# Being Proactive in Geriatric Advance Care Planning

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# Abstract

Disease burden is higher in the United States than in comparable countries. The Patient Self Determination Act of 1990 requires healthcare facilities to provide Advance Care Planning (ACP) information to all Medicare patients. The healthcare staffs' (n=7) commitment to 3-days of ACP training increase ACP rates in the primary care setting. The Medicare Incentive Program is the platform for this initiative. This quantitative project used a valid and reliable pre and posttest design that consisted of 27 items on a Likert-scale. A 3.5-month chart audit (n=91) was conducted to assess the completion rate. Descriptive statistics was used to describe the demographic data. The results of the two-tailed Wilcoxon signed rank test were significant based on an alpha value of 0.05, *V* = 0.00, *z* = -2.37, *p* = .018. There was a significant increase in the post-readiness to change average scores. A Mann Whitney test was used to analyze the statistically significant difference between the averages in two ACP types and electronic health record documentation (EHR). Staff did not always code (Mdn = 0.00) but they documented in the EHR (Mdn =1.00; 512.00, p = 0.003). ACP discussion was performed 63% of the time during Annual Wellness Visits (AWV), and there was a 49% increase in the EHR documentation. Trained staff are key stakeholders in guiding ACP conversations. They understand the barriers, impact, and consequences related to the lack of advance directives.

Key words: Advance care planning, end of life care, advance directives, quality of life

# Being Proactive in Geriatric Advance Care Planning

The national public opinion poll on ACP report that only 10% of adults discussed ACP with their primary care provider (Scholten et al., 2018; Bernard, 2018. Disease burden is higher in the United States than in comparable countries (Sawyer & McDermott, 2019). This contributes to more frequent hospital admissions for congestive heart failure, respiratory distress, infections, and poorly controlled diabetes. Despite the statistical increase in disease burden and hospital admissions compared to other countries, the United States continues to lack disease trajectory discussions and future planning. *Future planning* means creating a guide for an individual in case an illness, accident, or fatal event occurs. The majority of older adults appear to understand the terminology future planning as opposed to advance care planning (ACP).

The United States health infrastructure can deter providers from completing advance directives caused by higher patient load, emergency care, and lack of time. The time constraints affect providers' ability to provide quality, comprehensive, and holistic care for their patients. Advance care planning conversations require time and can create an emotional burden for everyone involved. The national public opinion poll on ACP report that only 10% of adults discussed ACP with their primary care provider (Scholten et al., 2018; Bernard, 2018). Clinic staff have a limited amount of time to discuss their patient's diagnosis and treatment plan. The Medicare patient population is living longer with many chronic conditions and need more time for health management, which makes ACP less of a priority for both patients and clinic staffs (Scholten et al., 2018; Bernard, 2018). They cannot thoroughly explain options, prognosis, and possible plan of care in such a short time frame (Scholten et al., 2018; De Caprariis et al., 2017).

Some patients are required to review ACP documents at home and to return for another visit for ACP discussion (Bernard, 2018). This disrupts ACP completion causing more delays and incomplete documentation; usually, advance care planning document completion occurs during critical situations, primarily in the last six months of life (De Caprariis et al., 2017; Dyess, Tappen, & Hennekens, 2014; Edward & Landon, 2014). These factors negatively impact ACP rates. The older adult population is growing, living longer with chronic conditions and comorbidities. The Geriatric population is more at risk for more acute and critical illnesses due to the aging process, decreased immune systems, and multiple acute on chronic condition management. Being proactive in Geriatric advance care planning will decrease emotional trauma, family burden, invasive health measures, financial expenditures, and most importantly, increase patient autonomy and healthy aging in older adults

## Problem Statement

The United States has low rates of ACP. The Medicare reimbursement incentives and awareness program can help increase national advance directive rate, currently at 33.3%, because an estimation of 97% of Americans are agreeable to participate in end of life (EOL) care discussions (De Caprariis et al., 2017; Edward & Landon, 2014). Despite the promotion of advance directives that has occurred, only 5% to 20% Arizonans completed advance directives (Kirk, 2010).

Advance directives, unfortunately are rarely discussed until a patient is quickly declining or given a terminal diagnosis. Patients and their family members are oftentimes forced to make "in the moment" types of decisions that lead to confusion, indecisiveness, and guilt. This disrupts ACP completion causing more delays and incomplete documentation; usually, advance care planning document completion occurs during critical situations, primarily in the last six months of life (De Caprariis et al., 2017; Dyess, Tappen, & Hennekens, 2014; Edward &

Landon, 2014) Consequently, this creates a quandary between prolonging life or suffering (De Caprariis et al., 2017; Cottingham et al., 2018).

The healthcare professionals' confidence contributes to low advance directive rates. Various factors can affect a clinic staff's comfort level such as years of experience, specialty area, and personal bias (De Caprariis et al., 2017; Dyess, Tappen; Hennekens, 2014; Edward & Landon, 2014; Bernard, 2018). Training the staff in assisting patients with ACP may result in increased confidence; thereby, increasing advance directive rates in primary care settings.

## Purpose and Rationale

Healthcare staff working with older adults in primary care settings need enhanced end of life care discussion training to learn specialized skills regarding these discussions. The training and discussing end of life plans in a meaningful way with patients may result in a reduction in increased spending and unnecessary administration of aggressive treatments. Also, advocating for patient quality of life can be improved by highly trained clinic staffs who are confident in discussing end of life care (Auriemma et al., 2016). The Medicare reimbursement initiative effective January 1, 2016 will pay for ACP discussion and documentation during Annual Wellness Visits (AWV) (Center for Medicare and Medicaid Services, 2018). This Physician Fee Schedule payment system will impact about 55 million Medicare beneficiaries and their healthcare providers (Center for Medicare and Medicaid Services, 2018). The Patient Self Determination Act of 1990 requires healthcare facilities to provide written ACP information to all Medicare patients. The patients have the right to access advance directives, complete documents, and ACP education (Kirk, 2010).

The purpose of this evidence-based practice (EBP) project was to evaluate the followings questions:

1) For staff in a primary care organization, does their organizational readiness for implementing change (ORIC) in the area of Advance Care Planning (ACP) with Medicare patients increase before and after training?

2) In older adults in a primary care setting, does the completion of ACP short and long form documentation and billing/coding increase after Medicare annual wellness visits with trained staff?

## Background/Significance

According to Scholten et al. (2018), clinic staffs can be properly trained to discuss ACP but this type of conversation requires time and can create an emotional burden for everyone involved. Clinic staff have a limited amount of time to discuss their patient's medical diagnosis and treatment plan. Many people are living longer with multiple chronic conditions and need more time for medical management, which makes ACP less of a priority for both patients and clinic staffs. When attempting to incorporate advance care planning during episodic or follow-up visits, clinic staffs do not have enough time to perform a comprehensive assessment. They cannot thoroughly explain options, prognosis, and possible plan of care in such a short time frame (Scholten et al., 2018; De Caprariis et al., 2017). The patient was required to return for another visit for ACP discussion and document completion causing delays and incomplete documentation; usually, advance care planning document completion occurs during critical situations, primarily in the last six months of life (Dyess, Tappen, & Hennekens, 2014; Edward & Landon, 2014).

Well-informed patients are more likely to participate in completing ACP when provided with step-by-step directions (Scholten et al., 2018). Scholten et al., (2018) propose the use of social workers in ACP is beneficial but difficult to incorporate in the ambulatory settings.

However, all clinic staffs must be readily available to explain options, prognosis, and treatment plans. The embedded ACP program within primary care clinics starts with the front office staff, providers thorough ACP and EOL discussions, and printed advance directives and education pamphlets help increase the rates. It takes all healthcare disciplines to create awareness, encourage discussion, and complete documentation.

There are multiple programs, tools, and theories used to help patients understand the importance of advance care planning (Cottingham et al., 2018; McGlade et al., 2017; Payne et al., 2010). The Conversation Project movement, for example, created tools and programs to better assess patient's mental capabilities to make their own informed decisions or assign a medical power of attorney or health proxy (The Conversation Project, 2018; Cottingham et al., 2018; McGlade et al., 2017; Payne et al., 2010). Once the emotional burden was addressed, patients are presented with the motivational reasoning for completing ACP; the majority of patients were receptive and understanding. Nearly all of the participants understand that they are healthy and capable of making informed decisions and they are in control of their health. Healthy aging promotes autonomy, control, and responsibility. The crisis of decision-making was eliminated from use of the medical power of attorney and health proxy when ACP was executed by a confident clinic staff in the ambulatory settings (De Caprariis et al., 2017; Karnik & Kanekar, 2016). The manner of the presentation sets the tone for the ACP discussion. When a clinic staff was trained properly and has confidence in ACP discussions, patients and their family members take this matter seriously and are more likely to complete ACP documentation (De Caprariis et al., 2017; Karnik & Kanekar, 2016).

Researchers suggested that electronic medical record (EMR) based ACP could potentially help increase the rates and improve clinic staff adherence to completion of advance care directives. A group of medical doctors assessed the effectiveness of an EMR based reminder in improving advance directive completion in an outpatient setting (Hayek et al., 2014). They reported that easily accessible online ACP documents increased rates to 66%. Further, ACP was simple, cost effective, and did not require extra financial or human resources (Hayek et al., 2014). The implementation of EMR supported health promotion by being proactive in patient's health care planning and making ACP a priority. In addition, well-informed patients are more likely to participate in completing ACP when provided with step-by-step directions (Scholten et al., 2018). Scholten et al., (2018) proposed the use of social workers in ACP. However, clinic staffs must be readily available to explain options, prognosis, and treatment plans.

## PICOT Question

A private practice in the southwestern United States suburb health care providers and staff had minimal experience with end of life (EOL) care discussions; lacked advance directive training; inconsistently inquired about advance directives; and did not have a formal embedded system to implement ACP. The practice is very busy, seeing a high volume of older adult patients with multiple comorbidities, which makes it difficult for clinic staff to start advance directive discussions. Current practice, staff members reported that advance directive discussions are brief and quickly noted but no official method was established. This inquiry has led to the PICOT question, “in Healthcare Clinic staff (P), how does ACP education (I) compared to no education (C) affect ACP rates (O)?

## Evidence Synthesis

A review of literature of research studies addressing the various aspects of ACP, illustrated diverse factors that affected low ACP rates: current ACP knowledge, language use, lack of provider education, lack of formal training, lack of patient education, time constraints, negatives thoughts associated with death, time filling out documentation, and heavy emotional burdens (De Caprariis, et al., 2017; Dyess et al., 2014; Scholten et al., 2018; Yap, Chen, Detering, Fraser, 2017). Former and current trends about ACP and Geriatric advocacy continue to shape the need for ACP awareness and how the lack of advance planning affects older adults (Appendix A, B, & C). This evidence led to the development and implementation of the Medicare Reimbursement Incentive Program. The Medicare Reimbursement Incentive Program is positively impacting the advocacy for increasing ACP rates. There are more states and federally funded end of life care coalitions that educate the public and providers about advance care planning.

