Exam, **OKAD** Oklahoma Advance Directive, **PAM** Patient Activation Measure, **PSQ** Patient Satisfaction Questionnaire, **SPMSQ** Short Portable Mental Status Questionnaire, **STAMP** Sharing and Talking About My Preferences, **TTM** Transtheoretical Model

Citation	Theoretical/ Conceptual Framework	Design/ Method/ Purpose	Sample/Setting	Variables	Measurement/ Instrumentation	Data Analysis	Results/ Findings	Level of Evidence; Application to practice. Generalization
Bias: Not indicated.			**Attrition:** 54	control over their EOL care. **ACP-** involves a series of discussions held over a period of time to identify personal values, goals, and preferences for future medical care, and may also involve the completion of formal AD documents.				Low-cost intervention. Can be easily duplicated. **Application:** Generalizable results to the geriatric population. Shows the importance of knowledge and ACP.
Fried et al., (2018) Effect of the Sharing and Talking About My Preferences Intervention on Completing Multiple Advance Care Planning Activities in Ambulatory Care: A Cluster Randomized Controlled Trial **Country:** United States	TTM	**Design/Method:** Cluster randomized controlled trial. **Purpose:** To investigate how a computer-tailored, behavioral health model-based intervention can impact the involvement of adults in ACP who were recruited	**Sample:** **N=** 455 **Demographics:** 55 years or older, had a primary care visit within the past 12 months, English speaking. **Setting:** Ten pairs of primary and specialty care practices.	**IV:** Received the STAMP computer-tailored intervention, with assessments linked to personalized feedback. **DV:** Completion of four ACP activities at six months. **Definition:** ACP is a strategy that assists individuals in comprehending and expressing their	**Tools:** The Sharing and Talking about My Preferences program (STAMP) **Validity/ Reliability:** The tool is based on the validated concepts of the TTM.	**Statistical Tests Used:** SAS version 9.4. PROC GENMOD. Univariate statistics. Subgroup analyses with pre-specified variables.	**Results:** **IG**- 95% CI 24.5%, 32.6 **CG**- 95% CI 15.0%, 25.7%	**Level of Evidence:** Level II **Strengths:** Large sample size, randomization, real-time intervention. **Weakness:** Study was conducted in a single region and excluded non-English speaking participants. No blinding. **Feasibility:**

Key: **ACP** Advance Care Planning, **AD** Advanced Directives, **CG** Control Group, **DV** Dependent Variable, **EHR** Electronic Health Record, **ENACT** Engaging in Advance Care Planning Talks, **EOL** End-of-Life, **GEE** Generalized estimating equation, **IG** Intervention Group, **IV** Independent Variable, **MMSE** Mini Mental Status Exam, **OKAD** Oklahoma Advance Directive, **PAM** Patient Activation Measure, **PSQ** Patient Satisfaction Questionnaire, **SPMSQ** Short Portable Mental Status Questionnaire, **STAMP** Sharing and Talking About My Preferences, **TTM** Transtheoretical Model

Citation	Theoretical/ Conceptual Framework	Design/ Method/ Purpose	Sample/Setting	Variables	Measurement/ Instrumentation	Data Analysis	Results/ Findings	Level of Evidence; Application to practice. Generalization
Funding: National Institute of Nursing Research, National Institute of Aging **Bias:** Not Indicated.		from outpatient clinics.	**Exclusion:** Urgent care clinical encounter. Severe hearing loss or vision loss, moderate-to-severe cognitive impairment, inability to participate in informed consent, primary language other than English, active psychiatric illness, no regular telephone access, no permanent mailing address, lack of physician permission. **Attrition:** 9%	personal values, future aspirations, and medical care preferences, regardless of their age or health status.				The intervention can be delivered via the web, telephone, and mail. Low-cost intervention. **Application:** Can be easily implemented in family practices.
Wickersham et al., (2019) Improving the Adoption of	Solberg's Practice Change Model.	**Design/Method:** 2 arm Cluster-randomized trial.	**Sample: N**= 635 **Demographic:** Patients 65 years	**IV:** Twenty semi-structured interviews were conducted with patients and	**Tools:** Not indicated.	**Statistical Tests Used:** GEE	**Results:** Five Wishes was favored significantly	**Level of Evidence:** Level II **Strengths:**

Key: **ACP** Advance Care Planning, **AD** Advanced Directives, **CG** Control Group, **DV** Dependent Variable, **EHR** Electronic Health Record, **ENACT** Engaging in Advance Care Planning Talks, **EOL** End-of-Life, **GEE** Generalized estimating equation, **IG** Intervention Group, **IV** Independent Variable, **MMSE** Mini Mental Status Exam, **OKAD** Oklahoma Advance Directive, **PAM** Patient Activation Measure, **PSQ** Patient Satisfaction Questionnaire, **SPMSQ** Short Portable Mental Status Questionnaire, **STAMP** Sharing and Talking About My Preferences, **TTM** Transtheoretical Model

