

DOCTOR OF NURSING PRACTICE (DNP) PROGRAM

A DNP PROJECT

TITLE:

IMPROVING ADVANCE CARE PLANNING IN PRIMARY CARE

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Table of Contents

| Abstract | 5 |
|---|----|
| Introduction | 6 |
| Background and Significance | 7 |
| Needs Assessment | |
| Problem Statement | |
| Clinical Question | 12 |
| Aims and Objectives | |
| Review of Literature | |
| Search Strategy | 14 |
| Narrative Synthesis | 14 |
| Theoretical Framework | 19 |
| Methodology | 21 |
| Setting | |
| Study Population | |
| Subject Recruitment | |
| Consent Procedure | 23 |
| Potential Risks and Benefits | |
| Study Interventions | 23 |
| Outcome Measures | 25 |
| Subject Costs and Compensation | 26 |
| Resources Needed and Economic Consideration | |
| Project Timeline | |

| Evaluation Plan | |
|--|----|
| Data Analysis | |
| Data Security and Storage | |
| Findings | |
| Discussion | |
| Implications for Healthcare Economics | |
| Implications for Healthcare Quality | |
| Implications for Healthcare Policy | |
| Sustainability of Project | |
| Dissemination and Professional Reporting | |
| Conclusion | |
| References | |
| Appendix A: Table of Evidence | 42 |
| Appendix B: Theoretical Framework | 50 |
| Appendix C: Site Letter of Cooperation | 51 |
| Appendix D: Informed Consent | 53 |
| Appendix E: Education Module | 56 |
| Appendix F: Pre and Post Test | |
| Appendix G: Data Collection Sheet | 69 |
| Appendix H: Project Cost Projection | 70 |
| Appendix I: Gantt Chart for Project Timeline | 71 |
| Appendix J: CITI Training Certificate | 73 |
| Appendix K: McNemar Test Cross Tabulation | 74 |

| Appendix L: Number of AC | Conversations | 75 |
|--------------------------|---------------|----|
|--------------------------|---------------|----|

Abstract

As the life spans of Americans are increasing so is the number of people who are living longer with multiple chronic comorbid conditions. End of life care can be protracted and very expensive. However, end of life treatment goals, articulated in advance care planning (ACP), can address these concerns. ACP is defined as the voluntary process in which patients discuss and communicate their future treatment and end-of-life preferences with their provider in case they lose their capacity to make decisions or communicate their wishes and preferences in the future. Primary care settings are ideal for the integration of ACP as part of routine care and health maintenance. However, a review of literature has shown that primary care patients do not routinely engage in ACP with their providers. This project increased ACP in a single primary care center by implementing an educational intervention targeted towards providers. McNemar's Test was used to analyze pre and post test scores in provider knowledge and attitude towards ACP. Additionally, ACP CPT code billing frequencies pre- and post-intervention were tracked. This study resulted in a positive change in provider knowledge base and attitude towards ACP, an increased frequency of the number of times ACP was billed for in the setting, and in the permanent integration of ACP in policy at the primary care center. This study demonstrated the feasibility of integrating ACP in primary care, increasing revenue for primary care settings, improving patient autonomy in end of life healthcare decision-making, and increasing the overall quality of healthcare services rendered.

Keywords: ACP, advance care planning, advance directives, primary care, end of life care

Improving Advance Care Planning in Primary Care

Introduction

Advance directives legally put into effect patient preferred decisions for treatment modalities in end-of-life for patients who cannot express them at the time due to advanced disease or incapacitation (Brinkman-Stoppelenburg, Rietjens, & van Der Heide, 2014). As such, advance directives provide an active opportunity for consumers to participate in their end-of-life decision making. Although greater emphasis has been placed on the value of advance care planning and the presence of an advance directive in more recent years, the use of advance directives remains suboptimal in the United States. It is estimated that the number of adults that possess written advance directives is approximately thirty-seven percent (Arnold & Givens, 2018). That leaves a staggering sixty-three percent of the American population that lives day-today with their end -of-life healthcare wishes left unknown and the intimate details of their healthcare potentially up to the discretion of strangers.

Advance directives fall under the broader umbrella of advance care planning and are usually signed while a person is hospitalized or in an advanced stage of illness in a long term care facility (Wissow et al., 2004). The quality of advance care planning is diminished if it is rushed and if created in times of physical or emotional duress. Ideally, a person should have time to carefully consider and discuss with loved ones about end-of-life care and goals. Primary care settings can serve the purpose and provide an opportunity for providers, patients, and family members to start advance care planning. Patients in primary care are less intensely ill and have the time to stop and critically consider future health decisions. Moreover, patients who seek routine primary healthcare and follow up generally have a well established relationship and rapport with their providers, and subsequently may feel more at ease broaching the subject of end-of-life issues (Tierney et al., 2001). Therefore, primary care offices are familiar,

comfortable, and supportive environments to begin advance care planning and subsequently increasing the number of advance directives that are in place.

Primary care providers are responsible for overseeing the health and well being of their clientele. Immersed within the community, primary care providers are in tune with not only their patients' medical management, but often their social issues as well. This intimate relationship cannot be recreated in an acute care facility. These providers, using illness history and presence of chronic comorbidities, can clearly identify patients in the office who are at greater risk for becoming acutely ill and work collaboratively to put an advance care plan into place before critical scenarios arise (Tierney et al., 2001). As such, this project provided primary care providers with information on advance care planning strategies, billing, and addressed identified barriers to advance care planning in order to facilitate the creation of advance care directives in primary care settings.

Background and Significance

End-of-life decision making is a complex topic that has traditionally been difficult to broach for both patients and providers. For decades, topics of death and dying have been deemed taboo and pushed out of the spotlight when compared to the marvels and reach of modernized Western medicine (Institute of Medicine, 2015). This problem is compounded by the lack of preparation and familiarity that Americans have with the decisions that need to be made in endof-life. Its sensitive and challenging nature have led to missed opportunities in the past for advance care planning education (Institute of Medicine, 2015; Tierney et al., 2001). Advance care planning is positively associated with higher quality end-of-life care (Brinkman-Stoppelenburg, Rietjens, & van Der Heide, 2014; Detering, Hancock, Reade & Silvester, 2010). The presence of an advance directive is also shown to ease the burden associated with end-of-life

decision making for family members or surrogate decision makers (Detering, Hancock, Reade & Silvester, 2010; Hickman & Pinto, 2013).

The need for advance care planning has become more apparent as healthcare costs related to end-of-life care has skyrocketed in recent years. In 2009, Medicare spending for end-of-life care within the last two months of life was in excess of 55 billion dollars. Data from 2011 revealed that over thirty-three percent of patients admitted to hospice care died within less than a week of admission. Indeed, up to thirty percent of the money spent had no meaningful impact on the patient's quality of life. Therefore, the exhaustive aggressive and invasive medical therapy utilized in end-of-life treatment is expensive and does not prolong or improve quality of life for patients (Smith & Himmel, 2013).

The role of invasive and life sustaining medical treatment in acute care is often misunderstood by patients and family members. Moreover, the prospect of a meaningful recuperation and return to baseline functional capacity is also reported to be poorly understood by patients and family in relation to progressive end stage disease. When a realistic picture of disease progression and the benefits and drawbacks of treatment options are explained to healthcare consumers, they tend to opt for treatment that focuses on comfort and quality rather than interventions that prolong the length of life (Agency for Healthcare Research and Quality [AHRQ], 2013).

By 2030, it is reported that adults aged 65 years and older will account for approximately 19.1 percent (72.1 million persons) of the total American population (AHRQ, 2013). As a result of the growing aging population living with an increased number of chronic comorbid conditions, national healthcare policy has shifted the paradigm of health care from reactive to preventive (National Prevention Strategy, 2016). With this shift comes an increased focus on

IMPROVING ADVANCE CARE PLANNING

advance care planning as it prevents unnecessary suffering, reduces expensive invasive end-oflife therapies, and moves the focus of end-of-life care towards quality and comfort (Centers for Disease Control and Prevention [CDC], 2012).

The Centers for Medicare and Medicaid Services recognize the need to facilitate advance care planning in primary care. Now a billable service, the agency encourages primary care providers to engage in end-of-life conversations with patients in the community as part of routine health services (American Academy of Family Physicians, 2019). The Institute of Medicine (2015) also strongly suggests a shared responsibility of primary providers to openly dialogue with their patients about advance care planning and facilitate completion of advance directives. Nonetheless, it is apparent that advance care planning is underutilized in primary care despite national efforts due to a combination of provider and patient barriers (Spoelhof & Elliott, 2012; Tung & North, 2009).

Providers have reported feeling uncertain about when or with whom to begin an advance care planning conversation as a barrier to successful advance care planning in primary care (Spoelhof & Elliott, 2012). Providers also reported feeling uncomfortable with conversations about death and dying with their patients, as they can trigger feelings of hopelessness (Tung & North, 2009). Other provider barriers include lack of time with patient and lack of flexibility within their health system to initiate advance care planning (Spoelhof & Elliott, 2012; Tung & North, 2009). However, overcoming barriers associated with advance care planning in primary care can not only increase the number of advance directives in place but also improve the overall quality of healthcare rendered.

To facilitate the discussion, primary care offices can develop a process or policy that introduces a routine and structured format to approach advance care planning. Literature

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9

suggests that having a repeated, structured introduction script to the initial advance care planning conversation significantly reduces the uncomfortable nature of the discussion and helps make it a more routine aspect of any visit (Spoelhof & Elliott, 2012). Elderly patients with chronic conditions also report a more fulfilling primary care experience when the provider initiated an advance care planning conversation (Tierney et al., 2001). Moreover, patients and families that complete advance care planning with their primary providers are better prepared to deal with acute health events or complications that can occur (Howard et al., 2018). In summation, planning for end-of-life care before a person's health state is critical provides patients with the opportunity to seriously consider and understand their personal health related values, have a discussion about their end of life care (Spoelhof & Elliott, 2012).