## Search Strategy

A search strategy was developed and implemented which captured the primary literature in the following databases: Cumulative Index of Nursing and Allied Health Literature (CINAHL), PsychInfo, and PubMed initially meeting abstracts. A search system was conducted for existing guidelines, systematic reviews, and primary literature within the last five years of publication. Inclusion criteria were English language, patients living with chronic illnesses, health-care provider direct involvement, includes outcome of interest, and comparative data. No specific exclusion criteria noted. This review was conducted by one reviewer.

### CINAHL

A search for primary articles uncovered 50 documents. Of these 50, two underwent a full-text review. Initial MESH terms used were nurse practitioners AND living will education AND increased advance care planning rates which yielded zero articles. The final phrase and Boolean connectors used retrieved articles that focused on providers AND advance care planning

AND rates which resulted in 50 articles. A slight change in similar key terms yielded the final higher search results.

### PsychInfo

A search for primary articles uncovered 31 documents. Of these 31, one underwent a full text review. Initial and final MESH terms were staff members OR providers OR nursing staff AND advance care planning education OR living will education AND advance care planning rates OR advance care planning increase. This database did not require additional keywords or MESH terms to generate results.

### PubMed

A search for primary articles uncovered 114 documents. Of these 114, three underwent a full text-review; same articles found in other databases. The same initial and final MESH terms as PsychoInfo were used. No additional keywords or MESH terms used.

## Theoretical Framework

The Health Action Process Approach (HAPA) model illustrated the motivational and volitional phases of action (Appendix L). This applied to ACP regarding the clinic staffs' willingness to complete the advance care documents. After making a definite choice to participate in the Advance care planning (ACP) advocacy, there were barriers to finalizing the documents. The motivational phase illustrated that the clinic staff was intentionally acting towards their goal as an organization. The clinic staff understood the risks and outcomes that could happen if directives were not finalized for patients and their family members. During this time, the clinic was motivated to carry out the patient's wishes, while promoting patient autonomy, and maintaining their patients' self-efficacy.

The volitional phase involved executing the desired action. This was the stage that exhibited potential barriers to advance directive completion. Once the clinic staff was committed to the action, they had the self-regulatory skills and strategies to reach the goal of advance care completion regardless of barriers, time constraints, and difficulty. This model allowed the clinic staff to understand that benefits of completing a documented advance directive that will help eliminate the potential futile care for their patient population.

## Implementation Framework

### Quality Improvement Model

The model chosen to help clinic staffs guide application of the synthesized evidence was the Plan-Do-Study-Act (PDSA) Cycle (Appendix M). This was a systematic series of steps for gaining valuable learning and knowledge for continual improvement of a process. The intial stage of the cycle was to idenfity an opportunity for improvement and to test how it worked within the system using metrics and indicators to assess progress towards the goal. Then, putting the plan in action allowed for a testing period that could be as short as one day and implemented with a small number of participants. The results and outcomes were thoroughly examined. Based on the testing period and results, adjustments were made to establish quality improvement plans. This was fitting for a small private practice because it allowed adjustments to be made in a short period of time and with a small number of participants (Appendix M). The system change that was implemented took several cycles of change and improvement at regular intervals, allowed for refining ACP education materials, rehearsed execution and tactics for information delivery to patients and family members, practiced use of appropriate ACP billing and coding process, completion of ACP documents, and the tracked ACP rates within the small private practice.

# Methods

A quantitative evidence-based practice project (EBP) used a pre and posttest design to assess readiness to change of the staff and a chart audit was conducted to assess the advance care planning (ACP) completion rate. The EBP project was approved by the Arizona State University Institutional Board Review (IRB).

## Setting

An EBP project was be implemented in a primary care clinic in Arizona that serves Medicare patients. The participants were 2 providers, 1 office manager, 2 medical scribes and 2 medical assistants. The private practice had 2 exam rooms where the discussions took place. There was a main lobby where the patients waited to be seen. General questions were answered in the waiting area, then more personal detailed questions were answered in the private exam rooms with the providers of the practice. Then, chart audits were performed on Medicare charts.

## Population

### Staff Members

The project facilitator was responsible for recruitment of staff and patients. The recruitment process included the use of flyers to recruit staff employed in the primary care clinic. The flyer introduced the advance care planning advocacy for the older adults education/training, project conductor, time/location/length of session, conductor contact information, and invitation to attend training. The flyers located in the primary care private practice office break room and front desk staff/office area. Recruiting all subjects at the private practice started after IRB approval. The inclusion criteria requirements were 18 years of age, can read, write, and speak English, and clinic staff willing and voluntarily to participate in advance care planning education and training, discussions, documentation, and appropriate billing/coding based on Medicare guidelines. The exclusion criteria requirements were less than 18 years of age and does not read, write, and speak English, and no advance care planning training.

### Medicare Patients

ACP informational flyers were provided to help with voluntary ACP participation. If the Medicare patients chose to participate, he or she could start filling out the short or long form ACP documents. This was included with Annual Wellness Visit (AWV) forms. The Medicare patients was instructed to write their questions down for discussion with the provider during the timed visit. After ACP discussions took place, providers signed off for completion. The documents were scanned and checked off in the EMR. The inclusion criteria requirements consisted of an electronic medical record (EMR) chart audit of Medicare patients who were 65 years of age or older.

### Project Description

Staff participated in advance care planning training, which included completing forms, electronic/EMR documentation, and detailed discussions with the Medicare patients. The education occurred during the clinic staffs' lunch hour. After the training was completed, the subjects were given a Starbuck's gift card.

The clinic staff received a 1-hour education training session. The education was a face-to-face interactive presentation that focused on the reasons for advance care planning in the older adults, family quandary, grief, and caregiver burden. A primary objective was providing tips on how to start and execute a productive advance care planning discussion and completion of directives short and long form. The topics discussed with the clinic staff members and Medicare patients consisted of advance directives, living wills, healthcare power of attorney, DNR or Orange form, change in decisions, and storing documentation. Staff were instructed to scan the documents and include them in patients' electronic medical record (EMR). Patients also had the option to be in the ACP state registry and a copy was sent home with them. The Medicare patients were encouraged to make multiple copies and give them to their loved ones in order to make their wishes known. Education training included instruction on Medicare Reimbursement Incentive and appropriate coding/billing protocols. It was recommended that ACP discussions are addressed during their annual visit; however, for the purpose of this project staff members discussed ACP with all patients over the age of 65 in order to increase ACP completion rates in the clinic.

After the education session and training, the goal was for clinic staff to have a better understanding of the following: advance care planning; implementing end of life care discussions; Medicare billing and coding use; advance directive electronic medical record (EMR) documentation; and increase confidence in guiding the conversations with the Medicare patients. This was a 1-3-day process dependent on how many subjects were present on the first day of training. An additional second or third day was implemented in case of scheduling conflicts or personal reasons. The education session was recorded using zoom technology to enhance learning and left at the clinic to enhance the sustainability of the project. The project implementation phase timeline took about 4 months to complete.

## Data Collection and Instrumentation

**Readiness to Change.** Pre-test and post-test data were collected to test and retest the subjects' readiness for change. Prior to training, the subjects were provided a pre-test using the Readiness to Change Survey that measured readiness to change practice in the area of advance care planning. The objective was to collect baseline data about clinic staff members' need for change, leadership and management commitment to change, attitude to change, communications, and preparation for change. The instrument consisted of 27 items on a Likert-scale with response options ranging from strongly disagree to strongly agree. The instrument consisted of five domains. The first domain measured need for change and the total score is 25. The second domain measured leadership and management and the total score is 20. The third domain measured attitude to change and the total score is 10. The fourth domain measured the communication and the total score is 20. The fifth domain measured preparation for change and the total score is 20. The overall instrument measured that staff members' readiness to change and the total score is 95. It takes approximately 5-10 minutes to complete the survey. However, it took approximately 15-20 minutes to complete because a couple of subjects needed more guidance. This instrument was reported as a valid and reliable. The ORIC instrument was found to be valid and reliable. The construct validity was ascertained using Confirmatory Factor Analysis (CFA): CFI =.838, RMSEA =.113 and CMIN/DF = 4.796, p <.001 and good reliability Cronbach α = 0.88 (Storkholm, Mazzocato, Tessma, & Savage, 2018).

After the presentation, the subjects completed the same readiness to change post-test with additional evaluation questions of education. The instrument consisted of 27 items on a Likert-scale with response options ranging from strongly disagree to strongly agree. It took approximately 15-20 minutes to complete the survey. The outcomes were to have ACP awareness, monitoring implementation, and Medicare Reimbursement.

**Chart Audits.** Charts were randomly reviewed immediately after training. The data collection took place once a week for a period of 3 1/2 months. The data was collected and documented on a chart audit form. The chart audit was promising in terms of feasibility in collecting ACP documents without affecting workflow, and efficacious in addressing Medicare patients who need ACP planning/documentation (Thompson, McClement, Labun, and Klassen, 2018). The data collected from patients' electronic medical records (EMR) on the following variables: age, gender, race, education, type of visit, EMR documentation, billing codes, and type of ACP forms used. The goal was to perform a chart review/audits of 168 charts. According to Thompson, McClement, Labun, and Klassen (2018), between 58-90 charts was an acceptable number of charts to review. The project facilitator collected the data, and observed the following outcome variables: advance care planning (ACP) completion rates and Medicare reimbursement documentation related to implementing ACP during annual visits.

### Data Analysis Plan

IntelluctusStatistics TM (IntellectusStatistics, 2020), software was used to store and manage the data. Descriptive statistics was used to describe the sample and outcome variables. Inferential statistics was used to analyze and interpret the findings pertaining to the outcome variables of interest; readiness to change and advance care planning completion rates.

A two tailed test was used for testing the null hypothesis and statistical significance; the critical value was set at $p < .05$.

### Budget and Funding

There was no budget and funding received for the project.

## Results

### Readiness to Change

The subjects consisted of medical providers (n=2), office manager (n=1), medical assistants (n=3), and medical scribes (n=2). The total sample size was n=7. The average age of subjects was 37 (*SD* = 12.93), the ages range from 22 to 52 years of age (Appendix D). Majority of the sample were female (*n* = 6, 86%) and Caucasian (*n* = 6, 86%). Most have college degree education (*n* = 3, 43%). Most of the staff consisted of healthcare providers 2 (29%) and medical assistants 2 (29%). For the pre-test, all of the subjects did not receive previous training. More than half of the subjects were comfortable discussing advance care planning  (*n* = 4, 57%). All subjects feel that this training would be meaningful (*n* = 7, 100%) (Appendix E).