Citation	Theoretical/ Conceptual Framework	Design/ Method/ Purpose	Sample/Setting	Variables	Measurement/ Instrumentation	Data Analysis	Results/ Findings	Level of Evidence; Application to practice. Generalization
Advance Directives in Primary Care Practices. **Country:** Untied States **Funding:** National Institutes of Health grant. **Bias:** Not indicated.		**Purpose:** To identify which form would be more acceptable to Oklahomans and to discover factors that influence AD implementation in general.	or older with decision-making capacity presenting for nonemergent office visits. **Setting:** Six primary care practices in Oklahoma. **Exclusion:** Did not mention. **Attrition:** Not indicated.	clinicians to evaluate their experience with the intervention, which included the use of the Oklahoma Advance Directive (OKAD) and the Five Wishes form. **DV**: Enhance the rates of patients' acceptance and completion, as well as the documentation of the intervention in their charts. Determine the most preferred intervention among both patients and clinicians. **Definition:** **AD-** Address one's ability to legally express one's desires regarding EOL care.		Logistics Regression SAS v9.4	over OKAD (OR = 1.52; 95% CI, 1.27 to 1.81; P < .0001). Five Wishes showed improvement in ACP conversations among patients and providers.	Participants blinded. Participant randomization. Large Sample Size. **Weaknesses:** Low offering rate. Short implementation period. Low number of study sites. Participants exposed to other intervention. **Feasibility:** Low-cost intervention, can be easily duplicated in other primary care settings. **Application:** Can be applied as a clinician in a primary care setting. Addresses the barriers to AD implementation.

Key: **ACP** Advance Care Planning, **AD** Advanced Directives, **CG** Control Group, **DV** Dependent Variable, **EHR** Electronic Health Record, **ENACT** Engaging in Advance Care Planning Talks, **EOL** End-of-Life, **GEE** Generalized estimating equation, **IG** Intervention Group, **IV** Independent Variable, **MMSE** Mini Mental Status Exam, **OKAD** Oklahoma Advance Directive, **PAM** Patient Activation Measure, **PSQ** Patient Satisfaction Questionnaire, **SPMSQ** Short Portable Mental Status Questionnaire, **STAMP** Sharing and Talking About My Preferences, **TTM** Transtheoretical Model

Citation	Theoretical/ Conceptual Framework	Design/ Method/ Purpose	Sample/Setting	Variables	Measurement/ Instrumentation	Data Analysis	Results/ Findings	Level of Evidence; Application to practice. Generalization
Lum et al., (2020) Effectiveness of Advance Care Planning Group Visits Among Older Adults in Primary Care. **Country:** United States **Funding:** University of Colorado Hospital **Bias:** Dr. Sudore and University of California, San Francisco, regents licensed PREPARE for use in this study.	Collaborative Learning Theory.	**Design/Method:** Randomized Clinical Trial. **Purpose:** evaluate whether the ENgaging in Advance Care Planning Talks (ENACT) group visits intervention can enhance ACP readiness and documentation in older adults.	**Sample: N=** 110 **Demographics:** Patients 60 years and older. **Setting:** Primary Care Clinic at the University of Colorado Hospital. **Exclusion:** Participants who had a diagnosis of dementia or cognitive impairment, were diagnosed with deafness, did not prefer English as their language, were non-local residents, or had participated in previous ACP group visit quality improvement sessions were	**IV:** Two 2-hour sessions with discussions of ACP topics and the use of ACP tools. Engaging in Advance Care Planning Talks (ENACT) group visits. **DV:** Improve ACP documentation and readiness in older adults. **Definition:** None stated.	**Tools:** Four-item validated ACP Engagement Survey, Five-point Likert scale. Conversation Starter Kit, and a one-page Colorado Medical Durable Power of Attorney form. **Validity/Reliability:** States the tools have been validated.	**Statistical Tests Used:** Descriptive Statistics. Chi-Square Tests. T-tests. Multivariate logistic regression. SAS version 9.4.	**Results:** 71% of ENACT participants had an ACP document in the EHR compared with 45% of control group participants (P< .001).	**Level of Evidence:** Level II **Strengths:** Large sample size, randomization, integration with the patients' medical care. Low-cost intervention. **Weaknesses:** High attrition 20%, No generalizability, Low recruitment rate. **Feasibility:** Can be easily duplicated in different primary care settings. **Application:** Can be implemented in primary care setting.