Needs Assessment

National

Several gaps in advance care planning have been identified on a national level. Foremost, the gross data regarding the percentage of American adults that have completed an advanced directive with their healthcare provider is variable and largely inconsistent. A systematic review of six health science databases from 2011 to 2016 found that among 150 studies that included 795,909 Americans, only 36.7 % of respondents had completed some form of documented advance care planning (Yadav et al., 2017). Moreover, locating reliable stratified data that analyzes the number of advance directives completed in primary care versus long term or acute care is challenging. Although advance care planning is now a billable service in primary care, it is not a mandated federal health regulatory requirement by the Centers for Medicare and Medicaid Services (Centers for Medicare and Medicaid Services, 2018). Since there is no good

evidence available that appraises the efficacy of advance care planning in primary care, the need for primary care centers to identify best mechanisms that increase advance care planning is crucial to formulating an overall more effective national healthcare policy.

State

It is important to note that the specific legalities surrounding advance directives in the United States are not federally standardized or regulated, but vary from state to state. Therefore, an advance directive completed in one state may not be accepted if a patient is critically ill in another state. The fragmentation around what is valid legally as an advance directive may contribute to the low subscription rate nationally (Hinders, 2012). In New Jersey, advance care planning is only a suggestion as part of routine health screening and maintenance (State of New Jersey Department of Health, 2019). However, this should not hinder primary care providers from having advance care planning conversations with their patients and families, as verbalizing end-of-life care goals helps disseminate valuable information between providers and among family members (Hinders 2012).

Local Setting

A free standing primary care office in Maplewood, New Jersey was identified by the principal investigator to implement the advance care planning practice change initiative. A well established practice that sees adults of all ages in varying stages of health, this office provided the investigator with an opportunity to enact effective change among a diverse population. This practice had no formal process or tool in place to assist in the identification of patients that may benefit from having an advance directive in place. Informal conversations with site providers and staff revealed that discomfort with topics of advance care planning, lack of time to effectively communicate advance care planning topics with patients, and lack of knowledge about what

advance care planning entails are major barriers to advance care planning implementation. As such, providers in this practice reported that advance care planning was neglected as part of their health maintenance plans despite seeing adult patients with multiple chronic comorbidities. Although stakeholder resistance was a recognizable concern and potential barrier to implementation and success of a practice change, preliminary interviews with both providers and office staff revealed a willingness to participate in the advance care planning improvement initiative.

Problem/Purpose Statement

Advanced care planning allows people to make informed decisions about end-of-life care with the help of their families and healthcare providers, yet only a few people do it. Without advance directives in place healthcare providers employ exhaustive aggressive and invasive medical therapy at the end-of-life which does not improve the quality of life or meaningfully prolong life. Additionally, as the American population ages, end-of-life care will increase the cost burden without improving quality of life or care. So there is a clear need for exploring means to increase opportunities and venues to discuss advanced care planning with patients before they become critically ill. The purpose of this study was to examine the potential role of primary care settings as an effective venue for advance care planning.

Clinical Question

Does the use of an education module, disseminated to primary care providers via a live education session, change provider attitudes and knowledge base of current advance care planning guidelines? Additionally, will the educational module have an impact on the number of advance care planning conversations that occur in primary care?

Aim and Objectives

The overall aim of this DNP project was to increase the number of advance care planning conversations that occurred in a single primary care office and to reduce provider associated barriers to advance care planning in the primary care setting. The objectives included:

- To educate providers and office staff
 - About the need and importance of advance care planning.
 - About Centers for Medicare and Medicaid Services billing code requirements for advance care planning.
- To reduce provider associated barriers to advance care planning in primary care by
 - o Increasing awareness of personal biases.
 - Offering evidence based strategies to integrate advance care planning into workflow.

Review of Literature

This review of the literature helped in determining provider related barriers to advance care planning in primary care; strategies that can reduce identified barriers; and the role of education in increasing knowledge about ACP and addressing barriers to ACP.

Search Strategy

A search was conducted using the Cumulative Index to Nursing and Allied Health Literature (CINAHL), PubMed, and MEDLINE databases. The following keywords were used in the search: 'advance care planning AND primary care', 'end-of-life care', 'barriers to advance care planning in primary care', 'improving advance care planning in primary care', 'end-of-life communication', and 'education tools in primary care AND advance care planning'. The initial search generated a total of 8,482 results. However, when the search was limited to peer-reviewed

articles only, the results reduced to 4,621. The results were further limited to the last five years generating a total of 855 results.

Inclusion and Exclusion Criteria

Studies were included for evaluation if the full-text was available in English and if the study focused on advance care planning, communication between primary care professionals and adult patients, and barriers and interventions to improve advance care planning in primary care offices. Search results yielded systematic reviews, meta-analyses, randomized control trials, observational studies, and qualitative research studies. Studies in which the primary subjects of interest were pediatric patients, or focused on advance care planning exclusively in long term or acute care settings were excluded from the review. The principal investigator then carefully appraised the abstracts of all the studies that fit the predefined criteria and included only those that were most relevant to the intervention of interest. A total of ten studies were included in the review (See Appendix A).

Narrative Synthesis

Most Americans can expect to live for more than 78 years. As the population ages the number of people living with multiple chronic comorbid conditions also rises and it is projected that this number will continue to rise over the next decade. It is the shared responsibility of healthcare providers to make sure that people maintain health and live full lives by preventing acute exacerbations of chronic conditions, promoting healthy lifestyles and planning for aging (Centers for Disease Control and Prevention [CDC], 2012). However, rising costs of healthcare and uncertain access to quality care for many low income individuals compounds the complexity of managing patients with chronic comorbidities (CDC, 2012). Therefore, longevity is

complicated by issues of chronic diseases, cost and access, and has brought increased public health attention on advance care planning (Institute of Medicine, 2015).

Advance care planning (ACP) is defined as the voluntary process in which patients discuss and communicate their long term treatment and end-of-life preferences with their care provider in case they lose their capacity to make decisions or communicate their wishes and preferences in the future (Rose, Leung, Gustin & Childers, 2018). If a patient elects to engage in an ACP conversation, the contents of that discussion can be recorded as an advance directive to ensure that the wishes and preferences of the patient are known and acted upon by health care professionals when the need arises (CDC, 2012).

Advance Care Planning gaps.

Several gaps in ACP exist within the primary care setting. A state-wide survey conducted by Arnett et al. (2016) reported that interdisciplinary members of healthcare teams recognized the need to initiate ACP conversations as part of rendering high quality patient centered care in primary care offices. However, the same respondents reported that ACP is rarely offered or often overlooked in their day-to-day practices. A lack of education material and lack of knowledge of ACP evidence-based conversations was cited as a major barrier to put ACP evidence into translation. Other barriers reported included absence of a formal policy or procedure to guide ACP conversations (Arnett et al., 2016). The long-term and established nature of the relationship between patients and their primary care provider is an ideal platform for introducing the subject of ACP. It is through this relationship that care providers can increase the frequency of conversations about long-term care planning. It is important that patients with chronic lifelimiting illnesses are offered ACP before time-critical situations occur (Delgado-Guay et al., 2016), yet, ACP is rarely offered or discussed.

ACP encourages patient autonomy. ACP gives patients the opportunity to participate in their healthcare decision-making by defining and making their goals for end-of-life treatment known. The process of ACP requires that patients are given accurate and specific information concerning their illnesses and the different healthcare options that exist. Through this, the patients can make an informed decision about their preferences. ACP is a patient's right that healthcare providers should help patients exercise through advance directives or appointment of surrogate decisions makers (Myers et al., 2018). Due to the highly personal nature of ACP conversations, no one single standardized tool has been identified as best practice for ACP for use with primary care patients. However, evidence suggests that provider education on ACP and communication skills training are indispensable interventions that improve both the quantity and quality of ACP. Therefore, interventions that focus on provider education may improve ACP in primary care (Myers et al., 2018).

Advance Care Planning barriers.

Patient-provider conversations about their preferred end-of-life care are an effective way for patients to participate in ACP. Although, patient centered communication is one means through which patients can express their wishes about care, communications may become a barrier (Litzelman, Cottingham, Griffin, Inui, & Ivy, 2016). End-of-life conversations may be difficult for patients and their families to engage in and how people approach end-of-life is culture bound. Therefore, it is important for health care providers to be sensitive to cultural preferences and multiple intercultural communication cues to create a supportive environment conducive to patient centered care.

There are different approaches that providers can utilize to promote patient communication on end-of-life issues. Some of the skills needed to ensure effective patient

communication in primary care centers include listening intently, fostering open ended communication between patients and their loved ones, and using empathy to respond to emotions. Within such an environment, healthcare providers can reframe end-of-life conversations to include identification of the goals of care and help patients develop their priorities for living well. Providers that have been educated on such patient engagement techniques report developing a better and trusting relationship with their patients and subsequently have an easier time discussing ACP (Litzelman, Cottingham, Griffin, Inui, & Ivy, 2016).