The pre-readiness to change domains descriptive statistics of the domains are located in table 3.  The average readiness to change total score on the pre-test is 66.7 (*SD* =12.20), and the scores ranges from 51 to 87 points (Appendix F).  The post-readiness to change domains descriptive statistics of the domains are located in table 4 (Appendix G).  The average readiness to change total score on the post-test is 78.71 (*SD* = 9.59), and the scores ranges from 70 to 95 points (Appendix G & H).

To answer the following evaluation question: For staff in a primary care organization, does their organizational readiness for implementing change (ORIC) in the area of Advance Care Planning (ACP) with Medicare patients increase before and after training? A two-tailed Wilcoxon signed rank test was conducted to examine whether there was a significant difference between the pre-readiness to change and post-readiness to change average scores.  The two-tailed Wilcoxon signed rank test is a non-parametric alternative to the paired samples *t*-test and does not share its distributional assumptions (Conover & Iman, 1981).  The results of the two-tailed Wilcoxon signed rank test were significant based on an alpha value of 0.05, $V = 0.00$, $z = -2.37$, $p = .018$ (Figure 1).  This indicates that the differences between Pre-Test Readiness to Change Total Score and Post- Test Readiness to Change Total Score are not likely due to random variation.  There is a significant increase in the post-readiness to change average scores (Appendix I).

### Documentation and Billing

The subjects consisted of Medicare Patients (n= 91) who had an average age of 73 (*SD* = 10.48), the ages range from 38 to 97 years of age (Appendix X). Majority of the sample were female (*n* = 50, 56%) and Caucasian (*n* = 89, 99%). During the Annual Wellness Visits (AWV), the favored advance care planning document was the short form (*n* = 57, 100%). For the follow up (F/U) visits, the favored advance care planning document was the short form (*n* = 33, 100%). During the AWV, advance care planning discussion or advance directive documents (*n* = 31, 54%) were documented or scanned into the electronic medical record (EMR). For the F/U appointments, advance care planning discussion or advance directive documents (*n* = 13, 39%) were documented or scanned into the EMR.

To answer the following evaluation question: in older adults in a primary care setting, does the completion of ACP short and long form documentation and billing/coding increase after Medicare annual wellness visits with trained staff? A Mann Whitney test was used to test whether there is a statistically significant difference between the means in two advance care planning type and electronic medical record documentation. The billing code use was not being billed 91% of the time during annual wellness visits. However, the electronic medical record documentation was performed 54% of the time during annual wellness visits. The average for billing code was 0.00 and the average for the EMR was 1.00. Staff members did not always code (Mdn = 0.00) but they documented in the electronic medical record (Mdn =1.00; 512.00, p = 0.003) (Appendix J).

The practice did not bill for (*n* = 52, 91%) of their AWV and (*n* = 30, 91%) of their F/U services. However, when the practice did choose to bill for their services, the code 99497 was used (n=5, 9%) during AWV and (n=3, 9%) during the F/U (Appendix K).

## Clinical Significance

## Readiness to Change

The subjects consisted of well-educated medical providers, office manager, medical assistants, and medical scribes.  The proponent stakeholders were the medical providers and the office manager.  They were invested in developing and implementing a systematic change that benefited their patients' future planning; making their wishes known before an illness or accident occurs.  Before the education session, the medical providers and the office manager were strong advocates for advance care planning advocacy due to their own clinical and personal experiences (De Caprariis et al., 2017; Edward & Landon, 2014).  Though there were barriers such as increase patient load, time constraints, negatives thoughts associated with death, time filling out documentation, and heavy emotional burdens, the healthcare members persevered and completed the advance directives because their patients' wishes mattered most (De Caprariis et al., 2017; Edward & Landon, 2014).  There were healthcare members who had no previous experience in advance care discussions and end of life care planning reported that more than half of them were comfortable and found that the education sessions were helpful and meaningful in their practice. The education training strengthened their understanding of the ACP knowledge and language use (Yap, Chen, Detering, Fraser, 2017).  The formal training allowed them to practice within their primary care setting and gain confidence to guide these discussions with their Medicare Patients.

### Documentation, and Visit Types

The implementation of the ACP process was based on previous studies which produced similar outcomes for patients. Medicare patients who presented to the clinic for an Annual Wellness Visit (AWV) were receptive to completing their advance directive forms; short forms were favored.  The advance directive forms were discussed and personally reviewed with their medical provider.  The medical scribes documented the advance care planning discussions into the electronic medical record (EMR). Then, the advance directives were witnessed, copied, and scanned into the EMR. Most importantly, the patients were educated about having easy access to the forms and sent two copies home; one for them and one for their assigned medical power of attorney (MPOA) (Cottingham et al., 2018; McGlade et al., 2017; Payne et al., 2010; CMS, 2020; Bernard, 2018).

### Advance Care Planning Type and Billing/Coding.

If the practice chose to bill for their services, they may have profited between $4,332 and $4,902 for Annual Wellness Visits, and between $2,508 and $2,838 for follow-up visits within a 3 1/2-month time frame (CMS, 2018; American Academy of Family Physicians, 2020). The Physician Fee Schedule is payment system is predicted to impact about 55 million Medicare beneficiaries and their healthcare providers (CMS, 2018; American Academy of Family Physicians, 2020). If advance care planning is discussed outside of AWV, this service will be an out of pocket expense for the Medicare patients. The practice rarely used the billing codes for the advance care planning discussions and documentation.

## Discussion

### Implications

The older population commonly endorse a range of goals for their health care: comfort, living longer, improved quality of life, independence, completion of life goals, and support from loved ones (CMS, 2018; American Academy of Family Physicians, 2020). The American culture indicated that they would rather spend their last days at home with their families. However, most Americans die in institutions such as the hospital or nursing homes. The reason for this is that the older adults have not clearly conveyed their wishes to their providers and family members (CMS, 2018; American Academy of Family Physicians, 2020). The lack of advance directives makes the dying process prolonged, painful, and expensive. Older adults are kept alive on life-sustaining support, artificial hydration, and feedings tubes though they can be in a vegetative state or have advance cognitive impairment (Scholten et al., 2018; Bernard, 2018).

Advance care planning and EOL discussions reduce healthcare expenditures. The Medicare beneficiaries and vulnerable populations make up two thirds of Medicare spending. Only one third of Americans have advance directives that outline their wishes when they are not able to speak for themselves (Scholten et al., 2018; Bernard, 2018). The majority of the severe or terminally ill patients do not have advance directives. The Patient Self Determination Act of 1990 requires healthcare facilities to provide written ACP information to all Medicare patients. The patients have the right to access advance directives, complete documents, and ACP education (Kirk, 2010).

Providers play a key role in guiding the detailed ACP conversations. The purpose of ACP is to inform patients about their health options, understanding the realities of illness, quality of life, treatment options pros and cons, and prognosis. The providers are key stakeholders in assuring that patients comprehend, reflect, and express their wishes before a health crisis occurs (CMS, 2018; American Academy of Family Physicians, 2020).

## Recommendations

Stakeholders can receive specialized training in end of life care and ACP discussions that are guided by Centers for Medicare and Medicaid Services (CMS). The Medicare Incentive Reimbursement program is a motivational factor to provide education for patients to make informed decisions. Though Medicare does not make Advance Care Planning documentation mandatory for healthcare teams, a systematic design implementation to ambulatory clinics can increase ACP documentation rates (Cottingham et al., 2018; McGlade et al., 2017; Payne et al., 2010; CMS, 2020; Bernard, 2018). There are resources, tools, and properly trained healthcare teams that are available to help patients complete advance care documents. Advance care planning creates better adherence to treatment plans, promotes proper allocation for resources, and increases Medicare reimbursements (Cottingham et al., 2018; McGlade et al., 2017; Payne et al., 2010; CMS, 2020; Bernard, 2018).

## Sustainability Factors

The education session audio and PowerPoint education materials are tools available for the practice to keep and to continue to implement with their new hires training program. During the project an ACP website resource page was designed by office manager, that provides the patients and their family members reliable and credible resources about advance care planning.

## Limitations and Challenges

There were many limitations throughout the implementation process and statistic findings**.** Limitations to the process were as follows: the staff members demographic data minimum age was 22 years old and maximum age was 52 years old. The pre-test evaluation question assessed if the subjects had previous advance care planning training. However, the conductor did not inquire about previous advance care planning experience. Advance care planning experience may have been a helpful additional evaluation question to assess readiness to change. Subjects who shared that they had previous experience were more invested in the training, process, and success of the increase ACP rates. Furthermore, those with ACP personal or clinical experience were quick learners and adapted to the system change. Therefore, the medical providers and office manager were the key stakeholders who educated the patients about the importance of advance care planning. The other staff members were able to enforce the importance of having available ACP copies that are easily accessible in case of an emergency.

There was lack in patient education materials because the quality improvement project focused on staff members' education. However, the staff members did educate their own patients based on the information that was provided for them. The staff members used credible and evidence-based practice resources to better guide their Medicare patients in finalizing advance directive documents (Cottingham et al., 2018; McGlade et al., 2017; Payne et al., 2010; CMS, 2020; Bernard, 2018). The ACP rates were significantly increased but the evidence-based-practice project did not measure the emotional burden that advance care planning and end of life care discussions would have on the staff members.

Limitation in the area of statistical findings were as follows. The private practice chose to not bill Medicare for their services. Therefore, not all billing codes were used during the 3 1/2-month study; limited statistical analyses were run because the lack of variables. The profit margins could not be calculated because there was lack in use of codes and reimbursements. These limitations provided a better comprehensive understanding of the evidence-based-practice project for improvements and data archiving.

## Conclusion

The older population commonly endorse a range of goals for their health care: comfort, living longer, improved quality of life, independence, completion of life goals, and support from loved ones. However, most Americans die the hospital or nursing homes. The reason for this is that the older adults have not clearly conveyed their wishes.

ACP discussions have shown to reduce healthcare expenditures. The Medicare beneficiaries and vulnerable populations make up two thirds of Medicare spending. Only one third of Americans have advance directives that outline their wishes when they are not able to speak for themselves. The majority of the severe or terminally ill patients do not have advance directives. A primary care setting is a very fitting environment with trained/confident primary care providers who play a key role in guiding the sensitive conversations during annual wellness visits. It is important to note that patients are receptive but they need professional guidance.