Key: **ACP** Advance Care Planning, **AD** Advanced Directives, **CG** Control Group, **DV** Dependent Variable, **EHR** Electronic Health Record, **ENACT** Engaging in Advance Care Planning Talks, **EOL** End-of-Life, **GEE** Generalized estimating equation, **IG** Intervention Group, **IV** Independent Variable, **MMSE** Mini Mental Status Exam, **OKAD** Oklahoma Advance Directive, **PAM** Patient Activation Measure, **PSQ** Patient Satisfaction Questionnaire, **SPMSQ** Short Portable Mental Status Questionnaire, **STAMP** Sharing and Talking About My Preferences, **TTM** Transtheoretical Model

Citation	Theoretical/ Conceptual Framework	Design/ Method/ Purpose	Sample/Setting	Variables	Measurement/ Instrumentation	Data Analysis	Results/ Findings	Level of Evidence; Application to practice. Generalization
			excluded from the study. **Attrition:** 11					

Key: **ACP** Advance Care Planning, **AD** Advanced Directives, **CG** Control Group, **DV** Dependent Variable, **EHR** Electronic Health Record, **ENACT** Engaging in Advance Care Planning Talks, **EOL** End-of-Life, **GEE** Generalized estimating equation, **IG** Intervention Group, **IV** Independent Variable, **MMSE** Mini Mental Status Exam, **OKAD** Oklahoma Advance Directive, **PAM** Patient Activation Measure, **PSQ** Patient Satisfaction Questionnaire, **SPMSQ** Short Portable Mental Status Questionnaire, **STAMP** Sharing and Talking About My Preferences, **TTM** Transtheoretical Model

Table A2

Synthesis Table

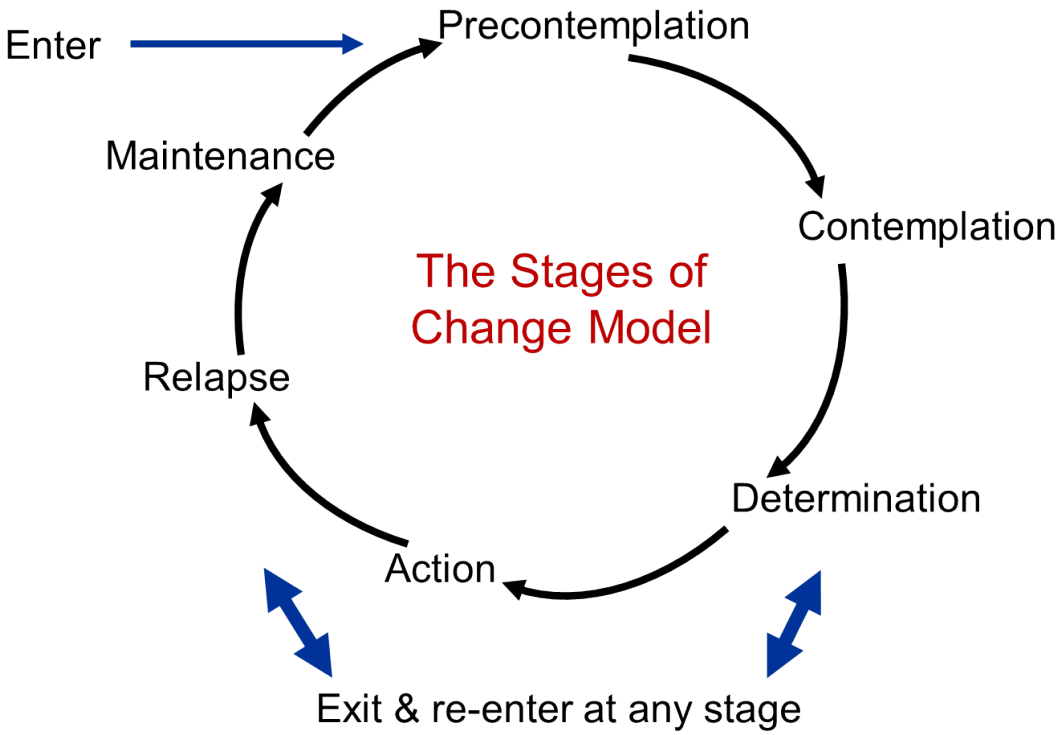
Study (Author, year)	Chiu wu et al., (2019)	Overbeek et al., (2018)	Chan et al., (2018)	Leung et al., (2019)	Ng et al., (2022)	van Dyck et al., (2021)	Barker et al., (2021)	Fried et al., (2018)	Wickersham et al., (2019)	Lum et al., (2020)
Design LOE	RCT/Level II	RCT/Level II	RCT/Level II	RCT/Level II	SR & MA/ Level I	RCT/Level II	RCT/Level II	RCT/Level II	RCT/Level II	RCT/Level II
Sample										
n subjects/studies	123	201	230	298	9	921	529	455	635	110
M-Age	55-65	> 75	> 18	> 60	> 60	> 60	> 50	> 55	> 65	> 60
Gender		F	F		F	F	F		F	F
Setting										
Community-Dwelling	X	X				X				
Hospital			X	X						
Primary Care Clinic						X	X	X	X	X
Nursing Home					X					
Interventions										
Computer Tailored Education						X		X		
Education/ Training for Provders/Staff					X					
Education Program for Patients	X	X	X	X						
Brochure						X	X			
Advance Directive Forms/Interviews									X	
Group Visits										X
Outcomes/ Themes										
ACP/AD Completion ↑	↑	↑	↑	↑						↑
EOL Care Preferences Documented					X		NS	X		
Low ACP Knowledge						X				
ACP Discussions									X	

