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Using Evidence-Based Interventions to Improve the Completion Rates of Advance Care

Directives

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Abstract

Background: Advance care directives reduce unnecessary suffering, improve life quality, and further engage patients and families in the decision-making process to ensure that end-of-life care preferences are considered and applied. Despite the proven benefits of advance care directives, advance directives completion rates are approximately 33% in the United States. *Purpose:* The purpose of this quality improvement project was to increase advance directive completion rates among patients at one clinic through an educational intervention. *Methods:* The intervention was used to educate patients about the benefits of advance care directives, and present opportunities for patients to complete the directive. The intervention included educational pamphlets and posters available in the clinic waiting room. The participants included patients and their families who attend the clinic. Results and Conclusion: The educational campaign resulted in a 20.3% increase in the completion rates of advance directives among the randomly selected health records. Age, gender, and race were found to be influential factors in patients' attitudes toward completing advance directives. This quality improvement project supports the application of an educational intervention to increase the completion rates of advance directives in clinics caring for patients who are immigrants, refugees, and low-income earners.

Keywords: advance care directives, evidence-based interventions, multimodal interventions, completion rates, end-of-life care

Introduction

Advances in health care management and technology have changed the perspectives about the end of life and provided opportunities to better manage end-of-life expectations. Advance care directives were created to offer a practical process for ensuring that the end-of-life care preferences of patients are considered and applied (Wilkinson et al., 2007). Advance care directives are legal documents that allow patients to specify their preferences and wishes regarding medical care and treatment (Wilkinson et al., 2007). They are applied when a patient is unable to make his or her own decision because of illness or incapacity. Using advance care directives is beneficial not only for patients and their families but also for health care providers and systems (Waggoner, 2021). Previous studies have shown that end-of-life is linked with substantial suffering for dying persons. The care dying persons receive may have negative health and financial impacts on the patients' families, the health care system, and society (Waggoner, 2021).

Using advance care directives, it is possible to reduce unnecessary suffering, enhance life's quality, and better understand the decision-making challenges that patients and their healthcare providers experience (Osman et al., 2020). Advance care directives can be created at any stage of life, whether the individual is sick or well, and should be updated with changes in circumstances (Osman et al., 2020).

Life expectancy in the US has dramatically increased over the past few decades, and projections are that approximately 21% of US residents will be 65 years and older by 2030 (Vespa, et al., 2018). Despite this, and the proven benefits and previous efforts on advance care directives, the completion rate for advance care directives is still low in the United States. One of the most recent studies on the total number of advance directives in the United States showed

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only one-third of the general population has some advance directive (Yadav et al., 2017). Low completion rates of advance directives may increase medical costs and in-hospital deaths and may decrease the use of hospice care and quality of life. Implementing evidence-based interventions has been identified as an effective approach for increasing the completion rates of advance directives. Therefore, the purpose of this Quality Improvement project is to implement a campaign to educate patients about the benefits of completing advance care directives, and to provide opportunities for them to complete the directives.

Review of the Literature

High-quality research studies are important for the support of an evidence-based project. For this project, a detailed search was conducted using six databases to locate publications that represent the state of the science in advance directives. CINAHL, MEDLINE Complete, PubMed, APA PsycINFO, Google Scholar, and Science Direct were systematically searched for peer-reviewed publications. Different keywords including several combinations of advance care directives, completion rates, evidence-based interventions, important factors, and healthcare settings were used for this search. The references list of each publication was also examined to find additional relevant studies. This search led to the identification of hundreds of studies. To narrow the search, publication dates were limited to include only 2005 to the present. Additionally, only published research and dissertations written in the English language, and with full-text availability were included. Following these criteria, 17 publications were selected and included in the review for this project.

Synthesis of the literature

Four studies in the literature focused on designing and evaluating evidence-based interventions to increase the completion rates of advance directives. While two studies showed

that the interventions have a significant impact on increasing the completion rates (Harlow, 2016; Gibbons, 2019) others showed the interventions may not have any impact (Jezewski et al., 2007; Barker et al., 2021). Jezewski and colleagues (2007) used two types of interventions: (1) didactic, which distributed information using an educational program or clinical encounter and (2) interactive, which were a person-to-person interaction. They concluded that educational intervention without the possibility of person-to-person interaction may not significantly improve the completion rates. Similarly, Barker and colleagues (2021) designed an intervention that included a 10–15-minute education session along with an advance directive brochure given to each participant, as well as follow-up reminder calls. The authors concluded that the brief intervention followed by calls did not have any impact on increasing the completion rates. However, an educational intervention, that included a written booklet and a discussion about advance directives, successfully increased completion rates (Harlow, 2016). A virtual interactive webpage also successfully increased advance directive completion rates (Gibbons, 2019).