The purpose of ACP is to inform patients about their health options, understanding the realities of illness, quality of life, treatment options pros and cons, and their prognosis. The healthcare staff are key stakeholders in assuring that patients comprehend, reflect, and express their wishes before a catastrophic event occurs.

Overall, disease burden is much higher in the United States. The Geriatric population is living longer with many chronic conditions and comorbidities. The aging process, decreased immunity, and acute on chronic conditions management increases the morbidity and mortality scores of older adults. However, the consequences are far more detrimental to the patients, family members, healthcare professionals, and the United States if action is not taken to increase ACP rates.

Invested, trained, and confident staff can play a key role in guiding the detailed ACP conversations once they have a clear understanding of the barriers, impact, and consequences if patients lack advance directives. The use of short ACP form, which was favored by the patients and staff members, and Medicare Guidelines support the older adults in making their wishes known. The lack of direction, lack of advance directives will negatively affect the patient, family members, healthcare professionals, and the United States' economy (Dyess et al., 2014; Edward & Landon, 2014; Hayek et al., 2014; Scholten et al., 2018).

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# Appendix A

Table 8

*Evaluation Table of Qualitative Studies*

| Citation | Conceptual Framework | | Design/ Method/ Sampling (Grounded Theory, phenomenology, Narrative…) | Sample/Setting (describe) | Major Variables Studied and Their Definitions | Measurement/ Instrumentation (focus group, 1:1, open-ended survey) | Data Analysis | Findings/ Themes | Level/Quality of Evidence; Decision for practice/ application to practice/ Generalization |
|---|---|---|---|---|---|---|---|---|---|
| Cain. (2016). Implementing Aid in Dying in California: Experiences from Other States Indicates the Need for Strong Implementation Guidelines. *Health Policy Brief.*<br>Country: United States of America | Improving quality of life<br>Aid in Dying<br>Death with Dignity Act | | Inclusion: terminally ill patients with a clear mental state who are cleared by psychiatrist (inferred)<br>Exclusion: potential vulnerable patients who are not capable of making EOL | N was not given<br>Sample: Patients who requested AID in dying<br>Setting: Washington, Oregon, and California<br>Demographics Race: white (97.1%), Non-white (3%) | Ethical critiques of AID: concerns for vulnerable persons/racial/ ethnic minority groups/low incomes/low education/ publicly funded health insurance | Verbal concerns shared by physicians | Qualitative<br>Health Policy | Better Data Collection<br>Required surveillance of AB 25 should be adjusted to collect higher quality data<br>Documentation at each step | LOE: VII (Health Policy influenced by policy makers)<br>Weakness: did not state sample size |

**Key: AD** – advance directives, **ACP** – advance care planning, ACA TOOL = availability, current issues, and anticipation tool, AMSTAR = assessment of multiple systematic reviews, CCTSI = Colorado Clinic & Translational Sciences Institute, DISC = Development and Informatics Service Center, D= documented, FACE = family-centered advance care planning, GMV= group medical visits, GOC = goals of care, **HPS** – healthcare professionals, **ICU** = intensive care unit, **LOE**= level of evidence, **m** –months, MYWK = making your wishes known, **n** – sample size, NIH/NCRR = National Institute of Health, NONRCT = non-randomized controlled trial, NM = not mentioned, NRR = no reported rate, NPCRS = National Palliative Care Research Center, POLST = physician order for life sustaining treatment, R = rate, RCT = randomized controlled trial, SD = standard deviation, **yrs** = years, **↑**= increase

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| Bias: UCLA Fielding School of Public Health is part of UCLA Center for Health Policy Research, analyses, interpretations, conclusions, and views expressed are those of the authors and do not necessarily represent UCLA Center for Health Policy Research<br>Funding: UCLA Fielding School of Citation<br>Public Health from Thomas Weinberger | Conceptual Framework | | decisions because of<br>Design/ Method/ Sampling (Grounded Theory, phenomenology, Narrative…)<br>mental state (inferred)<br>Purpose of the policy:<br>The implementation of AB 15 Act could aid in legalization of AID to improve knowledge and practices for EOL care generally, and creating ongoing educational opportunities for clinic | Education: less than high school<br>Sample/Setting (describe)<br>(6%), high school graduate (21.9%), some college (26.2%), Baccalaureate or higher (45.9%)<br>Insurance: private (60.2%), Medicare/Medicaid (38.3%), and no insurance (1.5%) | Major Variables Studied and Their Definitions<br>Concerns identified by physicians: lack of knowledge, privacy, legal consequences, other consequences, and problems in the process | Measurement/ Instrumentation (focus group, 1:1, open-ended survey) | Data Analysis | Findings/ Themes<br>Expanded data collection<br>Improve EOL care generally<br>Better measurement<br>Broader discussions<br>Continuous support<br>Educational research<br>Public education campaigns<br>Education for state regulators | Level/Quality of Evidence; Decision for practice/ application to practice/ Generalization<br>Strength: Policies are in place in Washington, Oregon, and California for AID in dying, encourages additional research investments, using legalization of AID to improve knowledge and practices for EOL care generally, creating ongoing educational programs for |

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| | Conceptual Framework | | staffs and the general public.<br>Design/ Method/ Sampling (Grounded Theory, phenomenology, Narrative…) | Sample/Setting (describe) | Major Variables Studied and Their Definitions | Measurement/ Instrumentation (focus group, 1:1, open-ended survey) | Data Analysis | and officials<br>Findings/Themes<br>Training clinic staffs | clinic staffs and general public<br>Level/Quality of Evidence; Decision for practice/ application to practice/ Generalization<br>PICOT question utility: educational opportunities can help quality EOL care |

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| Karnik & Kanekar. (2016). Ethical Issues Surrounding End-of-Life Care: A Narrative Review. *Healthcare.*<br>Country: United States of America<br>Bias: no conflict of interest<br>Funding: no source of funding | Conceptual Framework<br>Quality of life based on the Federal Patient Self-Determination Act (Inferred)<br>Egoistic theory – do good for the patient<br>Virtue Theory of Ethics – family and clinic staff working for the greater good of the patient | | Design/ Method/ Sampling (Grounded Theory, phenomenology, Narrative…)<br>Inclusion: none noted<br>Exclusion: none noted<br>Purpose of Narrative: to discuss issues such as autonomous decision making, importance of | Sample/Setting (describe)<br>Sample: not mentioned in detail, other than focus is EOL care patients<br>Setting: United States Centered Study | Major Variables Studied and Their Definitions<br>V1: autonomous decision making – patients right to control their treatment according to their preference<br>V2:Physicians' role and responsibilities to resolve issue – providing detailed information | Measurement/ Instrumentation (focus group, 1:1, open-ended survey)<br>NO mention of tools used | Data Analysis<br>Qualitative<br>Highlights the ethical dilemmas (SEE variables studied) | Findings/ Themes<br>Having advance directive documentation as an admission process per policy makers<br>Setting guidelines and policies per facility<br>Resources for palliative treatment care choices | Level/Quality of Evidence; Decision for practice/ application to practice/ Generalization<br>LOE: VI<br>Weakness: Narrative review, expert's opinion<br>Strength: clinic staffs play a key role in communication, education, and EOL discussions, public dialogues can |

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| Citation | Conceptual Framework | | advance directives, rationing of care in futile treatments and costs involved in providing EOL care.<br>Design/ Method/ Sampling (Grounded Theory, phenomenology, Narrative…) | Sample/Setting (describe) | about advance medical treatment, reviewing benefits, limitations, and drawbacks to treatment<br>Major Variables Studied and Their Definitions<br>V3: Advance directives – enables competent individuals to design and document their health care decision plan in advance in case of future disability or terminal illness<br>V4:Rationing care and futile treatment – | Measurement/ Instrumentation (focus group, 1:1, open-ended survey) | Data Analysis | Cure versus comfort conversations<br>Findings/ Themes | facilitate development and implementation of policies and guidelines safeguarding the interest of patients and<br>Level/Quality of Evidence; Decision for practice/ application to practice/ Generalization<br>healthcare organizations; improve and ease EOL journey<br>PICOT utility to study: need for guidelines and policies in ambulatory clinics |

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| | | | | | technological advancements have the capability to prolong life rather than allowing natural dying process<br>V5: Cost involvement – expenditure on healthcare<br>V6:Ethical theories – work against the egoistic theory by working for the good of the patient | | | | |
| Citation | Conceptual Framework | | Design/ Method/ | Sample/Setting (describe) | Major Variables | Measurement/ Instrumentation | Data Analysis | Findings/ Themes | Level/Quality of Evidence; |

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| | | | Sampling (Grounded Theory, phenomenology, Narrative…) | | Studied and Their Definitions | (focus group, 1:1, open-ended survey) | | | Decision for practice/ application to practice/ Generalization |
| Lum et al. (2016). Advance care planning meets group medical visits: the feasibility of promoting conversations. *Annals of Family Medicine*.<br>Country: USA<br>Bias: Sponsors had no role in design, method, and manuscript Citation | Inferred – Geriatric well-being<br>Conceptual Framework | | Qualitative GMV Conversation Project (Primary care-based group visit model)-met in 2 sessions of 2 hours each facilitated by geriatrician and social Design/ Method/ Sampling (Grounded Theory, phenomenology, Narrative…)<br>worker<br>RE-AIM Framework | 11 physicians who selected participants<br>80 patients approached, 32 participated in 5 group visits and 27 participated in both sessions<br>Group sizes-4-9<br>Sample/Setting (describe)<br>Average age 83, 63% females, 69% white, 13% black<br>Other demographics considered-relationship status, self- | Conversation Group Visit Structure-sessions, patients, practice setting, location, optional resource, facilitator considerations, group visit Major Variables Studied and Their Definitions<br>session format, documentation, billing (table 1)<br>Facilitators' communication guide- | Conversation Starter Kit – main tool, audio recorded and transcribed<br>Clinic based flyers<br>Initial telephone conversation<br>Facilitator Measurement/ Instrumentation (focus group, 1:1, open-ended survey)<br>Communication Guide<br>Group versus clinic visits | R-40% participation rate, mean age 79 years, 59% women, 72% white E-Clinic versus group visit result 19-41%, p=0.02 Data Analysis<br>A-median number of referrals 5 per physician I-84% retention rate, n=29 measured patient | Qualitative Analysis-p=0.02<br>Theme 1: Patients shared personal values and challenges related to ACP (table 4) Findings/Themes<br>Theme 2: Patients initiated group discussions of a broad range of ACP topics (table 4) | LOE: IV (cohort group)<br>Weakness: financial support for facilitator and staff training<br>Strength: conversation project tool used, CMS incentive<br>Level/Quality of Evidence; Decision for practice/ application to practice/ Generalization<br>Utility to PICOT: May be an effective |