Discomfort with addressing topics related to end-of-life, death, and dying is also a commonly cited provider barrier to ACP in primary care (Spoelhof & Elliott, 2012). Nolan (2014) implemented an intervention in which the researcher spent 15 minutes providing ACP education to multiple primary care providers. This intervention resulted in a statistically significant reduction in provider hesitation and discomfort with ACP topics and an increased willingness to engage primary care patients in ACP. A systematic review and meta-analysis of randomized controlled trials and observational studies undertaken by Chung, Oczkowski, Hanvey, Mbuagbaw, & You (2016) assessed the effectiveness of 'end-of-life communication training' with health care providers (p. 2-13). They concluded that such targeted education improved the provider's knowledge and self-efficacy related to ACP. Providers that received the end-of-life communication training also had better end-of-life communication scores.

Lum, Dukes, Church, Abbott, & Youngwerth (2018) concluded that educational strategies allowing for both interactive engagement of health care providers and time for selfreflection on personal ACP views led to an increase in willingness of providers to proactively engage in ACP conversations with their patients. Rose, Leung, Gustin, & Childers (2018)

conducted a mixed method study to improve ACP in primary care settings. The intervention included multiple modalities of education for the healthcare provider as a means to increase ACP conversations in the outpatient setting. Study results revealed that the number of ACP conversations went from a baseline measure of 0 to a total of 7200 over a 31-month span across the 36 primary care practices that participated. Moreover, 29% of the ACP conversations resulted in signed advance directives being incorporated into patient medical records. Such evidence supported the implementation of an ACP educational program initiative in primary care.

A strong patient-provider relationship is required for successful ACP. Features of such a relationship include clear communication among both parties, patient assumed autonomy in healthcare decision-making, and provider respect and empathy towards patient specific concerns and health related goals. De Vleminck et al. (2014) identified self reported primary care provider barriers to ACP. Identified barriers included a lack of comfort with timing of ACP conversations, lack of collaboration with specialty providers for adequate knowledge of illness progression, and lack of awareness regarding ACP treatment options. Recognizing such barriers and gaps in provider knowledge contributes to the development of interventions that address these barriers and gaps. Previous research suggested that targeted provider education and development of standardized guidelines can help minimize provider associated barriers to ACP (De Vleminck et al., 2014).

Educating providers on existing evidence based strategies that increase patient engagement in ACP can help facilitate better ACP in primary care. The *Go Wish* card game is one of the means through which healthcare providers can initiate and sustain conversations on ACP (Delgado-Guay et al., 2016). This game was developed to stimulate discussions that focus

on patients' values and wishes on end-of-life care. Its primary purpose is to educate elderly patients and their families on ACP options that are available. The game is an effective learning tool for elderly people with mild cognition impairments or people with limited literacy and comprehension skills (Delgado-Guay et al., 2016). Van Scoy et al. (2016) also performed a pilot study in 2016 in which they sought to determine the effectiveness of playing an end-of-life conversation game on engagement in ACP. The study showed that individuals who played the conversation game had higher rates of ACP behavior. Despite its proven efficacy, the use of such tools in primary care remain low. The disparity that exists between the evidence and availability of such tools and their use can be minimized by provider education programs on comprehensive ACP strategies. (Van Scoy et al., 2016).

Theoretical Framework

The Transtheoretical Model (TTM), also known as the Stages of Change Model, is a behavioral model that focuses on the idea of intentional change (Prochaska & DiClemente, 1982). The TTM recognizes that changing a behavior or attitude is an intentional, complex process that requires active decision-making. The TTM functions under the assumption that people do not readily change established behaviors quickly or decisively but rather behavioral change is a continuous process that is cyclical in nature. The TTM has five stages (See Appendix B).

The first stage is precontemplation, during which an individual expresses no desire or intent to change an established behavior. During the contemplation stage, an individual entertains the idea of possibly changing a behavior, but is not interested in actually making a change. The preparation stage is where the individual seriously considers taking an action that will result in behavioral change. In the action stage, the individual takes action that significantly modifies their

behavior in a manner that produces clinically significant change. Maintenance is the last identified stage of the TTM in which the individual maintains the newly acquired behaviors (Prochange, 2018). The different stages of the transtheoretical model were used as a framework for developing a sustainable primary care education module that improved advanced care planning awareness amongst healthcare providers.

Traditionally, medical education and learning focuses on eliminating knowledge deficits (Cohen, Halvorson, & Gosselink, 1994). However, provider and patient barriers to ACP that have been identified in primary care are not only related to knowledge gaps but defunct behavioral practices as well. ACP is not a practice that has traditionally been prioritized by healthcare providers. Be it due to personal barriers, biases, or perceived lack of time, the attitude towards ACP has historically been of avoidance. Changing the avoidance behavior is key to increasing ACP conversations (Howard et al., 2018). ACP is a complex and dynamic process that has physical, psychosocial, and emotional triggers attached to it (Hickman & Pinto, 2013). As such, using the transtheoretical model was essential to the nature of the intervention because a framework that operates to only correct a knowledge gap would not result in the behavioral change necessary to make ACP in primary care successful.

To increase ACP in primary care, the TTM framework was applied in several ways. It provided a means and process for the principal investigator to incorporate change in routine office behaviors and practices. Involvement of patients, ancillary staff, and the use of motivational reinforcement were basic but effective strategies that helped nurture stage changes within the TTM framework (Cohen, Halvorson, & Gosselink, 1994). Furthermore, a significant provider reported barrier to ACP implementation is avoidance of topics that may cause feelings of hopelessness or despair (Howard et al., 2018). The transtheoretical model helped transition the

avoidance culture and behaviors that surrounds ACP in primary care with the use of targeted interventions that made it easier for providers to act on and maintain ACP promoting behaviors.

Fried et al. (2016) noted that providers that shift their approach to the ACP discussion---modifying it from a static formal conversation that occurs near the end-of-life or with progression of a terminal illness to a patient engagement process, reported more successful ACP conversations and health behavior changes that happen over time. This shift in provider behavior towards ACP helped them better identify the individual patient's willingness and readiness toward ACP as well. Subsequently, the provider themselves were able to utilize the TTM to intervene and educate patients accordingly at each office visit. The change in behavior and perspective towards ACP facilitated by a TTM approach helped develop an office culture of care that is consistent with the national recommendations for preventative care that advocate for advanced care planning in primary care (Agency for Healthcare Research and Quality, 2013).

Methodology

This quality improvement project utilized a pre- and post design to measure the effectiveness of an ACP educational intervention. The educational intervention included a live, in person educational module that included information on ACP strategies, billing, and addressed identified barriers to ACP among primary care providers. A pre- and post-test containing identical questions was administered to participants prior to and then after completion of the educational module to identify changes in provider attitude and knowledge of ACP (See Appendix F). Additionally, the principal investigator monitored the number of times the ACP CPT billing code was used pre- and post-intervention via chart review to detect the impact of the education module on patient care practices.

Setting

The ACP education module was implemented in a single primary care setting (See Appendix C). Located in Maplewood, New Jersey, this practice employs one full time physician and two full time nurse practitioners. The educational module was disseminated to providers in a live session by the principal investigator in the setting's conference room. Data collection of ACP billing practices also took place in this setting.

Study Population

The target population for the intervention was the three primary care providers in the office, which includes one physician and two nurse practitioners (n=3). However, any member of health care team within the practice was invited to participate in the study. The invitation to participate was be extended to medical assistants, office management staff, and registered nurses that work in this setting as well. The total sample size that participated in the intervention was 1 physician, 2 nurse practitioners, and 4 registered nurses (n=7).

Subject Recruitment

Subject recruitment began in September 2019. The principal investigator went to the setting and spoke with the providers directly regarding their interest in participation. A total of three visits were arranged to the office to accommodate the varying schedules of each individual provider, however, the principal investigator was able to secure participation with all providers in one visit. Additional visits were made to recruit ancillary staff to participate in the intervention. A mutually agreeable date and time for conducting the intervention was agreed upon during these visits.

Consent Procedures

Consent to participate in the education session was obtained prior to the start of the education module. It was distributed to all attendees at the beginning of the session and required

a signature from each participant. Additional copies of the consent were made available for participants for personal records (See Appendix D).

Potential Risks and Benefits

Efforts were taken to minimize potential risks to study participants. Data collected in the pre- and post-test did not have participant names or identifying information. Potential recognized risk to study participants included discomfort with information disseminated during education session, risk of embarrassment related to knowledge gaps on topics discussed, and risk of discomfort with being a known participant in a research study. Identified benefits of study participation included increased knowledge and awareness of ACP practices and billing and reduced discomfort with discussing and integrating end of life issues in daily practice. Both benefits and risks were provided to the participants within the informed consent that was distributed at the beginning of the session (See Appendix D).

Study Intervention

The intervention consisted of an educational module developed for providers that was disseminated to participants in a live session via PowerPoint presentation (See Appendix E). The session was conducted by the principal investigator and study participants actively participated during the session by asking questions and sharing information related to ACP during and at the conclusion of the session. Education material used to develop the PowerPoint presentation for providers came from guidelines that were developed by HealthInsight Quality Innovation Network (2016) under contract with CMS and U.S. Department of Health and Human Services, the CMS (2018) ACP Factsheet, the CDC's (2012) ACP guideline, and from complied peerreviewed research (See Appendix A). Components of ACP education that were covered by the module are briefly outlined below. The full module can be viewed in Appendix E.

- 1. What is ACP?
 - Definition from CMS (2018).
- 2. ACP Facts.
 - Highlights end of life care related costs, patient attitudes, and current level of ACP engagement in the United States.
- 3. Benefits of ACP.
 - Provider specific benefits from ACP integration into practice.
 - Patient specific benefits derived from ACP.
- 4. ACP related CPT code and billing practices.
 - Criteria for billing for ACP.
 - Billing for 99497 vs. 99498.
 - Patients eligible for no co-pay vs. co-pay.
- 5. ACP forms.
 - Advance directives/ Medical living will.
 - Power of Attorney.
 - Physician Orders for Life-Sustaining Treatment (POLST) and Medical Orders for Scope of Treatment (MOST).
 - Validity of ACP forms in New Jersey.
- 6. Barriers and myths related to ACP in primary care.
 - Strategies to overcome common barriers in primary care.
 - Evidence to support suggestions that are offered.