Researchers also focused on factors that affect the completion rates of advance directives. Age, religion, family structure, disease entity, and patient's experiences with death, dying, and diseases were found to be influential factors on the completion of advance directives (Van Scoy et al., 2014. Advance directive completion was linked with older age, higher education, and income (Rao et al., 2014). Ethnicity, age, relationship status, and knowledge were also found to be significant factors that influenced the completion rates (Luck et al., 2017). Lack of awareness and knowledge among U.S. adults was the major reason for not having an advance directive (Kermel-Schiffman and Werner, 2017; Rao et al., 2014). Omondi and colleagues (2017) identified the history of ICU admission, history of endotracheal intubation, functional status of the patient, the medical specialty of the health care providers, and providers' discussion with the

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patient about the advance directive to influence care directives. Researchers advised improving knowledge and encouraging professionals to have face-to-face conversations with patients and their families about advance directives (Kermel-Schiffman and Werner, 2017).

Multimodal interventions have been tested in several studies to improve the rates of directive completion. For example, researchers examined the effectiveness of a multimodal intervention, including mailers, advance care planning conversations, and telephone follow-up calls, to improve advance directive completion rates (Koeppen et al., 2017). The multimodal intervention was helpful to raise rates of advance directive completions (Koeppen et al., 2017). Three other studies supported multimodal interventions to significantly increase advance directives completion rates (Bravo et al., 2008; Durbin et al., 2010; Tamayo-Velaquez et al., 2009).

Populations and settings varied across studies. Two studies focused on advance directive completion in community-dwelling individuals (Hinderer and Lee, 2014; Pfirstinger et al., 2017) Another study examined directive completion rates among older Americans (Silveira et al., 2014).

One study focused on quantifying changes in the completion of advance directives during COVID-19 compared to pre-COVID-19. Auriemma et al. (2020) found a 4.9-fold increase in online advance directive completion after the onset of COVID-19 (Feb to Apr 2020) compared to a pre-COVID-19 period (Jan 2019 to Jan 2020). They concluded that an increase in the rate of advance directive completion could be due to an increased sense of advance directive importance during the pandemic.

Despite the increasing popularity of advance directives, one study found they are not sufficient to decrease hospitalization rates or hospital death (Pfirstinger et al., 2017). Pfirstinger

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et al. (2017) compared private practice outpatients with those of a university clinic and found a substantially higher completion rate for the outpatients, who had previous experience with severe diseases. The importance of community-based, nurse-led educational interventions were found to be key to completing advance directives in the community (Hinderer and Lee, 2014; Pfirstinger et al., 2017).

Evidence Based Practice: Verification of Chosen Option

The literature review revealed that using advance directives in different settings has potential benefits for patients and their families, as well as healthcare providers and healthcare systems. Each study examined the influence of one, or more, evidence-based interventions on increasing the advance directives completion rates. However, the approaches used to improve the completion rates were different among the reviewed studies. Despite the benefits of employing an intervention to increase the completion rates, there is no evidence that one intervention can be considered the most effective approach. The literature review provided useful information for the planned DNP project regarding advance directives and the influential factors that may increase the completion rates of advance directives in different care settings.

Theoretical Framework

A precaution adoption process model (PAPM) framework was used (Weinstein et al., 2008) to guide this project. PAPM is a psychologically based model applied to describe how an individual makes a new decision and converts the decision into action (Appendix 1). The model's author examines the behavior change of an individual as dynamic, and occurring over time (Weinstein et al., 2008). The PAPM consists of seven stages, which are schematically shown in Appendix A. Stage 1 starts when an individual is fully unaware of an issue. In stage 2, the individual becomes aware of the issue but still does not see it as needing attention. In stage 3,

the individual becomes engaged and aware of the issue's importance and enters the decisionmaking process. From stage 3, the individual may enter either stage 4 or stage 5. If the individual's decision is to take no action regarding the issue, he/she enters stage 4 and ends at PAPM. Otherwise, the person enters stage 5, which means he/she accepts the issue and decides to take action. Once the issue is accepted, the individual will start a new behavior and enter stage 6. In stage 7, the individual will continue to maintain the behavior over time, which is called the maintenance stage (Haas, 2018).