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| Funding:<br>Colorado Health Foundation, University of Colorado Hospital, University Physicians, NPCRC, CCTSI, DISC, NIH/NCRR (pg 131) | Conceptual Framework | | R- reach<br>E- effectiveness<br>A-adoption<br>I- implementation<br>M- maintenance was not evaluated<br>Inclusion -65 years or older, spoke English, received primary at Senior Clinic<br>Design/ Method/ Sampling (Grounded Theory, phenomenology, Narrative…)<br>Exclusion- cognitive, hearing, | reported health status, caregiver for another person, attended with partner, type of insurance, education, living situation, referral source, reason for not participating<br>Senior Clinic at University of Colorado Hospital (Aurora, Colorado)<br>Sample/Setting (describe) | introduction, share ACP experiences, consider personal values, choose a surrogate decision maker (session 1), review individual ACP goals, consider flexibility, consider future healthcare choices, plan for conversations with healthcare<br>Major Variables Studied and Their Definitions<br>professionals, and goal setting (session 2) | GMV 5-point Likert scale<br>Researchers- geriatric palliative medicine specialist, nurse qualitative researcher, group visit specialist, implementation scientist, and academic leaders<br>Measurement/ Instrumentation (focus group, 1:1, open-ended survey) | experience of conversation group visit<br>M- not evaluated<br>40% participation rate, 84% retention rate, 16% attrition rate<br>Data Analysis | Findings/Themes | model for integrating high-quality, patient centered ACP into primary care<br>Level/Quality of Evidence; Decision for practice/ application to practice/ Generalization |

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| Citation | | | mental health impairments<br>Reasons for not participating- existing ACP, lack of interest, illness, lack of transportation, and unknown<br>Purpose- Determining new models to facilitate ACP conversations | | | | | | |
| Citation | Conceptual Framework | | Design/ Method/ Sampling (Grounded Theory, phenomenology, Narrative…) | Sample/Setting (describe) | Major Variables Studied and Their Definitions | Measurement/ Instrumentation (focus group, 1:1, open-ended survey) | Data Analysis | Findings/ Themes | Level/Quality of Evidence; Decision for practice/ application to practice/ Generalization |
| Myers et al. (2018). Clinic staff tools for | Adult Learning Theory | | Systematic Review | Setting: varies per study and not mentioned | Respecting individual | Tools used to select searches | Adult- **facilitating** | No consensus on tools or | LOE: I (systematic review) |

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| advance care planning and goals of care discussions: a systematic review. *American Journal of Hospice & Palliative Medicine.*<br>Country: Ontario, Canada<br>Bias: potential conflict of interest of OMHLTC funded $50,000 research, education, and ACP resources<br>Funding: CCO & OMHLTC | Conceptual Framework | | Educational design<br>Search for existing guidelines and systematic review, and search for primary literature<br>Guidelines, randomized trials, comparative studies, and noncomparative studies that included MEDLINE, EMBASE,<br>Design/ Method/ Sampling (Grounded Theory, phenomenology, Narrative…) | **Guideline search**=1701 documents (82 papers full review)<br>Adult-73<br>Pediatric-9<br>**Systematic review**=824 documents (55 papers full review)<br>Adult-47<br>Pediatric-8<br>**Primary Literature-** 31,105<br>Sample/Setting (describe)<br>documents (353 papers full review)<br>Adult-313<br>Pediatric-40 | EOL care choices<br>Type of intervention used- POLST, ACA tool, MYWK, and pediatric ACP tool (FACE)<br>Major Variables Studied and Their Definitions | 11-item Assessment of Multiple Systematic Reviews (AMSTAR)<br>Cochrane Risk of Bias tool for RCT<br>Risk of bias for nonRCT<br>Measurement/ Instrumentation (focus group, 1:1, open-ended survey) | Respecting individual EOL care choices – no P value<br>POLST- high consistency between code status and treatment received<br>ACA tool- no significant difference between control and experimental group<br>Data Analysis<br>MYWK- resulted in positive patient and | processes for ACP/GOC discussions<br>Only consensus is the definition, critical elements, and desired outcomes<br>Tool development should focus on enabling clinic staffs to facilitate value-based discussions<br>Findings/Themes | Weakness: no standardized on ACP/GOC tool<br>Strength: shift focus on desired/value-based care<br>Utility to PICOT: focus to establish pilot study about ACP discussion system-wide approach<br>Level/Quality of Evidence; Decision for practice/ application to practice/ Generalization |

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| Citation | Conceptual Framework | | International Advance Care Planning Conference and the American Society of Clinical Oncology Palliative Care Symposium<br>Design/ Method/ Sampling (Grounded Theory, phenomenology, Narrative…)<br>Inclusion- English language, patients living w/chronic illnesses, health-care | **RCT-**11 used<br>**NonRCT-**33 used<br>**Guidelines-** no suitable guidelines identified<br>No specific demographic data provided<br>*Figure 1 illustrates all info<br>Sample/Setting (describe) | Major Variables Studied and Their Definitions | Measurement/ Instrumentation (focus group, 1:1, open-ended survey) | clinic staff outcomes<br>Pediatric- **facilitating**<br>FACE- adolescent better informed about EOL than control group (p=.007), experimental adolescents less depression (p=.0268)<br>**Documentation**<br>Data Analysis<br>Adult- 94.4% stored at agency, 48.8% | Findings/Themes | Level/Quality of Evidence; Decision for practice/ application to practice/ Generalization |

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|---|---|---|---|---|---|---|---|---|---|
| Citation | | | clinic staff tools, includes at least one outcome of interest, comparative data, noncomparative data, minimum study size of 30 patients<br>Exclusion-case studies, commentaries, editorials Purpose-provide evidence for tools/practices available for use by clinic staffs to effectively facilitate ACP conversations and GOC<br>Focused questions-what tools | | | | stored at residence,3.3% special AD file<br>Pediatric-no studies | | |

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| | | | enable clinic staffs to **introduce** ACP/GOC discussions (1), what tools enable clinic staffs to **facilitate** ACP/GOC discussions (2), what tools are best suited for **documentation** of ACP/GOC discussions (3) | | | | | | |

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# Appendix B

Table 9

*Evaluation Table of Quantitative Studies*

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| Booth, A.T., & Lehna, C. (2016). Advanced directives and advance care planning for healthcare professionals. Accent on Research.<br>Country: USA<br>Bias: unstated | Conceptual dimension related to AD and ACP (i.e. perceived knowledge, capability to communicate, and awareness of the patient's level of illness). | Quantitative<br>Design: Needs Assessment (3 site visits at 3 different times)<br>Inclusion: ICU staff (inferred)<br>Exclusion: unstated<br>Purpose: assess HPS need for information on ACP/implement/evaluate educational plan for change in knowledge/behaviors | Trauma/Stroke ICU in Kentucky<br>Total n =23<br>N=11, 73%,<br>nurses n=10, 67%<br>nurse technicians n=2, 13% | AD & ACP conceptual dimension definitions:<br>1)perceived personal knowledge<br>2)capability to communicate<br>3)awareness of the patient's level of illness | Need Assessment Survey (11-item) used to assess ICU healthcare professionals perceived knowledge, capability to communicate with patients and their families, and barriers to EOL discussion concerning | Pre/post-test self-report<br>Mean score and standard deviation calculated for knowledge and comfort scales<br>Frequencies and percentages for yes/no questions<br>1) 83% no AD, average | Education Intervention-information about how to complete AD, link to Agency for Healthcare Research and Quality PowerPoint on patient codes, code status, clinic staffs effect on treatment plans | LOE: IV<br>Weakness: one facility, lack of time by ICU staff to perform completion of AD and provide education<br>Strength: revealing the need for supplemental educational intervention |

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| Funding: Agency for Healthcare<br>Citation<br>Research and Quality Improvement | Conceptual Framework | Design/ Method/ Sampling (Grounded Theory, phenomenology, Narrative…) | respiratory therapist n=2, 13% secretary n=1, 7%<br>Sample/Setting (describe)<br>average age 36.9 years of age (SD= 13.0)<br>range= 24-61<br>worked average of 8.7 years in healthcare (SD=9.1; | Major Variables Studied and Their Definitions | topics of ACP and AD. Quiz for healthcare AD – pre/post test scores<br>Measurement/ Instrumentation (focus group, 1:1, researcher(s) 1)perceived persona knowledge: number of own AD 2)capability to communicate: inquired about | percentage increase by 13%<br>Data Analysis<br>2) 73% pre and 80% post<br>3) increased 6%<br>*no statistically significance<br>All SD on table 1 range = 3.4 – 6.0 | Results: Majority of participants did<br>Findings/Themes<br>not have AD, moderately comfortable communicating, and time/access barriers concerns shared. | Utility to PICOT: ruled out ICU setting and enforces the need for staff education<br>Level/Quality of Evidence; Decision for practice/ application to practice/ Generalization |

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|  |  |  | range =1.9-35 years)<br>worked 8.4 years in ICUS (SD= 9.3;range = 4 m to 35 yrs |  | ACP (yes/no format)<br>3)awareness of patient's level of illness: chronicity vs comorbidities (yes/no format)<br>Knowledge scale- measured level of comfort in communicating<br>Level of comfort in discussion<br>**all measured on a 1-5 Likert scale |  |  |  |

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| | | | | | (minimum to maximum) | | | |
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| Arnett et al. (2017). Advance care planning: understanding clinical routines and experiences of interprofessional team members in diverse health care settings. *American* | Improving quality and honoring individual preferences near end of life –inferred | Quantitative<br>Design: cross sectional online survey<br>Sampling:118 healthcare team members from community based-clinics, long-term care, academic clinics, federally qualified agencies, and hospitals | Setting: primary care in urban, rural, and highly rural<br>Sample: physicians, social workers, nurses, advance nurse practitioners, physician | Survey variables (3 questions): role of healthcare member **(1),** description of clinical routines **(2),** workflow, ACP policies, and perspective | Chi-squared test<br>N=118 | Quantitative<br>Roles: physicians, social workers, nurses, advance nurse practitioners, physician assistants, chaplains, medical assistants, and | Though healthcare team members strongly believe ACP and EOL discussions are important, there is a gap in policies; documenting, reviewing, and transferring documents | LOE: IV<br>Weakness: conducted in primary care setting in Colorado only<br>Strength: illustrating that ACP/EOL discussions should not solely be the |