Outcome Measures

Two primary outcomes of interest were measured in the study. Differences in participant knowledge base and attitude towards ACP before and after the intervention was the first outcome of interest. As no validated outcome measurement tool for ACP education in primary care has been identified, this outcome was measured using an identical pre-test and post-test created by the principal investigator that utilized simple Likert-like scale questions. Positive changes from pre- to post-test scores were considered an improvement in ACP knowledge and attitudes (See Appendix F). Collection of this outcome criteria was pertinent to this study because it aided in determining if the education material provided helped close some gaps in ACP knowledge. Additionally, changes in score helped distinguish if the information provided in the education module is both useful and a good fit the the study population and setting. It may have also helped increase provider self-awareness of personal barriers or bias they may have towards ACP. No participant identifying information was collected in the pre- or post-test as the tests as they were anonymous.

The second outcome of interest was the number of times the ACP CPT codes were billed for. Pre- and post-intervention numbers were compared. The number of times the advance care planning CPT code is billed for pre-intervention was assumed as zero, as the providers and office staff had stated via informal conversations that no advance care planning conversations and subsequently no advance care planning billing occurred in this setting prior to the intervention. All patients that came to this practice for care were eligible for chart review. Data abstraction post intervention took place for 4 weeks (See Appendix G). Measuring this outcome helped the principal investigator identify if any changes to practice occurred in relation to the intervention. No patient identifying data was collected. This is because the principal investigator only had interest in increasing ACP conversations in primary care. It did not matter within the scope of

this DNP project which specific patients the providers had ACP conversations with, as long as there was an increase in the frequency of conversations. The reasoning behind this was that the more often the provider engaged their patients in ACP behavior, the easier it became for that provider to make ACP conversations a routine practice and eventual standard of care in their setting.

Subject Costs and Compensation

The participants of this study were not be charged any monetary value for their participation. The only identified cost for participants was their time of approximately 120 minutes. Participants were provided with beverages and snacks during the education session. The office providers and ancillary staff were also offered a complementary lunch at the end of the 4-week data collection period for their assistance in data extraction and overall participation.

Resources Required and Economic Considerations

Resources required for this project included a physical space for the intervention to take place, a computer, and a projector. Such resources were readily available at the primary care setting in their conference room. The principal investigator was granted access to use this space by the site coordinator as part of the project implementation at no cost. Office supplies such as pens, paper, and a secure USB for data management and storage were noted as both a required resource and economic consideration. The costs needed for subject compensation as aforementioned are recognized as well. All costs for this project were fully assumed by the principal investigator. A detailed cost analysis is highlighted in Appendix H.

Project Timeline

A full timeline for this project is summarized below (See Appendix I): January 2019 – July 2019:

- Identified a topic of interest for practice change or evidence implementation.
- Identified and recruited a doctorally prepared chair and team member for project.
- Performed a comprehensive review of current evidence and literature to synthesize findings and identify gaps in practice.
- Identified and secured a site for proposed intervention.
- Formulated a proposal for a potential practice change study. Reviewed and edited proposal under guidance of project team. Finalized a proposal with the approval of identified project chair.

August 2019- November 2019:

- Submitted proposal to Institutional Review Board (IRB) for review and approval.
- Made continual revisions to proposal as per IRB review.
- Began participant recruitment.

November- December 2019:

- Performed study intervention at identified site using exact methodology as outlined in proposal.
- Collected pre-test and post-test data.
- Collected ACP billing data from study site for 4 weeks post study intervention for analysis.

December 2019- January 2020

- Performed comprehensive data analysis and synthesis of findings.
- Linked findings to current evidence, assessed impact on healthcare, public health policy, and economics.

• Presented findings and conclusions to project team, peers, stakeholders, and interested parties.

The project was completed on January 16th, 2020.

Evaluation Plan

Data Analysis

The McNemar test was used to determine differences in pre- and post-test responses. To identify whether there was a change in the number of times ACP CPT codes are billed for from the the pre- to post-intervention periods, frequencies were compared. Since no demographic information was collected, there was no sub analyses or data stratification performed in this study.

Data Security and Storage

For the duration of this project, all collected data was managed by the principal investigator. The principal investigator has completed CITI training (See Appendix J). Data were shared with the project chair and project team member, both have completed CITI training as well. Rutgers faculty assigned to the principal investigator's project courses was able to view the data as reported findings but did not have direct access to collected information.

Data were stored on a personal and secure password-protected USB device owned by the principal investigator. Raw data collected will be maintained by the project chair for six years after study completion in a locked filing cabinet in the chair's Rutgers office, after which will be destroyed.

Findings

The principal investigator implemented the study intervention as outlined. An education module was presented to a total of seven study participants during a live session conducted by

the principal investigator at the study site. The sample of participants included one physician, two nurse practitioners, and four registered nurses.

Pre and Post Test Knowledge and Attitude Surveys

The pretest knowledge and attitude survey was administered prior to the start of the educational in-person presentation with the posttest knowledge and attitude survey provided shortly after presentation completion (See Appendix F). Questions 1, 3, and 5-11 addressed participant attitude toward ACP. Questions 2, 4, and 13- 15 focused on participant knowledge base of ACP. The McNemar test was used to analyze changes in participant responses in both areas between the pre and posttest intervention periods. The exact McNemar's test was used to analyze pre and posttests. The test determined that even though provider knowledge base and attitude shifted positively towards ACP from pre to post intervention, the data was not sufficient to demonstrate statistical significance, p = .063 (See Appendix K).

ACP Billing

Data on ACP billing practices were collected for the 4-week period after the intervention was implemented. During this time, the principal investigator monitored the frequency of how many times the ACP billing codes were utilized by the practice per day. As the providers at this practice did not have or bill for any ACP conversations prior to the intervention, the post intervention frequencies were compared to a pre intervention baseline frequency of zero. The total number of ACP conversations that were billed for in the 4-week post intervention period were 338 (See Appendix L). The highest number of ACP conversations occurred in the first week post intervention. During this time period, 100 ACP conversations were billed for by the providers. In the second week post intervention, 70 ACP conversations were billed for. Week 3 and week 4 post intervention had 80 and 84 conversations documented respectively.

Discussion

Healthcare provider associated barriers are one of the most commonly cited barriers to ACP in primary care (Chung, Oczkowski, Hanvey, Mbuagbaw, & You, 2016; Litzelman, Cottingham, Griffin, Inui, & Ivy, 2016; Lum, Dukes, Church, Abbott, & Youngwerth, 2018; Rose, Leung, Gustin, & Childers, 2018; Spoelhof & Elliott, 2012). Creating and utilizing tools that can address barriers and close knowledge gaps help improve quality of healthcare. This DNP project was successful in meeting its objectives. It reduced healthcare provider associated barriers that included a lack of knowledge related to ACP and improved attitudes towards ACP. Although not statistically significant, a positive change was seen in the provider knowledge base from pre to post intervention time periods. The project also led to an increase in the number of ACP conversations which were reflected in the increased billing.

The providers' attitude and perspective changed towards ACP after participating in this project. The principal investigator did not simply just introduce a new process in the study participants' workflow but was able to shift the way the providers think about ACP in healthcare. The TTM framework helps in explaining the change in attitudes has in facilitating the success of a lasting intervention (Prochaska & DiClemente, 1982; Pro-change, 2018).

The sustainability of an intervention is determined by the change in the practice's official policy and workflow and maintenance over a period of time. After the completion of this project, the medical director of this practice implemented a new policy that requires an ACP conversation to be documented with each new patient visit and at the time of each returning patient's annual wellness comprehensive physical. Effecting a definitive policy ensures continued ACP even after the project is terminated. It also suggests a favorable shift in attitude and knowledge towards ACP.

It is important to note that the principal investigator did play a facilitating role during the data collection period in order to ensure the success of the intervention. Though unintended, the principal investigator aided in a continued interest in ACP by being physically present in the practice during the post intervention period. This presence may have served as a subconscious 'reminder' to providers to engage in and bill for ACP conversations as well as a physical resource that was available to answer questions. As such, it is important for future similar projects and endeavors to build in a mechanism for continuing support to make comparable interventions successful.

This project was implemented during the Christmas and New Year holiday season. Some providers did initially express some apprehension about bringing up topics of end of life during such a 'festive' time. Therefore, the timing of this intervention may have limited some of its success. However, it did not seem to cause a large negative impact as results collected were favorable toward the intervention. For continued scholarship and inquiry, researchers could benefit from implementing similar interventions during non-holiday seasons.

Although Registered Nurses are integral health care providers within the primary care team, it is unclear whether including healthcare providers that cannot bill for services rendered had a meaningful impact on the success of this intervention. Quantifying and clarifying the role of the Registered Nurse was beyond the the scope of this project and should be further investigated.

Additionally, it should be taken into consideration that this intervention took place in a small primary care setting. With only a total of seven participants, four of which do not have the capacity to bill for services rendered, it is difficult to say how this intervention would be received in a larger setting with multiple providers.

Implications for Healthcare Economics

Specifically, within the scope of a single primary care setting intervention, this project had a beneficial fiscal impact for the providers. This intervention resulted in 338 ACP conversations that were billed for by the primary care center. Therefore, each conversation resulted in direct revenue being generated for the center. As no ACP conversations took place prior to this intervention, this change resulted in a significant revenue increase for the setting. Additionally, as the intervention was adopted as a formal permanent policy change for the primary care center, a steady source of revenue was secured.