This theoretical model is very relevant and applicable to this project. The focus of this project is to implement evidence-based interventions to increase the completion rates of advance care directives. Using evidence-based interventions at different stages of decision making may encourage participants to become engaged and to decide to act. If the participants decide not to act, the intervention has at least made them aware of advanced care directives. If the participants become engaged and decide to act, they will move into the acting process. The acting process includes completing the required documentation and expressing their preferences and wishes at end-of-life. The maintenance process, which is very important, will include continuing the discussion regarding advance care directives and making sure that the participants' preferences and wishes are understood by family members, and kept up to date as their health changes.

Objectives, and Expected Outcomes

The overall purpose/goal of this project was to increase the advance directives completion rates of patients at one clinic in Clarkston, Georgia through an educational campaign. SMART, specific, measurable, attainable, realistic, and time-oriented, goals were established for the project (Table 1).

Table 1

The purpose/goal, objectives, and outcomes of the project

Goal	Objective	Outcome
Increased advance	a) Educate patients about the	a) Posters and educational
directives completion	benefits of advance care	pamphlets about Advanced
rates.	directives	Directives were available to 100%
		of patients who attend the clinic
		over a three- month period.
	b) Provide more opportunities	b) Advanced Care Directive
	for patients to complete the	forms were readily available to
	advance care directive.	patients when attending the
		clinical over a three-month
		period.
	c) Determine the effect of the	c) Expectations set for a 25%
	educational campaign on	increase in the completion rates at
	completed Advanced Care	the end of the three-month period.
	Directives.	

Methods

In this section, descriptions of the project site and population, project design, and setting facilitators and barriers are presented.

Project Site and Population

The site selected for this project was a clinic located in Clarkston, Georgia. The setting is a primary and urgent care clinic offering a variety of clinical services to patients including annual physical, pediatric care, STD screening, allergy testing, drug screening, mental health, family planning, men's and women's health, hypertension, diabetes, cholesterol management, and more. The clinic staff includes a physician, two nurse practitioners, two registered nurses, and two secretaries. The clinic patients included immigrants, refugees, and low-income populations. The patients who came to the clinic were of different genders, ages, races, and cultural and religious backgrounds. All patients who attended the clinic were able to see the posters and education pamphlets.

For Iranian and Afghan and all other patients who spoke Farsi and Pashto, the DNP student helped with the communication and translation purposes. The preceptor speaks Amharic, which is the official language of Ethiopia, and Swahili, which is the national language of Tanzania, Kenya, Uganda, and the Democratic Republic of the Congo. She communicated with patients who spoke Amharic and Swahili. The Physician of the clinic speaks French, and he helped as a translator for the patients who spoke French. Many refugee patients who spoke other languages were accompanied by a translator from the International Rescue Committee. For all other patients, online translation apps were normally used to better understand their concerns and requests.

Project Design

A pre and post educational campaign was used as the project design. The educational intervention included adding posters (see Appendix C) in the waiting room and providing educational pamphlets (see Appendix D) to the patients who had appointments at the center. This

project was designed with the goal of implementing this educational intervention to improve the advance directives completion rates among the patients of this health center. Health records were reviewed before and at the end of the campaign to assess advance directive completion rates.

Setting Facilitators and Barriers

Having collaborative individuals was a great facilitator for this project. For this project, the DNP student interacted and established a collaborative culture with the nurse practitioner as the preceptor and the secretary of the clinic. The language barrier and lack of health literacy among immigrants, refugees, and low-income populations were speculated as potential barriers to implementing this project. Therefore, to minimize this issue, the brochures and pamphlets were written and prepared at the 6th-grade level English so educational materials could be better understood by the patients of the clinic. Prior to starting the project, all possible barriers and facilitators of this project were discussed in detail with the site preceptor.

Measurement Instruments

The measurable data for this project was the Advanced Care Directive completion rates. The number of completed Advance Care Directives (outcome) was obtained through a review of health records prior to and following the educational campaign. Just prior to the educational campaign, and 3 months later, 50 random health records were reviewed for advanced directive forms. No personal identifying information was obtained, and the presence or absence of the advance directive form was noted. To measure the outcomes of my DNP Project, the increase in the advance directives completion rates among the selected population was used. The number of newly completed directives was tabulated each week during the project.