Key: **ACP** Advance Care Planning, **AD** Advanced Directives, **EOL** End-of-Life, **F** Higher rate of female participants, **MA** Meta-analysis, **NS** Not stated, **RCT** Randomized control trial, **SR** Systematic review, **TTM** Transtheoretical Model, **X** Included in article, ↑ Improved

Appendix B

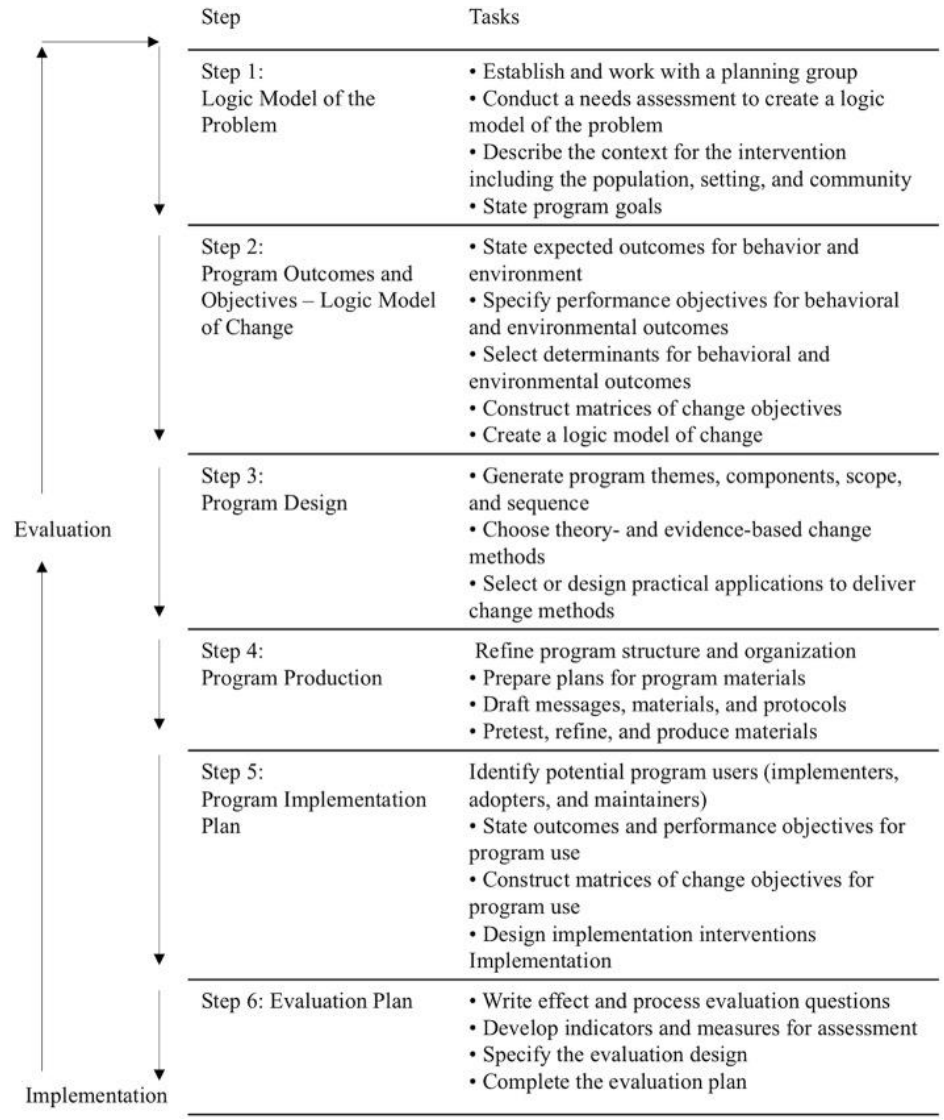
Models and Frameworks

Figure B1
Transtheoretical Model



(Lamorte, 2019)