The impact for patients must also be considered in relation to increased ACP. By having clear goals of care established, patients can exercise autonomy over the care they receive when they become critically ill in the future, identify surrogates who can make decisions about care, potentially reduce anxiety and stress and limit out-of-pocket as well as covered healthcare costs.

This project has the potential to help lay groundwork for meaningful change in American healthcare economics as well. End of life care related spending has been reported in excess of fifty-five billion in recent years (Smith and Himmel, 2013) and usually does not lead to improved quality of life or prolongation of life. If more primary care providers integrate ACP conversations in the routine care of their patients, more advance directives will be generated which can potentially decrease healthcare decisions that lead to higher spending yet have relatively small effect on prolonging life.

Implications for Healthcare Quality

Quality of care has been integrated on a national level as an evaluative measurement of healthcare services rendered (AHRQ, 2018). The different domains of quality that include effectiveness, efficiency, equity, patient centeredness, safety, and timeliness have been

incorporated into several standards of care within healthcare systems (AHRQ, 2018). This project targeted several of these identified domains. ACP education for primary care providers not only resulted in increased effectiveness of the patient-provider encounter but also improved in quality domains of equity and patient centeredness.

Implications for Healthcare Policy

CMS (2018) categorizes ACP as a preventative care service. This project provided healthcare providers with education about ACP and strategies to address barriers to improve ACP conversations as a preventative care service. It also helped facilitate compliance with the current American healthcare guideline. The project demonstrated that in order to make a policy change sustainable, stakeholder engagement, facilitation in the form of education and evaluation are critical. Therefore, in order to increase the number of advance directives completed in primary care, policy makers should incorporate provider education in the implementation of ACP. The project also highlighted the role re-imbursement for services can play in improving rates of ACP conversations.

Sustainability of Project

This project introduced ACP to a primary care setting. In order to ensure that the practice change was sustainable, the project included policy change. A change in the office policy changed how care was delivered at this center. The Transtheoretical model framework was used to design this project and focused on creating individual behavioral changes (Prochaska & DiClemente, 1982). The principal investigator primed the participants in the preparation phase and used live interactive educational sessions to impart a meaningful quality impact on the study

participants. The posttest evaluated the change in knowledge and attitudes and the increased rates of ACP conversations were reflected in the action phases of the model. The final count of ACP conversations after four weeks indicated the maintenance or sustainability of the practice change. It was encouraging to see only a slight drop in numbers, but this could be attributed to fewer 'new' patients or patient visits in general. An evaluation after a longer period would be a better estimate of sustained change.

Dissemination and Professional Reporting

Project findings were disseminated to all parties involved in this project. A poster presentation session was held that highlighted the overall scope and background of the project, methodology utilized, and detailed findings and conclusions surmised by the principal investigator. Study participants, project team members, and parties interested in end-of-life care and advance care planning were invited to attend.

Conclusion

With the steady increase in the number of people living with chronic and progressively comorbid conditions, end-of-life care concerns have become a public health issue in American healthcare (AHRQ, 2013). This project aimed to address this public health concern by increasing ACP conversations in primary care and reducing primary care provider barriers to ACP in their practice settings using an education module. Regardless of whether a person decides to 'die in peace' or 'fight till their last breath', that decision should be made after carefully weighing all options. It should also be a decision that the patient chooses to make and not one that is chosen for them by healthcare providers or facilities. Primary care providers are in the position to help their patients make informed decisions and choices regarding end of life care and should take advantage of this position by developing office policies and protocols that integrate ACP into

routine practice. This project demonstrated that educational interventions that include knowledge about ACP, as well as target identified barriers to initiating ACP when guided by a theoretical framework have the potential to improve rates of ACP. In addition, by including and reimbursing ACP as a preventive care service provides an incentive for primary care providers and acknowledges the time, they invest in providing ACP.

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Appendix A

Table of Evidence

| # | First Author & Year of Publication | Evidence type | Sample, sample size, setting | Study findings that help answer the EBP Question | Limitations | Evidence level and quality |
|----|---|--|---|--|---|----------------------------------|
| 1. | (2016) | Quantitative: Nonexperimetntal, Survey | health care system networks. A total of 118 health care team members responded to the survey. Physicians (53%), advanced practice nurses (18%), nurses (11%), and other interprofessional team members including administrators, chaplains, social workers, and others (18%). Clinical specialties represented include family medicine (46%), geriatric medicine (21%), and internal | to interdisciplinary members of healthcare teams among varied primary care centers. Common themes and gaps highlighted in the survey results include a lack of policy or procedure in place that incorporates ACP. Additionally, only 14% of settings had an ACP education program place. The study highlights the gaps in both ACP | sample in Colorado reduces generalizability to other states. As physicians and nurse practitioners made up majority | |
| 2. | O, (2016). | • | trials and 14 observational studies were included in the review. | A systematic review was done to ascertain whether educational interventions targeted to train healthcare professionals in end- of-life communication skills were effective. | generated was insufficient to determine whether this intervention would have an impact on actual patient outcomes. Search strategy | II/B |

| # | First Author & Year of Publication | Evidence type | Sample, sample size, setting | Study findings that help answer the EBP Question | Limitations | Evidence level and quality |
|----|---|---|---|--|---|----------------------------------|
| | | | | that ACP educational interventions for health care providers were associated with | | |
| 3. | Guay, M. O. | Quantitative: Randomized Controlled Trial | of 100 patients with advanced cancer treated at the | used to expose patients to the <i>Go</i> <i>Wish</i> game (GWG) vs a standard statement of end-of- life wishes. 25 patients received the Go Wish Game exclusively and 25 participants received the list of end of life wishes exclusively. Of the remaining 50 patients exposed to both tests, 43 (86 %) agreed that the GWG instructions were clear, 45 (90 %) agreed that the GWG was easy to understand, 31 (62 | more diverse population. The study is limited to advanced cancer patients and cannot be generalized to all | |

| # | First | | Sample, sample size, setting | Study findings that | | Evidence |
|----|-------------|---------------|------------------------------|-----------------------|----------------------|-----------|
| | Author & | Evidence type | | help answer the | | level and |
| | Year of | | | EBP Question | | quality |
| | Publication | | | | | 1 . |
| | | | | increase their | | |
| | | | | anxiety and 31 (62 | | |
| | | | | %) agreed that | | |
| | | | | having | | |
| | | | | conversations about | | |
| | | | | EOL priorities was | | |
| | | | | beneficial. The | | |
| | | | | evidence suggests | | |
| | | | | that the GWG is a | | |
| | | | | useful tool in ACP | | |
| | | | | and that educating | | |
| | | | | providers about the | | |
| | | | | GWG is an | | |
| | | | | important strategy | | |
| | | | | that can be used to | | |
| | | | | increase ACP in | | |
| | | | | primary care. | | |
| | | | | primary cure. | | |
| | | | | | | |
| 4. | De | Qualitative: | Five focus groups (n=36) | Researchers | Most of the PCPs | III/B |
| •• | Vleminck, | Constant | were held with primary care | identified several | in the focus group | III/ D |
| | A. (2014). | Comparative | practitioners in Flanders, | barriers that reduce | were males; | |
| | | Analysis | Belgium. | ACP in primary | perspectives and | |
| | | | | care. These include: | potential | |
| | | | | lack of provider | perceived barriers | |
| | | | | knowledge about | of female | |
| | | | | treatment options, | providers were not | |
| | | | | inability to identify | well represented. | |
| | | | | key moments where | | |
| | | | | ACP can occur, and | Small sample size. | |
| | | | | lack of inter- | | |
| | | | | professional | Subjective report | |
| | | | | collaboration with | of barriers. | |
| | | | | specialists. The | International | |
| | | | | researchers suggest | study, unknown | |
| | | | | | replicability in the | |
| | | | | barriers can be | US. | |
| | | | | overcome with the | | |
| | | | | development of | | |
| | | | | practical guidelines | | |
| | | | 1 | | 1 | |
| | | | | and educational | | |

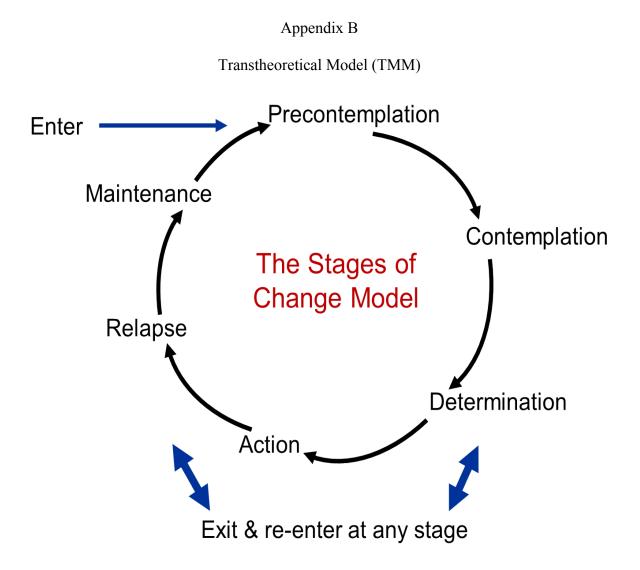
| # | First Author & Year of Publication | Evidence type | Sample, sample size, setting | Study findings that help answer the EBP Question | Limitations | Evidence level and quality |
|----|---|---|---|---|---|----------------------------------|
| | | | | at primary care providers. | | |
| 5. | D. K. | Quantitative: Quazi- Experimental Design | included health care providers and community members were included in the study over a 2 year period in the state of Indiana. | provided education and coaching to individuals, health providers, and organizations across the state of Indiana intended to facilitate ACP conversations. HCPs were educated on techniques to improve their comfort discussing | Participant selection was limited to state of Indiana only. These factors limit the generalizability of the study. | II/B |