Data Collection Procedures

Following Internal Review Board (IRB) determination of "not humans subjects research", the DNP student sent an email to the site preceptor to coordinate a time to start the educational campaign. Once an appropriate time was coordinated, the project posters were added in the clinic waiting room and examination rooms. Additionally, educational pamphlets were distributed by the secretary of the clinic to patients. The posters and educational pamphlets provided information about advance directives, their components, and their importance. By reading the posters and brochures, patients learned about the importance of discussing advance directives and their wishes with family and their healthcare providers. The secretary offered educational pamphlets to the patients at the time of their appointment check-in. Patients were encouraged to review the materials inside the educational pamphlets and complete the advance directive form either after their appointment or at the time of their next appointment. DNP student phone number and email address were added to the educational pamphlets and on posters as a source for patients who might have questions and concerns about advance directive forms. A three-month period was planned for this project from the time the educational intervention was initiated until the health records were reviewed. The secretary recorded the number of patients who completed the forms, and this was tabulated weekly.

The influence of this educational intervention on completion rates was determined by comparing the percentage of patient records with advance directive forms before and after the educational campaign and the total number of newly completed directives during the educational campaign. A simple random selection was used to select 50 patient records for review pre and post intervention. This gives an equal chance to each patient with an available health record in the clinic to be selected for this educational campaign. This method of selection was used and

discussed in many previous studies such as the study of Basti & Madadizadeh (2021). There was a total of 1032 established patients prior to starting the educational campaign. A list of the clinic's patients without their personal identifying information was obtained from the secretary and preceptor. To select 50 random patients, a table was created in an Excel sheet in which every 20th patient on the list was selected. The same 50 records were reviewed pre and post intervention.

Data Analysis

Descriptive analysis was used to analyze the data between pre and post health record review of Advanced Care Directive completion rates. Graphical representation was used to share the data and results. Excel and Minitab statistical software were used to analyze the data.

Ethical Considerations/Protection of Human Subjects

The University of Massachusetts, Amherst (UMass) Internal Review Board (IRB) determined the project to be "not humans subjects research" prior to initiating the Project. The Health Insurance Portability and Accountability Act (HIPAA) is another important ethical consideration for this project. HIPAA is a federal law that generally prohibits healthcare professionals including nurses from disclosing patients' health information without written consent (Samadbeik et al., 2015). All the participants in this project and their health information were protected by following HIPAA guidelines. Ethical considerations during this project were beneficial in various aspects such as valuing the participants' rights and protecting their privacy and confidentiality. Ethical considerations minimized any risk related to the project and participants and helped to improve the quality and validity of the project. To ensure that ethics were fully considered at the project site, the DNP student consulted with the director of the clinic to have his guidance regarding all aspects of the rights and privacy of the participants.

Results

Demographic and Baseline Findings

As mentioned earlier, 50 random health records were reviewed pre-intervention for advanced directive forms. Only four patient records included AD documentation. Age, gender, race, and availability of advance directive forms were the only information that was recorded. Table 2 presents the statistical data related to the age of 50 randomly selected patient records preimplementation. The age of the 50 random patients ranged between 32 and 86 years old, with an average of 58.1 and a median of 59.5.

Table 2

Patients' age statistics of pre-implementation population

Age group	n	%	Average	Median	Minimum	Maximum
30-39 years	12	24	35.3	35.5	32	39
40-49 years	7	14	44	43	40	48
50-59 years	6	12	55.3	55.5	51	59
60-69 years	8	16	65.3	65	63	69
70-79 years	10	20	74.1	74	70	78
+80 years	7	14	82.7	83	81	86
			58.1	59.5	32	86

Figure 1 shows the patients' age range of pre-implementation population for those with and without advance directive (AD) forms. Only 4 out of 50 patients (8% of the random population) had a completed AD form in their record.