Figure B2
Intervention Mapping Framework



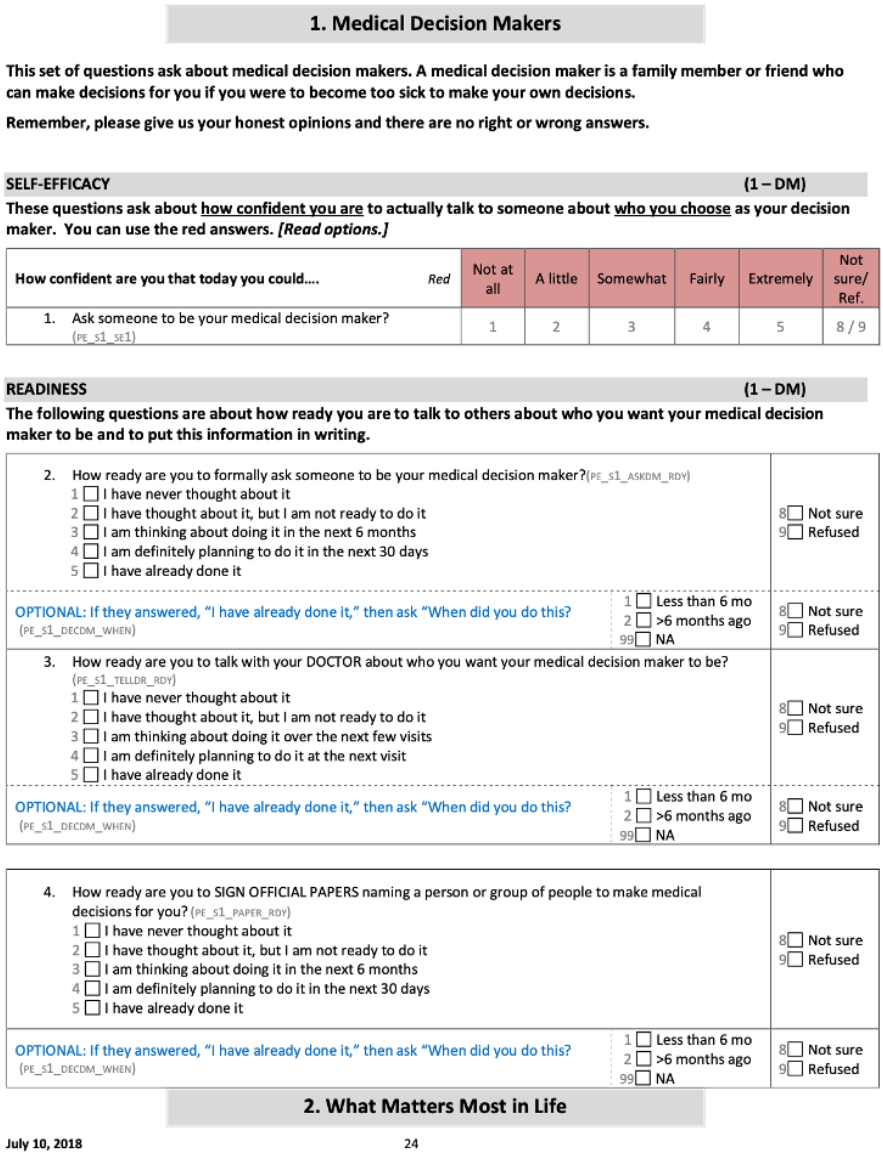
(Fernandez et al., 2019)

Appendix C

Instrument

Figure C1

Advance Care Planning Engagement Survey



1. Medical Decision Makers

This set of questions ask about medical decision makers. A medical decision maker is a family member or friend who can make decisions for you if you were to become too sick to make your own decisions.

Remember, please give us your honest opinions and there are no right or wrong answers.

SELF-EFFICACY **(1 – DM)**

These questions ask about how confident you are to actually talk to someone about who you choose as your decision maker. You can use the red answers. *[Read options.]*

How confident are you that today you could.... *Red*	Not at all	A little	Somewhat	Fairly	Extremely	Not sure/ Ref.
1. Ask someone to be your medical decision maker? (PE_S1_SE1)	1	2	3	4	5	8 / 9

READINESS **(1 – DM)**

The following questions are about how ready you are to talk to others about who you want your medical decision maker to be and to put this information in writing.