| # | First Author & Year of Publication | Evidence type | Sample, sample size, setting | Study findings that help answer the EBP Question | Limitations | Evidence level and quality |
|----|---|---|---|--|--|----------------------------------|
| | | | | more engaging to participate in ACP for HCPs (reported). | | |
| 6. | - | Quantitative: Longitudinal Cohort Study | - | required to attend a 4 hour ACP training program as part of their curriculum that including training on how to start the ACP conversation and other end-of-life issues. 76% of the students reported a better understanding and approach to ACP with their | University of Colorado medical students—this reduces the generalizability of the study greatly. Follow up does not have any reported evidence or implications on patient outcomes with ACP. | II/C |
| 7. | 5 | - | and 3 pediatric primary studies (4 articles) that were retained for analysis. Eleven randomized controlled trials (RCTs) were | randomized trials, | ACP varies in each article included in the systematic review. As such, there is a lack of | II/B |

| # | First | | Sample, sample size, setting | Study findings that | | Evidence |
|----|------------------------|------------------|--|---|-------------------------|-----------|
| | Author & | Evidence type | | help answer the | | level and |
| | Year of Publication | | | EBP Question | | quality |
| | | | | was to determine the | comparing data of | |
| | | | | best tool, process, or | | |
| | | | | guideline for | tools. | |
| | | | | providers to use in | | |
| | | | | ACP. The | | |
| | | | | systematic review | | |
| | | | | revealed a lack of | | |
| | | | | reliable evidence | | |
| | | | | that conclusively | | |
| | | | | supports the use of any one clinical tool | | |
| | | | | for facilitating ACP | | |
| | | | | conversations. Study | | |
| | | | | findings do | | |
| | | | | emphasize that | | |
| | | | | effective ACP | | |
| | | | | conversations at | | |
| | | | | both the population | | |
| | | | | and the individual | | |
| | | | | level require provider based | | |
| | | | | education on ACP | | |
| | | | | and proper | | |
| | | | | communication skill | | |
| | | | | development. | | |
| 0 | Nolan, M. | Quantitative: | A convenience sample of 64 | Particinants were | Other healthcare | |
| 8. | (2015). | Quasi- | _ | recruited by letters | providers that | II/B |
| | | Experimental, | York City area and care for | of invitation sent to | practice primary | |
| | | Pretest-Posttest | patients over 65 years of age | 350 PCPs in the | care (NPs and | |
| | | Design | | | PAs) were | |
| | | | 1 1 | PCPs were | excluded from | |
| | | | | identified using the phone book and | study. | |
| | | | 100% of the sample practiced | Internet via NYC zip | | |
| | | | | codes search for | sampling may | |
| | | | | primary care | represent local | |
| | | | | L | bias. | |
| | | | U | The intervention | There is no | |
| | | | participant was 58.9860. The mean years of practice were | | There is no evidence to | |
| | | | | step educational tool | | |
| L | | | 20.01.27. | step equeational tool | suggest to whether | |

| # | First | | Sample, sample size, setting | Study findings that | | Evidence |
|----|-------------|---------------|--|---------------------------------|---------------------------------|-----------|
| | Author & | Evidence type | Sumple, sumple size, seeing | help answer the | | level and |
| | Year of | | | EBP Question | | quality |
| | Publication | | | | | 1 0 |
| | | | | that involved a 15 | increased provider | |
| | | | Medical Doctors (MDs) | minute 1 on 1 | comfort with | |
| | | | made up 90.6 % of the | conversation | discussing ACP | |
| | | | population and Doctors of | | will result in | |
| | | | Osteopathic Medicine (DOs) | and provider. There | increased advance | |
| | | | 9.4 %. | was a statistically | directives in | |
| | | | | significant increase | primary care. | |
| | | | | in provider's | | |
| | | | | comfort score with | | |
| | | | | ACP planning from | | |
| | | | | the pretest to the | | |
| | | | | posttest, with a T- | | |
| | | | | 32= 14.233, <i>p</i> < | | |
| | | | | 0.001. | | |
| | | | | | | |
| 9. | | - | 36 Primary Care Practices | This study used | The researchers | III/B |
| | · / | | were included in the study | r | did not collect | |
| | | U | intervention from an | interventions to | demographic and illness data of | |
| | | | integrated not-for-profit health system with more | | patients before | |
| | | | - | | starting the study. | |
| | | | Cincinnati, Ohio. | Vital Talk physician | | |
| | | | | coaching, and EMR | | |
| | | | | • | researchers | |
| | | | | use of these | understand the | |
| | | | | interventions helped | number of patients | |
| | | | | increase the amount | who would have | |
| | | | | of ACP | had ACP | |
| | | | | | conversations. | |
| | | | | primary care offices. | | |
| | | | | A total of 7200 ACP | | |
| | | | | | provided, the | |
| | | | | initiated for 31 | reader cannot | |
| | | | | months in 36 | determine | |
| | | | | primary care practices, and 29% | conclusively whether the EMR | |
| | | | | of conversations | customization or | |
| | | | | | provider education | |
| | | | | | had a larger | |
| | | | | - | influence in | |
| | | | | | increasing ACP | |
| | | | | Ŭ | conversations. | |

| # | First Author & Year of Publication | Evidence type | Sample, sample size, setting | help answer the EBP Question | Limitations | Evidence level and quality |
|-----|---|---|---|--|---|----------------------------------|
| | | | | month review period. | | |
| 10. | L. J. (2016). | Quantitative: Exploratory pilot study | English speaking participants from communities around Hershey, Pennsylvania and Lexington, Kentucky. Mean age was 51.3 years. | game that uses 47 question cards to prompt discussions about death, dying, and end-of-life issues. Questions are ordered with regard to pacing, content, and emotional depth with the aim of promoting adoption of ACP practices. 78% of the participants engaged in ACP behaviors within 3 months of playing the game. Study findings highlight need for PCP education and utilization of such tools to increase ACP in their practices. | population because majority of the participants were highly educated Caucasians. | |



Appendix C

Site Letter of Cooperation

02/17/2019

Re: Letter of Cooperation for

Dear Dashmeet Singh,

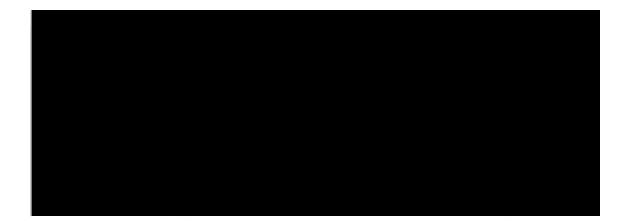
This letter confirms that that I, as an authorized representative of

allow the Principal Investigator access to conduct study related activities at the listed site(s), as discussed with the Principal Investigator and briefly outlined below, and which may commence when the Principal Investigator provides evidence of IRB approval for the proposed project.

- Research Site(s)
- Study Purpose: The purpose of this study is to increase advance care planning conversations in
 primary care. Ultimately, the principal investigator would like to better understand barriers associated
 with advance care planning in primary care and educate office staff and available providers on
 advance care planning techniques so that they can be more routinely applied in daily practice.
- Study Activities: Providers and office staff will be given a pre-intervention questionnaire regarding
 advance care planning knowledge and attitudes. Providers and office staff will next be given a short
 educational in service on advance care planning techniques, benefits, and billing criteria. Post
 intervention knowledge and attitudes will be assessed via survey,
- Subject Enrollment: All office personnel that have direct patient clinical contact will be considered eligible study participants.
- Site(s) Support: will provide the principal investigator
 will provide the principal investigator
 will also allow the principal investigator to collaborate with staff to help reach study objectives
 - and collect participant demographic information.
- Data Management: Data collected will not include identifying characteristics of subject participants. Data will be handled by the principal investigator on a password protected device over secure internet connection only.
- Anticipated End Date: May 2020

We understand that this site's participation will only take place during the study's active IRB approval period. All study related activities must cease if IRB approval expires or is suspended. I understand that any activities involving Personal Private Information or Protected Health Information may require compliance with HIPAA Laws and Rutgers Policy.

Our organization agrees to the terms and conditions stated above. If we have any concerns related to this project, we will contact the Principal Investigator. For concerns regarding IRB policy or human subject welfare, we may also contact the Rutgers IRB (see <u>orra.rutgers.edu/hspp</u>).



Appendix D

Informed Consent

RUTGERS

Rutgers School of Nursing Stanley S. Bergen Building Rutgers, The State University of New

TITLE OF STUDY: Improving Advance Care Planning (ACP) in Primary Care Principal Investigator: Rubab Qureshi MBBS, MD, PhD

This consent form is part of an informed consent process for a research study and it will provide information that will help you decide whether you want to take part in this study. It is your choice to take part or not. After all of your questions have been answered and you wish to take part in the research study, you will be asked to sign this consent form. You will be given a copy of the signed form to keep. Your alternative to taking part in the research is not to take part in it.

Who is conducting this research study and what is it about?

You are being asked to take part in research being conducted by Rubab Qureshi who is a Rutgers faculty in the Dept. of Nursing and her student Dashmeet Singh who is a Rutgers DNP candidate. The purpose of this study is to increase knowledge and awareness of advance care planning amongst primary care providers and increase the number of ACP conversations in primary care. You are being asked to participate in this study because you work in a primary care setting.

What will I be asked to do if I take part?