Figure 1

Patients' age ranges of pre-implementation population

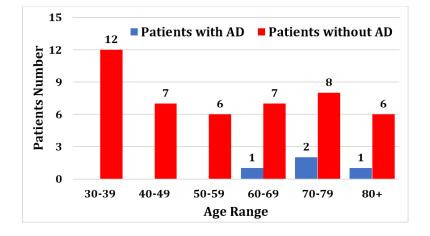
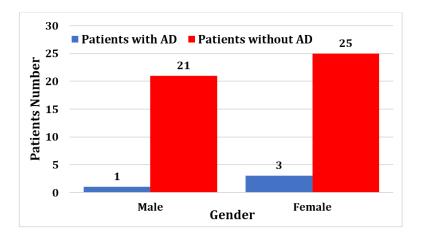


Figure 2 shows the gender of pre-implementation population for patients with and

without advance directive (AD) forms.

Figure 2

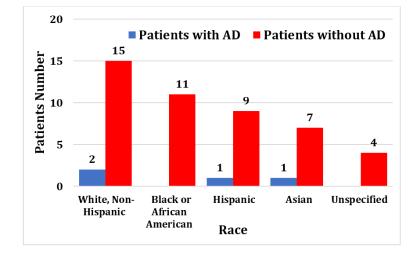
Patients' gender of pre-implementation population



The racial information of patients was also analyzed, and the results for patients with AD and without AD are presented in Figure 3.

Figure 3

Patients' race of pre-implementation population



Findings Post-Intervention

Post-intervention 13 health records included AD (28.3%). A 20.3% increase in the completion rates of advance directives was observed after implementing the educational campaign. The age range of patients who completed AD after implementing the campaign was also examined (Figure 4). Only patients over the age of 50 years completed the advance directives forms. Additionally, more women completed the AD forms (Figure 5), and more who identified as white/non-Hispanic (Figure 6).

Figure 4

Age range of patients who completed AD after implementing EBI

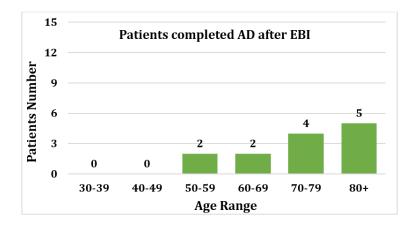


Figure 5

Gender of patients who completed AD after implementing EBI

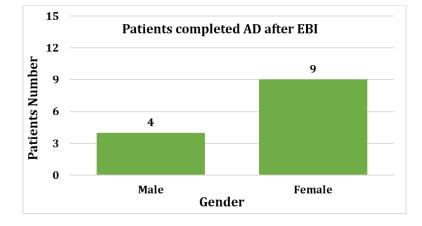
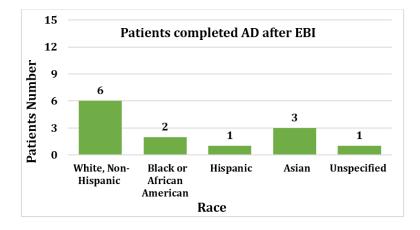


Figure 6

Race of patients who completed AD after implementing EBI



Discussion

The purpose of this evidence-based intervention was to educate patients about the benefits of having advance directives and to determine the effect of an educational campaign on completion rates of advance directives. This evidence-based project was designed to examine the effect of an educational campaign over a period of three months in a primary and urgent care clinic, where most patients were immigrants, refugees, and low-income individuals.

Findings Explanation

Prior to starting this project, out of 50 randomly selected patient records, only 4 (8%) included advance directive forms, post-intervention, 13 health records included AD (28.3%). The educational campaign resulted in a 20.3% increase in the completion rates of advance directives in the clinic. The project and implementation of the educational intervention were successfully implemented, however, the goal of the project, which was a 25% increase in the advance directive completion rates, was not met. Although the target number was not met, there was a notable increase in completed AD forms.

Results showed that age can be an influential factor in whether patients complete advance directives. Although patients under 50 years of age were 41% of the total patient records surveyed (19 out 46), none completed advance directives. This demonstrates that younger patients may believe completing advance directives is only necessary for those patients who are older and may have more complicated chronic diseases.

Gender was found to be another factor in completing advance directives. The number of female patient records without AD prior to the campaign was 25, after the campaign 9 of these records included AD (36% of them). The number of male patients with no AD before the campaign was 21, and after the campaign 4 more completed the AD (19% of them). This may be due to differences between men's and women's perspectives regarding the discussion about end-of-life and whether they want to express their wishes and preferences for their end-of-life.

The results revealed the association between race and advance directive completion. Race shaped patients' attitudes regarding end-of-life care and the importance of completing advance directive forms. White, Non-Hispanic patients showed more tendency to complete the form while Black or African American and Hispanic patients showed less tendency.