2. How ready are you to formally ask someone to be your medical decision maker? (PE_S1_ASKDM_RDY)
   - 1 ☐ I have never thought about it
   - 2 ☐ I have thought about it, but I am not ready to do it
   - 3 ☐ I am thinking about doing it in the next 6 months
   - 4 ☐ I am definitely planning to do it in the next 30 days
   - 5 ☐ I have already done it
   - 8 ☐ Not sure
   - 9 ☐ Refused

OPTIONAL: If they answered, "I have already done it," then ask "When did you do this? (PE_S1_DECDM_WHEN)
- 1 ☐ Less than 6 mo
- 2 ☐ >6 months ago
- 99 ☐ NA
- 8 ☐ Not sure
- 9 ☐ Refused

3. How ready are you to talk with your DOCTOR about who you want your medical decision maker to be? (PE_S1_TELLDR_RDY)
   - 1 ☐ I have never thought about it
   - 2 ☐ I have thought about it, but I am not ready to do it
   - 3 ☐ I am thinking about doing it over the next few visits
   - 4 ☐ I am definitely planning to do it at the next visit
   - 5 ☐ I have already done it
   - 8 ☐ Not sure
   - 9 ☐ Refused

OPTIONAL: If they answered, "I have already done it," then ask "When did you do this? (PE_S1_DECDM_WHEN)
- 1 ☐ Less than 6 mo
- 2 ☐ >6 months ago
- 99 ☐ NA
- 8 ☐ Not sure
- 9 ☐ Refused

4. How ready are you to SIGN OFFICIAL PAPERS naming a person or group of people to make medical decisions for you? (PE_S1_PAPER_RDY)
   - 1 ☐ I have never thought about it
   - 2 ☐ I have thought about it, but I am not ready to do it
   - 3 ☐ I am thinking about doing it in the next 6 months
   - 4 ☐ I am definitely planning to do it in the next 30 days
   - 5 ☐ I have already done it
   - 8 ☐ Not sure
   - 9 ☐ Refused

OPTIONAL: If they answered, "I have already done it," then ask "When did you do this? (PE_S1_DECDM_WHEN)
- 1 ☐ Less than 6 mo
- 2 ☐ >6 months ago
- 99 ☐ NA
- 8 ☐ Not sure
- 9 ☐ Refused

2. What Matters Most in Life

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We are switching topics now. The previous questions were about how people would or would not want to live.

The following questions are about specific medical treatments that people may or may never want if they were very sick or at the end of their life. For instance, some people know they would want to be on a breathing machine. Other people know they would never want to be on a breathing machine. Please give us your honest opinions to the following questions about medical treatments. There are no right or wrong answers.

SELF-EFFICACY **(2B – CARE AT EOL)**

The next two questions ask about how confident you are to actually talk to someone about your medical wishes. You can use the red answers. *[Read options.]*

How confident are you that today you could.... *Red*	Not at all	A little	Somewhat	Fairly	Extremely	Not sure/ Ref.
5. Talk with your decision maker about the care you would want if you were very sick or near the end of life? (PE_S2B_SE1)	1	2	3	4	5	8 / 9
6. Talk with your doctors about the care you would want if you were very sick or near the end of life? (PE_S2B_SE2)	1	2	3	4	5	8 / 9

READINESS **(2B – CARE AT EOL)**

The following questions are about how ready you are to decide and talk about the care you would want if you were very sick or near the end of life.

7. How ready are you to talk to your DECISION MAKER about the kind of medical care you would want if you were very sick or near the end of life? (PE_S2B_TELLDM_READY) 1 ☐ I have never thought about it 2 ☐ I have thought about it, but I am not ready to do it 3 ☐ I am thinking about doing it in the next 6 months 4 ☐ I am definitely planning to do it in the next 30 days 5 ☐ I have already done it		8 ☐ Not sure 9 ☐ Refused
OPTIONAL: If they answered, "I have already done it," then ask "When did you do this? (PE_S1_DECDM_WHEN)	1 ☐ Less than 6 mo 2 ☐ >6 months ago 99 ☐ NA	8 ☐ Not sure 9 ☐ Refused
8. How ready are you to talk to your DOCTOR about the kind of medical care you would want if you were very sick or near the end of life? (PE_S2B_TELLDR_RDY) 1 ☐ I have never thought about it 2 ☐ I have thought about it, but I am not ready to do it 3 ☐ I am thinking about doing it in the next few visits 4 ☐ I am definitely planning to do it at the next visit 5 ☐ I have already done it		8 ☐ Not sure 9 ☐ Refused
OPTIONAL: If they answered, "I have already done it," then ask "When did you do this? (PE_S1_DECDM_WHEN)	1 ☐ Less than 6 mo 2 ☐ >6 months ago 99 ☐ NA	8 ☐ Not sure 9 ☐ Refused

9. How ready are you to SIGN OFFICIAL PAPERS putting your wishes about the kind of medical care you would want if you were very sick or near the end of life? (PE_S2B_PAPER_RDY) 1 ☐ I have never thought about it 2 ☐ I have thought about it, but I am not ready to do it 3 ☐ I am thinking about doing it in the next 6 months 4 ☐ I am definitely planning to do it in the next 30 days 5 ☐ I have already done it		8 ☐ Not sure 9 ☐ Refused
OPTIONAL: If they answered, "I have already done it," then ask "When did you do this? (PE_S1_DECDM_WHEN)	1 ☐ Less than 6 mo 2 ☐ >6 months ago 99 ☐ NA	8 ☐ Not sure 9 ☐ Refused

3. Flexibility

Now we are going to talk about flexibility in decision making. Flexibility means that your decision maker can work with your doctor and change your prior medical decisions, if it is best for you at that time. Patients can decide to give or not give flexibility.