You will be asked to participate in an education session about advance care planning where the principal investigator will present information to you. This session will take about 1.5 hours to complete. You will complete a questionnaire before and after the session that will assess both your knowledge base and attitudes towards advance care planning, each taking about 10 minutes to complete. We anticipate a maximum of 10 subjects who will take part in the study.

What are the risks and/or discomforts I might experience if I take part in the study?

- Discomfort with information disseminated during education session
- Risk of embarrassment related to knowledge gaps on topics discussed
- · Discomfort with being a known participant in a research study

Breach of confidentiality is a risk of harm but a data security plan is in place to minimize such a risk. Also, some questions may make you feel uncomfortable. If this should happen, you have the option to skip those questions or withdraw from the study altogether. If you decide to quit at any time before you have finished the questionnaire your answers will NOT be recorded or used in data analyses.

Are there any benefits to me if I choose to take part in this study?

- Increased knowledge and awareness of ACP practices and billing.
- Reduced discomfort with discussing and integrating end of life topics in daily practice.
- However, it is possible that you may not receive any direct benefit from taking part in this study.

What Are My Alternatives If I Do Not Want To Take Part In This Study?

Your alternative is not to take part in this study.

Will I be paid to take part in this study?

You will not be paid to take part in this study. A light lunch will be provided to all participants.

How will information about me be kept private or confidential?

All efforts will be made to keep your responses confidential, but total confidentiality cannot be guaranteed. We will not collect any personal information that can identify you or other subjects. To match pre and post questionnaires, you will be assigned a number. Completed forms will be stored in a locked cabinet in the investigator's office at Rutgers University. Responses may be converted to digital format and stored on a password-protected computer that can only be accessed by the study team. Paper copies will then be

Page 1 of 3



Rutgers School of Nursing Stanley S. Bergen Building Rutgers, The State University of New

destroyed. We plan to delete the digital data after 6 years. No information that can identify you will appear in any professional presentation or publication.

What will happen to information I provide in the research after the study is over?

The information collected about you for this research will not be used by or distributed to investigators for other research.

What will happen if I do not want to take part or decide later not to stay in the study?

It is your choice whether to take part in the research. You may choose to take part, not to take part or you may change your mind and withdraw from the study at any time. In addition, you may skip questions that you are not comfortable answering. You may leave without turning in a completed form or by turning in a blank or incomplete form without any repercussions.

If you do not want to enter the study or decide to stop taking part, your relationship with the Primary Care Practice staff will not change, and you may do so without penalty and without loss of benefits to which you are otherwise entitled.

Who can I call if I have questions?

If you have questions about taking part in this study, you can contact the Principal Investigator: Rubab Qureshi at

If you have questions about your rights as a research subject, you can contact the IRB Director at:

Newark HealthSci (973)-972-3608

Please keep this consent form if you would like a copy of it for your files.

| AGREEMENT TO PARTICIPATE |
|--|
| Subject Consent: |
| I have read this entire consent form, or it has been read to me, and I believe that I understand what has been discussed. All of my questions about this form and this study have been answered. I agree to take part in this study. |
| Subject Name (printed): |
| Subject Signature:Date: |
| Signature of Investigator/Individual Obtaining Consent: |
| To the best of my ability, I have explained and discussed all the important details about the study including all of the information contained in this consent form. |
| Investigator/Person Obtaining Consent (printed): |

Page 2 of 3

| Rutgers | Rutgers School of Nursing Stanley S. Bergen Building Rutgers, The State University of New | |
|------------|---|--|
| Signature: | Date: | |

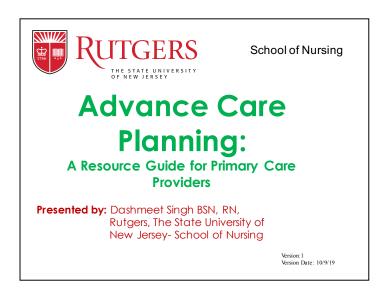
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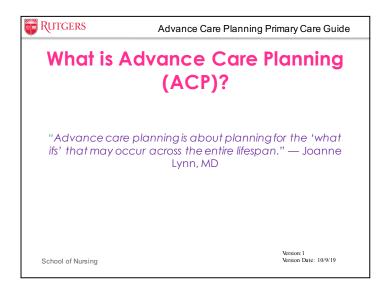
Appendix E

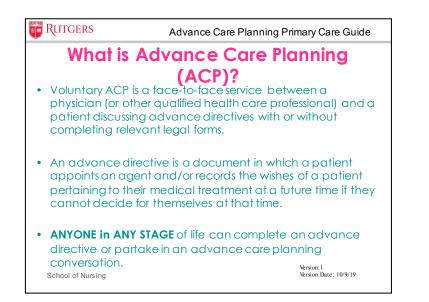
Advance Care Planning Education Module

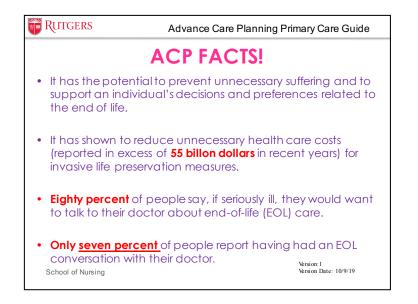
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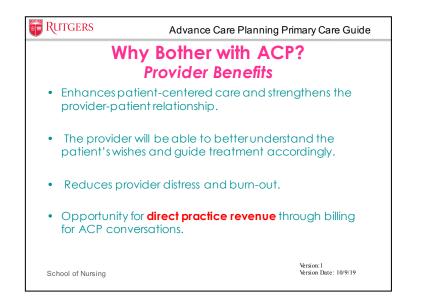


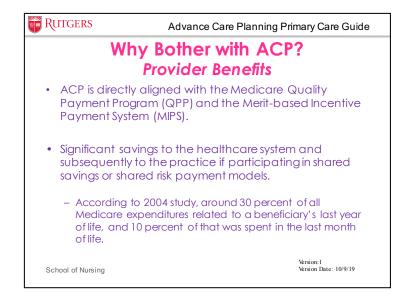




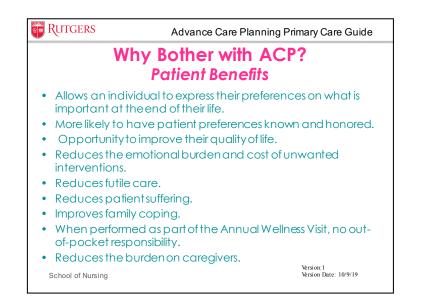


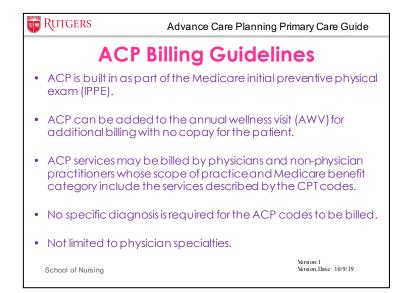
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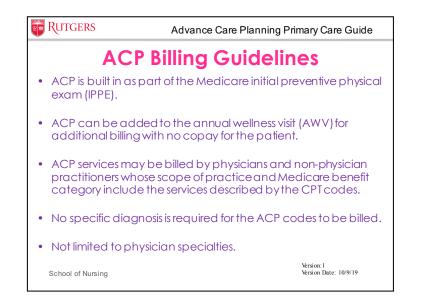
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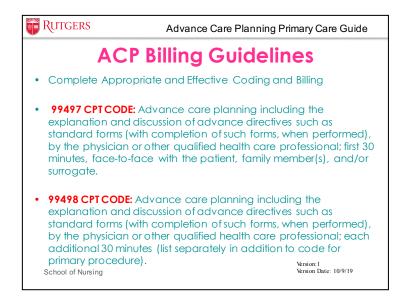




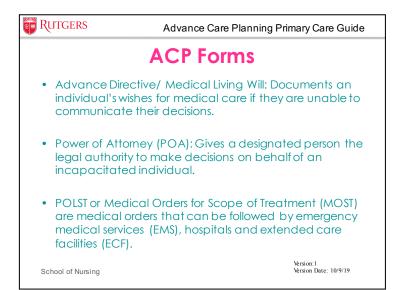
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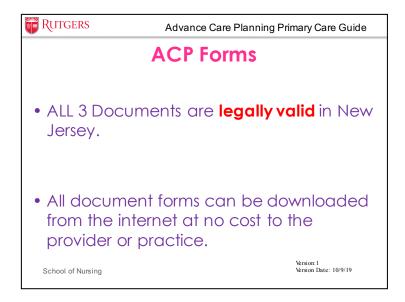
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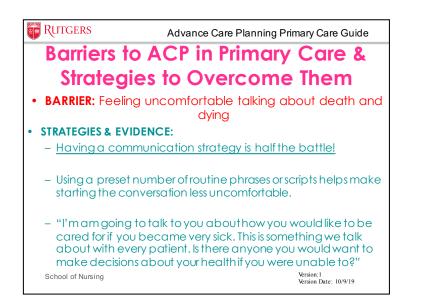


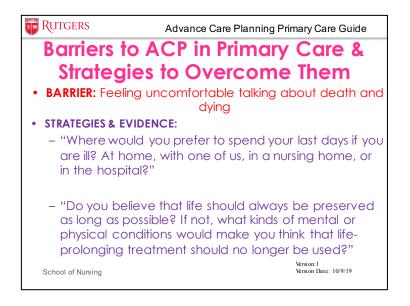
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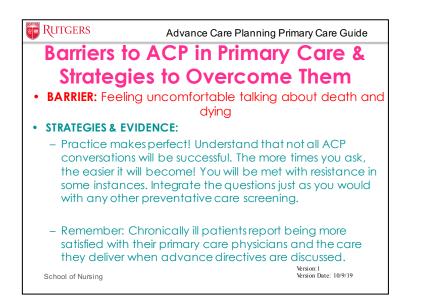