Evaluation of The Theoretical Framework

The precaution adoption process model (PAPM) framework was found to be applicable to this DNP project. PAPM, as a psychologically based model, has helped this project to better understand how an individual (patient) makes a new decision and converts the decision into action. Educating patients regarding the benefits of completing advance directives may encourage them to become engaged and decide to act (stage 3 of PAMP). If they decide not to act (stage 3 of PAMP), the educational intervention has at least made them aware of advanced care directives. The educational intervention could put many patients in stage 3, but eventually, they decided to not complete the advance directive form and enter stage 4 of PAMP. If the patients become engaged and decide to act, they will move into the acting process (stage 5 of PAMP). The acting process includes completing the form and expressing their preferences and wishes at end-of-life (stage 6 of PAMP). The maintenance process (stage 7 of PAMP), which is a future step and beyond the scope of this project, is very important because it includes continuing the discussion regarding advance care directives. It also includes ensuring that the patient's values and wishes are understood and kept up to date as their health changes.

Strengths and Limitations of The Project

The strength of this project was successfully implementing an educational intervention among immigrants, refugees, and low-income patients. The successful completion of this project increases its transferability and enables its applicability in similar clinic settings. The results of this project supported the potential benefits of performing an evidence-based intervention for educating patients about the importance of completing advance directives. This project and its results have implications for similar clinics and settings. Despite its strengths, this project has a few limitations too. One limitation could be the small size of the clinic and the sample size of randomly selected patients (50 patients). Because posters and pamphlets were used as an educational intervention in this study, the project results may not be generalized and replicated for other types of educational intervention. Different results may be expected by changing the patients' sample, patients' demographic, and clinical settings. The randomly selected population of this project was racially diverse. This could limit the applicability of the implemented educational intervention to promote advance directives. The reason could be because of variable individualistic decision-making styles, attitudes, as well as personal and religious beliefs among different races, which are important factors to explore why patients may complete an advance directive or not.

Cost-Benefit Analysis/Budget

Project expenses included printing posters and brochures. The DNP student provided pamphlets and posters and was responsible for the full cost of the project. For the cost-benefit analysis, the commuting, consultation, and facilitator costs were ignored. The estimated costs for this project mostly included the cost required for designing and printing the posters and brochures (Appendix E).

Increasing the completion rates of advance directives may decrease the medical cost for both patients and the health care system and in-hospital deaths. It may increase the utilization of hospice care, and the quality of end-of-life. It also gives the patients peace of mind and reduces their distress and anxiety at the end of life.

This DNP project had benefits for the participants and their families and the health care system in Clarkston, Georgia. The potential benefits of this project outweigh the time, energy, and cost spent to implement this project.

Conclusion

According to the literature, using advance directives in different healthcare settings is of growing interest because of the clear benefits to patients, their families, and the healthcare system. Implementing an educational intervention is a common approach to improving the advance directive completion rates. The overall objective of this project was to implement an evidence-based intervention that includes educational materials such as pamphlets and posters available for viewing in the clinic waiting room to guide and educate patients regarding the benefits of advance care directives. The outcome of the project was measured by analyzing advance care directive completion rates among a randomly selected patients' population.

The project and implementation of the educational intervention were successfully implemented, however, the goal of the project, a 25% increase in advance directive completion rates, was not met. The educational campaign resulted in a 20.3% increase in the completion rates of advance directives. Age, gender, and race were observed as influential factors in patients' attitudes toward completing advance directives. The results of this quality improvement project supported the application of educational interventions to increase the completion rates of advance directives in a clinic, where patients are immigrants, refugees, and low-income individuals.

To further support the outcomes of this project, similar educational interventions should be considered as part of routine patient care in the clinic. It is therefore recommended to continue adding posters to the clinic and offering pamphlets to all patients who attend the hospital.

Futures studies should be conducted by offering more educational interventions, and in different formats to identify which intervention provides better outcomes. Also, educational interventions should be implemented in a different clinical setting and for a larger sample of

patients. A future project could be conducted to prompt physicians to continue the educational discussion regarding advance care directives, during screening/prevention visits, and ensure the maintenance process (stage 7 of PAMP) is maintained.