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| *Journal of Hospice & Palliative Medicine.*<br>Country: USA<br>Bias: to surgical, private practices, Citation<br>veterans' administration, elderly acute care settings<br>Funding: Colorado Health Foundation, National Palliative Care Research Center | Conceptual Framework | Inclusion: not mentioned<br>Exclusion: not mentioned<br>***interprofessional team primary care settings utilized for the cross sectional survey (inferred)<br>Design/ Method/ Sampling (Grounded Theory, phenomenology, Narrative…) | assistants, chaplains, medical assistants, and health coaches Sample/Setting (describe) | and experiences with ACP **(3)**<br>Major Variables Studied and Their Definitions | Measurement/ Instrumentation (focus group, 1:1, researcher(s) | health coaches **(1)**<br>71% believe ACP discussions should be performed by physicians, and 85% believe it Data Analysis<br>can be a nonphysician responsibility **(1)**<br>Clinical routines, systems processes, ACP policies: | Lack of education about ACP and EOL billing and coding<br>Findings/ Themes | responsibility of clinic staffs but should be a team approach<br>Utility to PICOT: primary setting ACP and appropriately coding and billing<br>Level/Quality of Evidence; Decision for practice/ application to practice/ Generalization<br>Medicare for reimbursement |

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| Junior Faculty Career Development Grant | | | | | | electronically stored (64%), systematically available (45%), guidelines and policies (37%), outreach and communication programs (14%) **(2)**<br>ACP discussions, time spent, patient/family member initiating discussion, billing practice, rating of ACP | | |

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| | | | | | | and EOL discussions **(3)**<br>Family medicine vs geriatric medicine length of ACP conversation (longer in geriatric); p=.056<br>Advanced care practitioners had longer conversation than physicians; p=.068 | | |

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| Bestvina. (2017). Implementation of advance care planning in oncology; a review of literature. *American society of* | Improving quality and honoring individual preferences near end of life -inferred (Institute of Medicine drivers) | A literature review of PubMed<br>Inclusion: ACP, oncology, palliative, terminal care, quality of life, and electronic health records articles | Sample Start; N = 476 articles<br>Final; N =26<br>Setting: University of Chicago | Variable 1: Who needs ACP and at what point in the cancer care continuum?<br>Variable 2: Who should | Downs and Black Criteria (used to assess quality of articles)<br>Measurement/ | Quantitative Chi-squared test<br>Downs and Black Criteria (used to assess quality of articles) = 11 very good | ACP and EOL discussions are now expected in oncology settings within the first 3 initial visits based on the Oncology Care Model/National | LOE:I<br>Strength: patient rapport between client and clinic staff, more ease with delivery of prognostic information, video aids helped in |

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| *clinical oncology*.<br>Country: United States of America<br>Bias: not mentioned<br>Funding: Merck<br>Citation | Conceptual Framework | Exclusion: no exclusion criteria mentioned in detail<br>Design/ Method/ Sampling (Grounded Theory, phenomenology, Narrative…) | Sample/Setting (describe) | conduct ACP sessions?<br>Variable 3:What is the best tool to educate patients?<br>Variable 4: What is the best way to engage health care clinic staffs?<br>Major Variables Studied and Their Definitions | Instrumentation (focus group, 1:1, open-ended survey) | articles, 7 good articles, 3 fair articles, and 2 poor articles, and 3 unrated articles<br>V1: stage III-IV (metastatic disease, advanced malignancy, less than 12 months to live, if grouped with palliative team patient had a better idea of prognosis and less likely to | comprehensive cancer network guidelines.<br>Institute of Medicine recommends that ACP should be revisited based on the Dying in America movement.<br>Findings/ Themes | making a better decision<br>Weakness: discouraging hope to fight cancer<br>Utility to PICOT: potentially using video aids and the question prompt list to allow patients to ask focused questions to help guide them in their decision making<br>Level/Quality of Evidence; Decision for practice/ |

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| | | | | | | get chemo; p=.02<br>Data Analysis<br>V2: Nurses to start note, physicians to complete note (69% documented ACP, and 46% code status orders)<br>V3: Question prompt list: used to improve patient/clinic staff EOL care communication | | application to practice/ Generalization |

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| | | | | | | ; p<.001 (more prognostics Data Analysis<br>questions asked by patient p=.004, and discussed EOL more frequently p=.001, consultation were longer p=.002) when QPL was used<br>Code status change (no CPR) p=.023, chi squared = 5.1<br>Knowledge scores increase | | |

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|  |  |  |  |  |  | after video presentation about ACP 95% confidence interval, p=.746<br>V4: Serious Illness Care program training helped guide physicians with suggested prompts for conversation which increased documentation to 33.7% |  |  |

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| Auriemman et al. (2016). Public opinion regarding financial incentives to engage in advance care planning and complete advance care. *American Journal of Hospice and Palliative Medicine*<br>Country: United States of America | Conceptual Framework<br>Concept/US Congressmen bipartisan bill: Personalize Your Care Act of 2013, Medicare Choices Empowerment and Protection Act, and Care Planning Act | Design/ Method/ Sampling (Grounded Theory, phenomenology, Narrative…)<br>Design: Cross-sectional online and in-person surveys<br>Inclusion: none noted (See demo)<br>Exclusion: none noted (See demo)<br>Demographics:<br>Age: 18-34 (42.9), 35-54 (53.4), 55-older (21.6) | Sample/Setting (describe)<br>Participants: English Speaking adults<br>N= 883 total<br>Online=503<br>In-person=380<br>Setting: public park in Philadelphia Pennsylvania | Major Variables Studied and Their Definitions<br>All demographics analyzed but the 4 variables were the main focus<br>V1: political ideology<br>V2:religion<br>V3:education<br>V4: income | Measurement/ Instrumentation (focus group, 1:1, open-ended survey)<br>In-person versus online surveys<br>Measurement: 5-point Likert scale<br>Amount of dollars used for incentivizing ACP completion = $ | Data Analysis<br>Quantitative<br>Wilcoxon sign-rank test<br>Logistic Regression<br>Wilcoxon rank-sum test<br>In-person versus online surveys: 380 (68.7% complete) vs 503(64.4% complete) | Findings/ Themes<br>Financial incentives can increase ACP rates<br>Accept or decline ACP with health insurance agencies could be a new policy<br>Financial incentives for ACP are less likely favorable than smoking and cancer screenings; | Level/Quality of Evidence; Decision for practice/ application to practice/ Generalization<br>LOE:VII<br>Strength:Financial incentives do not necessarily increase ACP rates<br>Weakness: understanding the underlying reason why is not stated in the study |

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| Bias: none mentioned<br><br>Funding: Doris Duke Charitable Citation<br><br>Foundation, University of Pennsylvania Center for Health Incentives and Behavioral Economics Patient Engagement and Community Outreach pilot grant, and Otto Haas Charitable Trust |  | Gender: Male 50.7, Female 49.3<br><br>Race: White (61.7), Black (24.9), Asian (6.7), Other (7)<br><br>Design/ Method/ Sampling (Grounded Theory, phenomenology, Narrative…)<br><br>Education: high school or less (24.9), college (53.2), graduate (21.9)<br><br>Employment: full time (50.5)<br><br>Household income: $60,000 or less (47.6), | Sample/Setting (describe) | Major Variables Studied and Their Definitions | Method: 13 questions, 10 minute survey<br><br>Measurement/ Instrumentation (focus group, 1:1, open-ended survey) | In person: younger, higher incomes, highly educated, non-white, full-time employed ($p < .05$)<br><br>Data Analysis<br><br>Online: Christian, active smokers, chronic conditions, family o/friend colon cancer, ($p < .05$)<br><br>Online patients would prefer | perhaps this is a limitation of the study.<br><br>Findings/ Themes<br><br>Need more research to determine underlying reason. | Level/Quality of Evidence; Decision for practice/ application to practice/ Generalization<br><br>Utility to PICOT: Formulates the question will CMS incentive be enough to help primary care settings increase ACP rates |

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|  |  | more than $60,000 (52.4)<br>Political ideology: liberal (34.5), moderate (44.1), conservative (21.5)<br>Religion: catholic (23.5), protestant (14.6), other Christian (28.5), Jewish (4.6)<br>Design/ Method/ Sampling (Grounded Theory, phenomenology, Narrative…)<br>Importance of religion in daily life: unimportant |  |  |  | patient payment for ACP completion (p<.002)<br>Data Analysis<br>Measurement: 5-point Likert scale: measures status quo(p<.001), pay patient to complete ACP (p<.001), Insurance active choice, insurance requirement, pay clinic staffs if patients complete ACP |  |  |

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| | | (28.5), neutral (19.4), important (52.1)<br>Experience with ACP: yes (59.6), no (40.4)<br>Chronic condition: yes (21.8), no (78.2)<br>Smoker: yes (23.9), no (76.1)<br>Friends/family with lung cancer: yes(34.1), no (65.9)<br>Friends/family with colon cancer: yes (25.4), no 74.6)<br>Purpose of study: paying clinic staffs versus | | | | (p<.001), Pay clinic staffs to discuss (p<.001),<br>Median proposed payment: $100, minimal amount was $5 | | |

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| | | paying patients to help incentivize completion of ACP | | | | | | |
| Courtright et al. (2016). A randomized trial of expanding choices sets to motivate advance directive completion. *Medical* | Conceptual Framework<br>Primary focus<br>Patient Self-Determination Act | Design/ Method/ Sampling (Grounded Theory, phenomenology, Narrative…)<br>Design: different types of ACP to choose from<br>Method: | Sample/Setting (describe)<br>Sample: n= 1,266 outpatient hemodialysis patients | Major Variables Studied and Their Definitions<br>V1: brief<br>V2: expanded<br>V3: comprehensive | Measurement/ Instrumentation (focus group, 1:1, open-ended survey)<br>Department of Veterans Affairs and | Data Analysis<br>Quantitative<br>RCT -321<br>Chi-square – intention to treat analysis | Findings/ Themes<br>ESRD patients thought that filling out an expanded ACP version would motivate them to complete ACP, | Level/Quality of Evidence; Decision for practice/ application to practice/ Generalization<br>LOE:I |