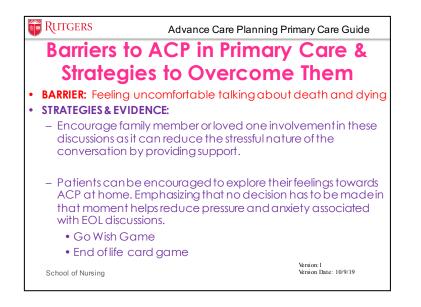
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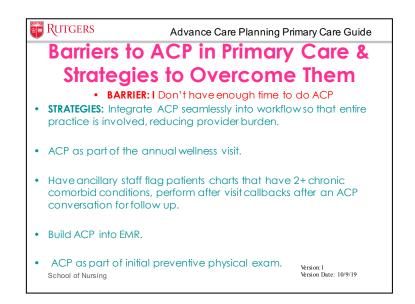


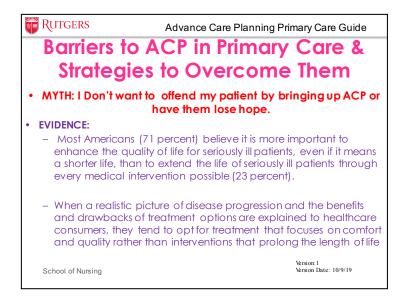
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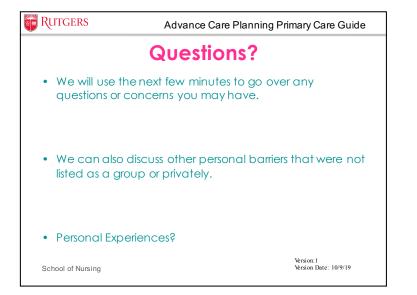


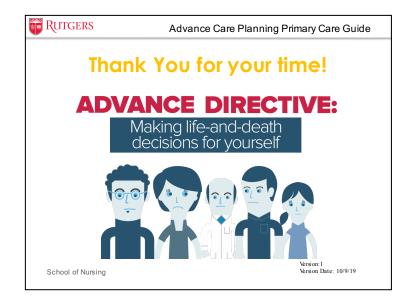
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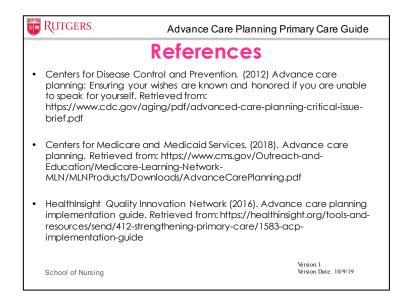




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| RUTGERS | Advance Care Planning Primary Care Guide |
|--------------------------------|--|
| R | eferences |
| J., Heyland, D. K. (2018). | ein, D., Elston, D., Tan, A., Slaven, M., Barwich, D., You, J. Barriers to and enablers of advance care planning Survey of health care providers. <i>Canadian Family</i> |
| (2018). Provider tools for adv | , Harle, I., Harrold, D., Incardona, N., & Walton, T. rance care planning and goals of care discussions: A n Journal of Hospice and Palliative Medicine, 35(8), 09118760303 |
| | . Changing the way we die: Compassionate end-of- ovement. Berkeley, Califomia: Viva Editions. |
| Wolinsky, F. D. (2001). The ef | Gramelspacher, G. P., Perkins, A. J., Zhou, X. H., & fect of discussions about advance directives on imary care. Journal of General Internal |
| School of Nursing | Version: 1 Version Date: 10/9/19 |

Appendix F

Pre and Post Test ACP Knowledge and Attitude Survey

Advance Care Planning Assessment: Please circle one answer choice per question I routinely bring up topics of advance care planning in my patient care. Never Rarely Sometimes Very Often Always I think that advance care planning is an important health care topic to discuss with my patients. Very Often Never Rarely Sometimes Always I feel comfortable talking to my patients about their end of life care. Rarely Very Often Never Sometimes Always I am confident in my knowledge of advance care planning practices and related legal documents in New Jersey. Sometimes Very Often Never Rarely Always I incorporate patient values into clinical decision making and treatment plans. Never Rarely Sometimes Very Often Always I offer patients alternatives of care based on benefits, cost and patient preferences. Never Rarely Sometimes Very Often Always I have difficulties with defining the right moment to engage patients in advance care planning. Never Rarely Sometimes Very Often Always I have difficulties in dealing with uncertainty of prognosis for patients with chronic illness. Never Rarely Sometimes Very Often Always I am confident in being able to elicit values, beliefs, and preferences related to end-of-life care in patient conversations.

Never Rarely Sometimes Very Often Always

I believe that other health care professionals are better positioned to initiate advance care planning conversations.

| Never | Rarely | Sometimes | Very Often | Always | | |
|---|------------------|------------------------|--------------------------|--------------|--|--|
| I believe that patien | ts should initia | ate advance care plan | ning conversations. | | | |
| Never | Rarely | Sometimes | Very Often | Always | | |
| I fear that advance | care planning v | will negatively affect | my relationship with p | patients. | | |
| Never | Rarely | Sometimes | Very Often | Always | | |
| There is a lack of re | eady access to | forms and resources f | for patients regarding a | idvance care | | |
| planning. | | | | | | |
| Never | Rarely | Sometimes | Very Often | Always | | |
| There is insufficient access to or availability of other health care professionals (social workers, | | | | | | |
| nurses, or others) to help with advance care planning. | | | | | | |
| Never | Rarely | Sometimes | Very Often | Always | | |
| There is a lack of financial compensation for advance care planning. | | | | | | |

Nava Sometime Very Offe Darah

| Never | Rarely | Sometimes | Very Often | Always |
|-------|--------|-----------|------------|--------|

Appendix G:

Data Collection Sheet

RUTGERS School of Nursing

Rutgers, The State University of New Jersey 65 Bergen Street-Room 1126 Newark, NJ 07107-3001 www.nursing.rutgers.edu Phone: (973) 972-4307 Fax: (973) 972-8947

Improving Advance Care Planning in Primary Care: Data Collection Sheet

| Date: | Number of times 99497 CPT CODE is billed: | Number of times 99498 CPT CODE is billed: | Total number of patients seen in office: |
|-------|---|---|--|
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Rutgers, The State University of New Jersey

Version: 1 Version Date: 10/9/19

Appendix H:

Cost Analysis for DNP Project

| • | Physical Space for Project Implementation | \$0.00 USD |
|---|--|--------------|
| • | Computer | \$0.00 USD |
| • | Projector | \$0.00 USD |
| • | Pens, Paper, & USB | \$22.00 USD |
| • | Beverages and Snacks for Education Session | \$38.00 USD |
| • | Complementary Lunch | \$145.00 USD |
| • | Total Cost | \$205.00 USD |

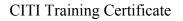
Appendix I:

Gantt Chart for Project Timeline

| Project Steps: | January 2019 –July 2019 | August 2019- November 2019 | November 2019- December 2019 | December 2019- January 2020 |
|--|-------------------------------|-------------------------------------|---------------------------------------|-----------------------------------|
| Identified topic of interest. | | | | |
| Recruited project chair and team member. | | | | |
| Completed literature review and identify gaps. | | | | |
| Formulated, reviewed, edited proposal. | | | | |
| Secured a project site. | | | | |
| Submit proposal to Institutional Review Board (IRB) for review and approval. Made continual revisions to proposal as per IRB review. Began participant recruitment, | | | | |
| Performed education session at site. | | | | |
| Collected pre and post test data. | | | | |
| Collected ACP billing data from study site for 4 weeks post study | | | | |
| Performed data analysis and synthesis of findings. | | | | |

| Linked findings to current evidence, assessed impact on healthcare, public health policy, and economics. | |
|---|--|
| Presented findings and conclusions to project team, peers, stakeholders, and interested parties. | |

Appendix J





Appendix K

McNemar Test Cross Tabulation

Pre-intervention & Post-intervention ACP Knowledge & Attitudes

| | Post Intervention | | |
|------------------|-------------------|----|--|
| Pre intervention | yes | no | |
| yes | 2 | 0 | |
| no | 5 | 0 | |

Yes= Positive response to ACP in knowledge or attitude

No= Negative responsive towards ACP in knowledge or attitude

McNemar Test Statistics^a

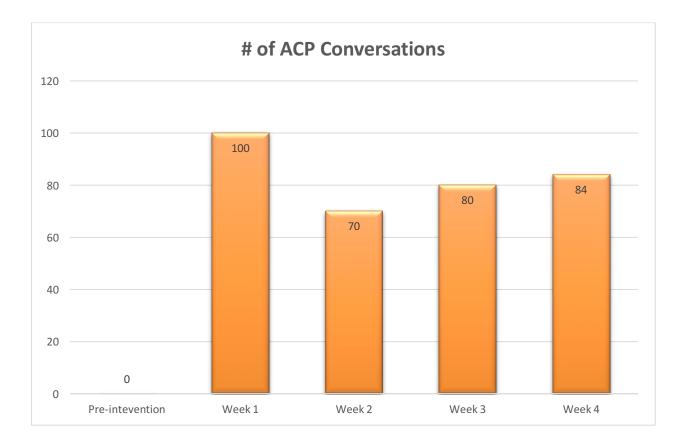
| | Pre Intervention & Post Intervention |
|-----------------------|--------------------------------------|
| Ν | 7 |
| Exact Sig. (2-tailed) | .063 ^b |

a. McNemar Test

b. Binomial distribution used.

Appendix L

Number of ACP Conversations



Total Number of ACP Conversations Post Intervention: 336