Because the population of this project was racially diverse, a future study should be performed by promoting advance directives among each individual race. This study could determine whether or not educational interventions can be customized to better address the individualistic decision-making style, attitudes, as well as personal and religious beliefs of each race.

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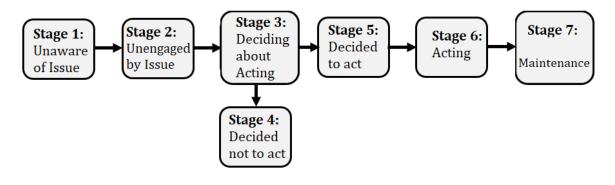
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Different stages of PAPM model



Appendix B

Project Timeline

Project Timeline								
Tasks/Months	Oct 2022	Nov 2022	Dec 2022	Jan 2023	Feb 2023	Mar 2023	Apr 2023	May 2023
Implementing the educational intervention								
Analyzing data, and								
evaluating the overall								
Outcome Preparing the final draft of								
the project								

Appendix C

Designed Educational Poster

ADVANCE DIRECTIVE FORM

What is an ADVANCE DIRECTIVE?

 ADVANCE DIRECTIVE FORM is a legal document that is ONLY applied when you are incapable of making decision for yourself because of illness or incapacity.

Who needs to have an ADVANCE DIRECTIVE?

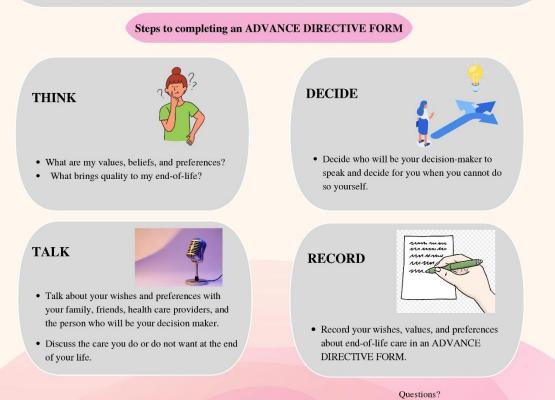
- ADVANCE DIRECTIVE is not just for elderly individuals.
- Every person over the age of 18 should have an ADVANCE DIRECTIVE.

Why do you need an ADVANCE DIRECTIVE?

- Even if you are not sick now, it is still very important to plan for your health care and record your wishes and preferences.
- At any age, an unexpected medical crisis can happen.

BENEFILT

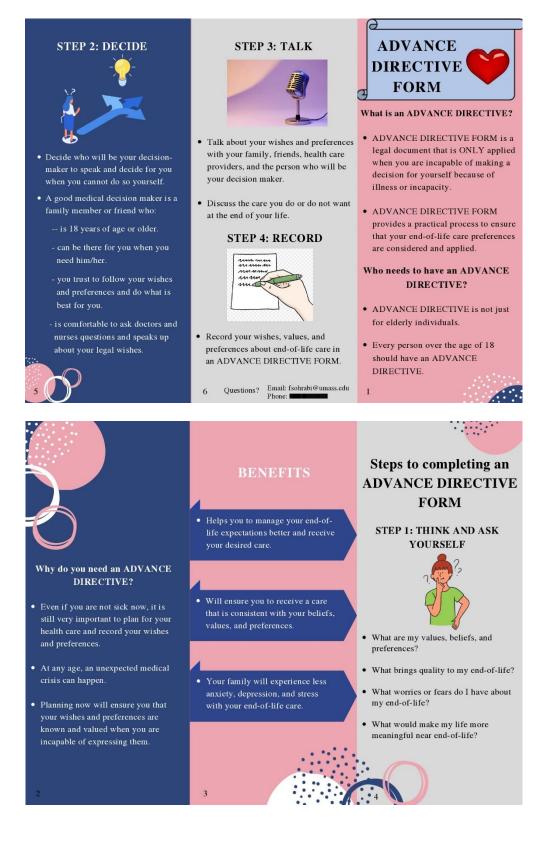
- Helps you to manage your end-of-life expectations better and receive your desired care.
- Your family will experience less anxiety, depression, and stress with your end-of-life care.



Send an email to: fsohrabi@umass.edu

Appendix D

Designed Educational Pamphlet



Appendix E

Summary of the cost analysis

Item	Value
Posters and educational pamphlets design	\$100
Posters print cost	\$180
Educational pamphlets print cost:	\$300
Total cost	\$580