SELF-EFFICACY **(3 – FLEXIBILITY)**

These questions ask about how confident you are to talk to someone about flexibility. You can use the red answers. *[Read options.]*

How confident are you that today you could.... *Red*	Not at all	A little	Somewhat	Fairly	Extremely	Not sure/ Ref.
10. Talk with your medical decision maker about how much flexibility you want to give your medical decision maker? (PE_S3_SE2)	1	2	3	4	5	8 / 9
11. Talk with your DOCTOR about how much flexibility you want to give your medical decision maker? (PE_S3_SE2) (PE_S3_SE3)	1	2	3	4	5	8 / 9

READINESS **(3 – FLEXIBILITY)**

The following questions are about how ready you are to talk to others about how much flexibility you want to give your medical decision maker and to put this information in writing.

12. How ready are you to talk to your DECISION MAKER about how much flexibility you want to give them? (PE_S3_TELLDM_RDY) 1 ☐ I have never thought about it 2 ☐ I have thought about it, but I am not ready to do it 3 ☐ I am thinking about doing it in the next 6 months 4 ☐ I am definitely planning to do it in the next 30 days 5 ☐ I have already done it		8 ☐ Not sure 9 ☐ Refused
OPTIONAL: If they answered, "I have already done it," then ask "When did you do this? (PE_S1_DECDM_WHEN)	1 ☐ Less than 6 mo 2 ☐ >6 months ago 99 ☐ NA	8 ☐ Not sure 9 ☐ Refused

13. How ready are you to talk to your DOCTOR about how much flexibility you want to give your decision maker? (PE_S3_TELLDR_RDY)

1 ☐ I have never thought about it
2 ☐ I have thought about it, but I am not ready to do it
3 ☐ I am thinking about doing it in the next few visits
4 ☐ I am definitely planning to do it in the next visit
5 ☐ I have already done it

8 ☐ Not sure
9 ☐ Refused

OPTIONAL: If they answered, "I have already done it," then ask "When did you do this? (PE_S1_DECDM_WHEN)

1 ☐ Less than 6 mo
2 ☐ >6 months ago
99 ☐ NA

8 ☐ Not sure
9 ☐ Refused

4. Asking Your Doctor Questions

Now we are going to talk about asking doctors questions.

SELF-EFFICACY **(5 – ASK DR)**

How confident are you that today you could... *Red*	Not at all	A little	Somewhat	Fairly	Extremely	Not sure/ Ref.
14. Ask the right questions of your doctor to help make good medical decisions? (PE_S5_SE1)	1	2	3	4	5	8 / 9

READINESS **(5 – ASK DR)**

15. **How ready are you to ask your doctor questions to help you make a good medical decision?** (PE_S5_RDY)

1 ☐ I have never thought about it
2 ☐ I have thought about it, but I am not ready to do it
3 ☐ I am thinking about doing it in the next 6 months
4 ☐ I am definitely planning to do it in the next 30 days
5 ☐ I have already done it

8 ☐ Not sure
9 ☐ Refused

OPTIONAL: If they answered, "I have already done it," then ask "When did you do this? (PE_S1_DECDM_WHEN)

1 ☐ Less than 6 mo
2 ☐ >6 months ago
99 ☐ NA

8 ☐ Not sure
9 ☐ Refused

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(Sudore et al., 2013)

Appendix D

Logic Model

Figure D1
Logic Model

Figure 1. Educating Older Adults in Community Dwellings Logic Model

Goals: This quality improvement project aims to implement a patient education program covering various aspects of ACP to improve overall comprehension of ACP and ACP completion and documentation for older adults residing in a Maricopa County community-based independent living facility in Arizona.

INPUTS	OUTPUTS		OUTCOMES			IMPACTS
	Activities	*Target*	*Short*	*Intermediate*	*Long*	
Patient focused education program on ACP. Facility to conduct educational program. Project participants with low knowledge regarding ACP activities. PCP to help deliver educational program. *Select survey (questionnaire) for project participants. The Advance Care Planning Engagement Survey is the best fit for this project (Sudore et al., 2013). Determine method for de-identifying participants (Office for Civil Rights (OCR), 2012).	*DNP student to create ACP patient education program *DNP student to create participation recruitment flyer. * Determine participate inclusion and exclusion criteria. Schedule dates and book facility to host education program. *Provide The Advance Care Planning Likert-scale survey to measure outcomes pre intervention and post intervention (Sudore et al., 2013).	The project participants, residents at the project site that meet inclusion criteria.	**Completed patient education program to be implemented. **Completed pre and post intervention survey.	**Increase in patient Initiation of ACP conversations with PCP. **Increase overall comprehension of ACP.	**Increase overall ACP completion and documentation. **Facilitate changes or updates to current ACPs.	**Increase overall comprehension of ACP. ⬇ **Increase overall ACP completion and documentation. ⬇ Decreasing unwanted medical procedures. ⬇ Decreasing excessive medical care costs. ⬇ Increase patient quality of life and improve patient, family and provider satisfaction.