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|---|---|---|---|---|---|---|---|---|
| *Decision Making.*<br>Country: United States of America<br>Bias: funding agreement ensured the authors' independence in designing the study, interpreting the data, and writing and publishing the report<br>Funding: National Heart, Lung, and Blood | Improving Quality and Honoring Individual Preferences near end of life: Institute of Medicine motive<br>Inferred<br>Conceptual Framework | Sampling<br>Inclusion: outpatient hemodialysis patients<br>Design/ Method/ Sampling (Grounded Theory, phenomenology, Narrative…)<br>Exclusion: receiving dialysis <90 days, non-English speaking, blind, cognitive impairment (287 excluded 1st round), have ACP with living will, declined participation, unable to approach (658 excluded 2nd round) | Setting: 15 dialysis centers in Philadelphia and New Jersey region<br>Sample/Setting (describe) | All types were only mentioned not explained in detail, each type of ACP allowed free text writing<br>Major Variables Studied and Their Definitions | Five Wishes documents<br>McGill Quality of –life Questionnaire – assessed demographics, previous end-of-life discussions, quality of life at baseline (p=.002)<br>Measurement/ Instrumentation (focus group, 1:1, open-ended survey) | Fisher exact test<br>2-tailed t test<br>Wilcoxon rank-sum test<br>Logistic Regression<br>Data Analysis<br>Primary outcome = completed and returned ACP, there were no difference in completion rates; 13.1%;95% | however it did not affect the ACP rates.<br>Patients who did complete ACPs may have forgotten to return the completed documents<br>Findings/ Themes<br>Patient needs for notarization, time, emotional costs required to contemplate one's mortality | Strength: generating new evidence that EMR may be the new platform for ACP completion<br>Level/Quality of Evidence; Decision for practice/ application to practice/ Generalization<br>Weakness: though length of document in this study was not significant, it could still be a |

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| Institute, National Institute of Diabetes and Digestive, and Kidney Disease, The Center for Health Incentives and Behavioral Economics, University of Pennsylvania, and Otto Haas Charitable Trust | | Standard Choice Set = n 162, 127 completed 3-mo f/u assessments, 2 died, 1 incapacitated, 6 withdrew, 6 declined, 18 unreachable<br>Expanded Choice Set = n159, 129 completed 3-mo f/u, 2 died, 2 incapacitated, 6 withdrew, 5 declined, 12 unreachable<br>Design/ Method/ Sampling (Grounded Theory, phenomenology, Narrative…) | | | 12-item short-form Health survey – assessed the same factors above (p=.002)<br>Chart review and transplant status were reviewed | confidence interval versus 12.2%;95% confidence interval; p=0.80<br>Completion rates did not differ between completing at practice and completing at home 18.3%;95% confidence interval versus 14.3%;95% confidence interval; p=0.40<br>Secondary outcome = | and complete the documents | barrier in other studies<br>Utility to PICOT: choosing the correct ACP documentation for ambulatory clinics |

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|  |  | Purpose of study: testing the influence of increasing the number of options (types) for completing ACP among seriously ill patients |  |  |  | Data Analysis<br>change in quality of life = highly satisfied with decision process, satisfaction score of 4.28, s=0.78, and no difference between standard and expanded ACP forms<br>Results between standard and expanded ACP use: wanted to complete an |  |  |

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|---|---|---|---|---|---|---|---|---|
| | | | | | | ACP (standard 71.9%, and expanded 85.3% with p=.004)<br>Completed an advance directive (standard 13.1%, and expanded 12.2% with p=0.80<br>Satisfaction with decision score: p=0.65 | | |
| Silvia et al. (2019). The SHARE | Conceptual Framework | Design/ Method/ Sampling | Sample/Setting (describe) | Major Variables Studied and | Measurement/ Instrumentation | Data Analysis<br>Quantitative | Findings/ Themes | Level/Quality of Evidence; Decision for |

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|---|---|---|---|---|---|---|---|---|
| Program for dementia: Implementation of an early-stage dyadic care-planning intervention. *Dementia*. Country: United States of America<br>Bias: none noted<br>Funding: Grant numbers 90AI004-01 and 90AI040 from U.S. Administration for Community Living, | SHARE care values: Support, Health, Activities, Resources, and Education based from Gerontology Society of America.<br>“Working together” the best case scenario when there is shared and early recognition of the symptoms and help is sought jointly. | (Grounded Theory, phenomenology, Narrative…)<br>Inclusion: community dwelling, English Speaking, able to read printed material, symptoms of progressive memory loss, dementia diagnosis, and MMSE between 21-27, cognitive impairment diagnosis, and primary caregivers<br>Exclusion:<br>Design/ Method/ Sampling | N= 49 dyads<br>Demographics: female (61.3%),<br>Relationships: wife (37.5%), husband (12.5%), daughter (30%), son (1%), other (7%)<br>Ethnicity: white (80%)<br>Sample/Setting (describe) | Their Definitions Values and Preference Scale-measured<br>independence, who helps out, activities with family and friends, not being a burden, and safety (**care values)**<br>Major Variables Studied and Their Definitions | (focus group, 1:1, open-ended survey)<br>Resources: family, friends, service clinic staffs, this helps to build a balanced and realistic plan of care for future.<br>SHARE’s counselors: ALL one Master’s degree earned, and four earning Master Degree | Paired sample t-test = caregivers to perform less care tasks T2 (M=6.9) than at T1 (M=12.3), t(39)=5.40, p <.001<br>Acceptability and Feasibility: 40 dyads, 6.4 sessions, SD = 1.01, time spent average of 82 minutes SD = 12.75 in each session, average total | Early discussions help create a balanced, realistic, and based on the patients with dementia care values.<br>These discussions introduced the concept of caregiver burden and addressing how to reduce burden in a meaningful and understandable manner. | practice/ application to practice/ Generalization<br>LOE:III<br>Strength: caregivers are called to make difficult decisions are crucial times and are unprepared when discussions do not happen early in the disease process, trained counselors facilitate a positive and productive |

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| Department of Health and Human Services | Conceptual Framework<br>Empowerment and Self-Efficacy for everyone<br>Emphasis on strong, open, and trusting relationship is the foundation, ensuring the goals of the program are achieved. | (Grounded Theory, phenomenology, Narrative…)<br>Purpose of study: built on assessing and documenting the person living with dementia's care values and preferences for future care. Care givers are given a chance to achieve understanding of their loved one's desires before the onset of disease progression when the demand for making care decisions is high. | Percentage of patient and caregiver living together (67.5%)<br>College graduate (67.5%)<br>Caregiver employment (45%)<br>Patient employment (17.5%)<br>Alzheimer's Diagnosis (12%) | Values and Preference Scale- measured<br>personal activities of daily living, instrumental activities of daily living, and socioemotional care tasks (**care preferences)**<br>selection of care giver for future planning (**clinic staffs)** | Measurement/ Instrumentation (focus group, 1:1, open-ended survey)<br>SHARE Counselor Manual<br>Counselor's Guide<br>Magnetic Boards used to facilitate care values and preferences discussions 5-point Likert scale | 9.44 hours SD = 2.35<br>Data Analysis<br>SHARE Counselors' level of skill, helpfulness, friendliness, usefulness using 5-point Likert scale ranged between 3.03-3.77 per caregivers and 2.83-3.76 per patients with dementia<br>Satisfactions scores using 5-point Likert | Findings/Themes | EOL conversations, Level/Quality of Evidence; Decision for practice/ application to practice/ Generalization<br>Weakness: sessions too long, time constraints, stress related to topic, patient with dementia impairment, some participants were not ready to have EOL discussions, participants were not followed over |

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| | | | Dementia (10%)<br>Undiagnosed (18%)<br>Sample: Patients with early dementia and their family members, recruited over a 20 month period,<br>SHARE Counselors N=5 | Dyads meet jointly, separately, then jointly for final session with the counselor<br>SHARE care circle: building rapport, establishing buy-in, and effective communication<br>SHARE protocol: understanding memory loss (meet jointly | | scale mean 3.46 and SD = .76 per caregiver, and mean 3.65 and SD = .60 per patient with dementia<br>SHARE strategies= 100% per care givers, and 97% per patients with dementia | | a period of time (longevity of the study)<br>Utility to PICOT: early discussions before crucial events occur help the caregiver and patient be on the same page and less miscommunication and feeling of guilt will occur |

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| | | | Setting: various social service agencies in North east Ohio | 1), care values (separately 2), car preferences (jointly 3), taking care of self/taking care of others (jointly 4), family and friends (jointly 5), community resources (jointly 6), and looking to the future (jointly 7) | | | | |

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# Appendix C

| ***Significant Basics*** | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| LOE | VII | VI | IV | I | IV | IV | I | VII | I | III |
| Authors | Cain, 2016 | Karnik & Kanekar , 2016 | Lum et al, 2016 | Myers et al, 2018 | Booth & Lehna, 2016 | Arnett et al, 2017 | Bestivina, 2017 | Auriemann et al, 2016 | Courtright et al, 2016 | Silvia et al, 2019 |
| Common Conceptual Frameworks | Death with Dignity Act | Egoisti and Virtue Theory | Geriatric well-being | Adult Leering Theory | Conceptual Dimension | Improving Quality of life | Quality of life in Oncology Patients | Empowerment and Protection Act | Patient Self-Determination Act | Empowerment and Self-Efficacy |
| Outpatient Setting | X | X | X | X | | X | X | X | X | X |
| Clinic staff and Staff Involvement | X | X | X | X | X | X | X | X | X | X |
| ***Major Common Variables/Themes*** | | | | | | | | | | |
| Clinic staff lack of ACP & EOL Education | X | X | X | X | X | X | X | X | X | X |
| Staff members ACP Training | X | X | X | X | X | X | X | X | X | X |
| Time Constraints | | | X | | | | X | X | | X |
| Legal Consequences | X | X | X | X | X | | | | | |
| ACP Public Education | X | X | X | | X | X | | | | |
| MPOA & Health Proxy | X | X | X | X | X | X | | | | |
| Autonomous Decision Making | X | X | | | X | | | | | |
| Future Disability and Aggressive Treatment | X | X | | X | X | X | X | | | |
| Advocacy for Imitating ACP Conversations | | | | X | X | X | X | | | |
| ACP documentation | | | | X | X | X | X | | | X |
| ACP rates | | | | X | X | X | X | | | X |
| ***Participants Criteria*** | | | | | | | | | | |
| Cognitively Intact & Literate | X | X | X | X | X | X | X | X | X | X |
| Chronic Conditions | | | | X | | | | | X | X |
| Terminal Illnesses | X | | | | | | X | | | X |
| ***Data Analysis/Outcomes*** | | | | | | | | | | |
| **ACP documentation & Rate Effect** | NM | NM | NM | D & NRR | D & ↑ R | D & ↑ R | D & ↑ R | NM | D & ↑ R | D & ↑ R |

**Key: AD – advance directives, ACP – advance care planning, ACA TOOL =** availability, current issues, and anticipation tool, **AMSTAR =** assessment of multiple systematic reviews, **CCTSI =** Colorado Clinic & Translational Sciences Institute, **DISC =** Development and Informatics Service Center, **D=** documented, **FACE =** family-centered advance care planning, **GMV=** group medical visits, **GOC =** goals of care, **HPS – healthcare professionals, ICU = intensive care unit, LOE= level of evidence, m –months, MYWK =** making your wishes known, **n – sample size, NIH/NCRR =** National Institute of Health, **NONRCT =** non-randomized controlled trial, **NM =** not mentioned, **NRR =** no reported rate, **NPCRS =** National Palliative Care Research Center, **POLST** = physician order for life sustaining treatment, **R** = rate, **RCT** = randomized controlled trial, **SD** = standard deviation, **yrs = years, ↑= increase**