Assumptions: All participants involved are aged over 65 years; most of these individuals will be highly educated women (Overbeek et al., 2018). They will acquire enhanced knowledge regarding ACP and grasp its importance in addressing their healthcare preferences and requirements towards the end of life (Overbeek et al., 2018).

Key: **ACP**-Advance care planning; **PCP**- Primary care provider
Theoretical Framework: **Transtheoretical Model (TTM) (Prochaska & Velicer, 1997)
Implementation Framework: *Intervention Mapping (IM) Cycle (Fernandez et al., 2019)

Appendix E

Budget

Table E1
Project Budget

Phase	Activities	Cost	subtotal	Total
	Data Collection and Evaluation personnel (Statistician)	$300	$300	**$300**
	Educational materials documents and marketing materials (handouts, flyers, pens)	$0.68/copy 75 copies 30 pens	$57	**$357**
	Hire Spanish translator Estimated 3 hours @ $20/hr to translate materials	$60	$60	**$417**
	Technology Equipment Rental (Audiovisual, projector, and screen)	$485	$485	**$902**
Indirect Costs	Office Space and Utilities	$100	$100	**$1002**
	Refreshments for participants (snacks and drinks)	$200	$200	**$1202**

	Plates and napkins			
Potential Funding	American Association of Nurse Practitioners (AANP) Grants (up to $5000) American Association of Nurse Practitioners (AANP) Scholarships ($2500) Retirement Research Foundation (RRF) (Unknown amount) Online Crowdfunding (campaign highlighting the importance of ACP education) Donors (Individuals in the community who are passionate about healthcare, aging, or end-of-life care)			

Cost versus Revenue Savings	Reduction in the utilization of emergency services such as EMTs and the Fire department Reduction in the utilization of assisted living staff due to a decrease in unnecessary medical treatments Efficient medical resource allocation

Appendix F

Descriptive Statistics

Table F1
Descriptive Statistics

Variable	*n*	*%*
Gender		
Female	12	63.16
Male	7	36.84
Ethnicity		
Caucasian	19	100.00
Language		
English	19	100.00
Education		
Associate Degree	2	10.53
High School	2	10.53
Graduate Degree	5	26.32
Bachelor's Degree	10	52.63
Marital Status		
Widowed	4	21.05
Divorced	2	10.53
Married	12	63.16
Single	1	5.26

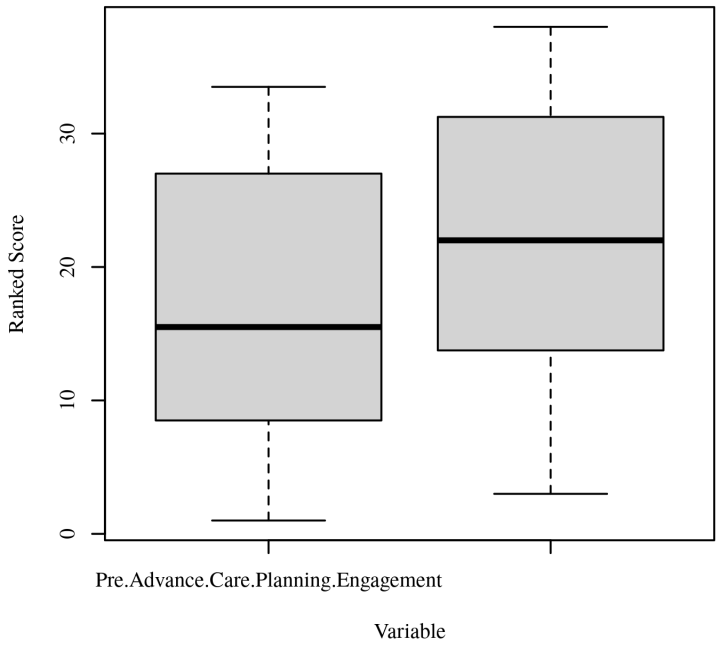
Note. Due to rounding errors, percentages may not equal 100%.

(Intellectus Statistics, 2023)

Appendix G

Two-Tailed Wilcoxon Signed Rank Test

Figure G1
Advance Care Planning Engagement Average Scores



(Intellectus Statistics, 2023)