# Appendix D

Table 1

*Average Age of Clinic Staff*

| Variable | *M* | *SD* | *n* | Min | Max |
|---|---|---|---|---|---|
| Age | 37 | 12.93 | 7 | 22.00 | 52.00 |

(Intellectus Statistics, 2020)

# Appendix E

Table 2

*Frequency Table of Demographic Characteristics*

| Variable | *n* | % |
|---|---|---|
| Race | | |
| Asian/Pacific | 1 | 14% |
| Caucasian | 6 | 86% |
| Gender | | |
| F | 6 | 86% |
| M | 1 | 14% |
| Level of Education | | |
| Some College | 1 | 14% |
| College Degree | 3 | 43% |
| Graduate Degree | 1 | 14% |
| Post Graduate | 2 | 29% |
| Role | | |
| Healthcare Provider | 2 | 29% |
| Medical Assistant | 2 | 29% |
| Medical Assistant/Medical Scribe | 1 | 14% |
| Medical Scribe | 1 | 14% |
| Office Manager | 1 | 14% |
| Training | | |
| Yes | 0 | 0% |
| No | 7 | 100% |
| Comfort | | |
| Yes | 4 | 57% |
| No | 3 | 43% |
| Meaningful | | |
| Yes | 7 | 100% |
| No | 0 | 0% |

(Intellectus Statistics, 2020)

# Appendix F

Table 3

*Summary Statistics Table for Interval and Ratio Variables*

| Variable | *M* | *SD* | *n* | Min | Max |
|---|---|---|---|---|---|
| Pre_Attitude to Change_Total Score | 7.43 | 1.40 | 7 | 6.00 | 10.00 |
| Pre_Communication_Total Score | 13.71 | 2.63 | 7 | 10.00 | 18.00 |
| Pre_Leadership and Management_Total Score | 14.43 | 2.70 | 7 | 12.00 | 19.00 |
| Pre_Need for Change_Total Score | 17.14 | 3.13 | 7 | 11.00 | 20.00 |
| Pre_Preparation for Change_Total Score | 14.00 | 3.27 | 7 | 10.00 | 20.00 |
| Pre_Total Score | 66.71 | 12.20 | 7 | 51.00 | 87.00 |

(Intellectus Statistics, 2020)

# Appendix G

Table 4

*Summary Statistics Table for Interval and Ratio Variables*

| Variable | *M* | *SD* | *n* | Min | Max |
|---|---|---|---|---|---|
| Post_Attitude to Change_Total Score | 8.71 | 1.11 | 7 | 7.00 | 10.00 |
| Post_Communication_Total Score | 16.71 | 2.50 | 7 | 14.00 | 20.00 |
| Post_Leadership and Management_Total Score | 15.86 | 2.41 | 7 | 13.00 | 20.00 |
| Post_Need for Change_Total Score | 21.29 | 2.29 | 7 | 18.00 | 25.00 |
| Post_Preparation for Change_Total Score | 16.14 | 2.34 | 7 | 13.00 | 20.00 |
| Post_Total Score | 78.71 | 9.59 | 7 | 70.00 | 95.00 |

(Intellectus Statistics, 2020)

# Appendix H

Table 5

*Summary Statistics Table for Interval and Ratio Variables*

| Variable | *M* | *SD* | *n* | Min | Max |
|---|---|---|---|---|---|
| Pre_Attitude to Change_Total Score | 7.43 | 1.40 | 7 | 6.00 | 10.00 |
| Post_Attitude to Change_Total Score | 8.71 | 1.11 | 7 | 7.00 | 10.00 |

(Intellectus Statistics, 2020)

# Appendix I

Figure 1

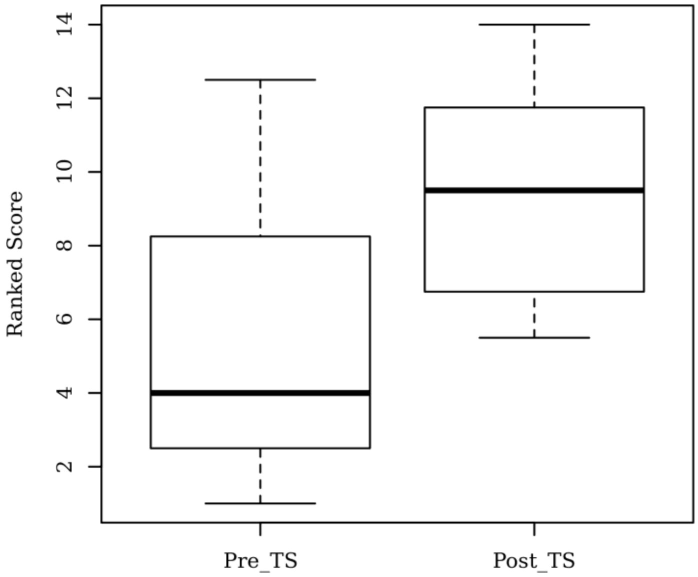


*Figure 1. Boxplot pre and post total ranked scores.*

(Intellectus Statistics, 2020)

# Appendix J

Table 6

*Two-Tailed Mann-Whitney Test for Electronic Medical Record by BILLING_CODES*

| | Mean Rank | | | | |
|---|---|---|---|---|---|
| Variable | 0 | 1 | *U* | *z* | *p* |
| Electronic Medical Record | 47.74 | 22.50 | 512.00 | -3.01 | .003 |

(Intellectus Statistics, 2020)

# Appendix K

Table 7

*Frequency Table for Nominal Variables*

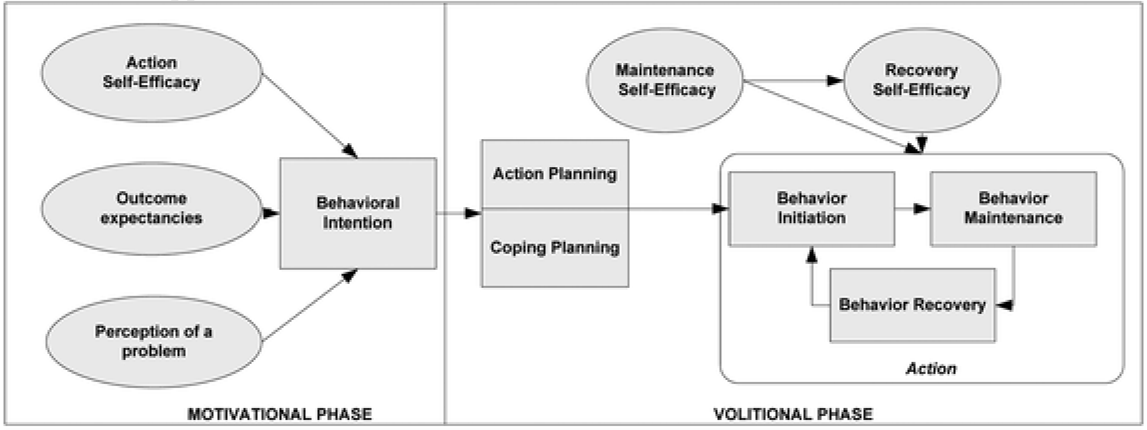
| Variable | Annual Wellness Visit | Follow Up |
|---|---|---|
| Race | | |
| Caucasian | 57 (100%) | 32 (97%) |
| Asian | 0 (0%) | 1 (3%) |
| Billing Codes | | |
| Not Billed | 52 (91%) | 30 (91%) |
| 99497 | 5 (9%) | 3 (9%) |
| Advance Care Planning Type | | |
| Short Form | 57 (100%) | 33 (100%) |
| Long Form | 0(0%) | 0(0%) |
| Electronic Medical Record | | |
| Documented/Scanned | 31 (54%) | 13 (39%) |
| Not Documented/Scanned | 26 (46%) | 20 (61%) |
| Gender | | |
| Female | 33 (58%) | 17 (52%) |
| Male | 24 (42%) | 16 (48%) |

(Intellectus Statistics, 2020)

# Appendix L

Figure 2

Health Action Process Approach Model



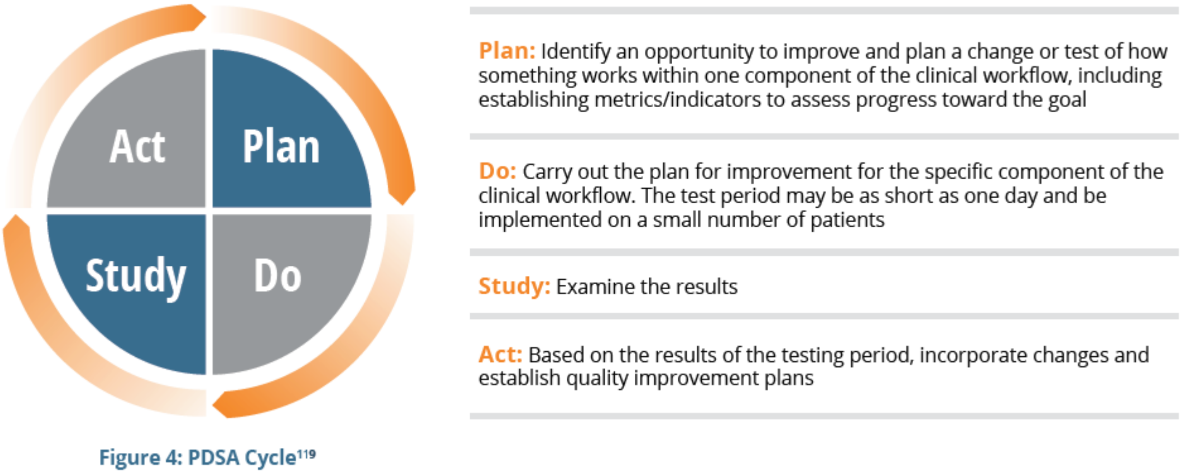
Note: Adapted from Schwarzer (2008a).

(Schwarzer, 2008)

# Appendix M

Figure 3

PDSA Cycle



**Plan:** Identify an opportunity to improve and plan a change or test of how something works within one component of the clinical workflow, including establishing metrics/indicators to assess progress toward the goal

**Do:** Carry out the plan for improvement for the specific component of the clinical workflow. The test period may be as short as one day and be implemented on a small number of patients

**Study:** Examine the results

**Act:** Based on the results of the testing period, incorporate changes and establish quality improvement plans

**Figure 4: PDSA Cycle**[119]

(Malnutrition Quality Improvement Initiative, 2016)