Improving the Use of Advance Care Planning in Assisted Living Facilities

Submitted by

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Abstract

Ensuring patients receive care in the fashion they so choose at the end of life should be considered and addressed upon any admission process. The project site noted many unnecessary, repeated emergency room (ER) visits for residents so an evidence-based solution was sought. The purpose of this quantitative, quality improvement project was to determine if the implementation of the Carolina Caring Hospice Agency ACP (CCHA-ACP) toolkit would impact ACP implementation and reduce ER visits among residents in an assisted living facility (ALF) in Western North Carolina over four weeks. Orem's self-care theory was the framework of the project. Data was obtained from the electronic health record for the number of ACPs and the quality department provided the ER visits data among the sample of 31 residents of an ALF. A Chi-square test indicated a clinical and statistically significant improvement in the implementation of ACP between the comparative (n=0, 0%) and the implementation group (n=3, 30%), X^2 (1, N=31) = 6.98, p= .008. A chi-square analysis indicated there was no statistically significant reduction in ER visits (X^2(1, N = 62) = .295, p = .587). However clinical significance was noted in reducing readmissions by 6.5%. Therefore, the implementation of the CCHA-ACP toolkit may improve ACP implementation but additional data analysis is needed on reducing readmission rates. Recommendation are to sustain the project and reanalyze data after six months to determine if the short project timeline impacted the statistical analysis.

Keywords: Carolina Caring Hospice Agency ACP (CCHA-ACP) toolkit, advance care plan (ACP), care planning, end-of-life care, self-determination, living wills, end of life planning, Orem's self-care model .

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Chapter 1: Introduction to the Project

The use of ACP can lead to improved end of life treatment options and improve patient and family decision making during this transition phase. One major concern among older adult aged 60 and older is approaching end of life care due to the increasing number of older adult patient (Saracino, Bai, Blatt, Solomon, & McCorkle, 2018). This can be a very scary time and difficult for this population to discuss as they tend to poorly execute advanced care plans (ACP), that help outline wishes during this time for older adults. One factor related to poor use of ACP is the lack of understanding or knowledge about advance care planning (Mignani et al., 2017). The need to engage older adult patients to have better understanding about the implementation of ACP can improve end of life care. Improving the knowledge and understanding of ACP along with the use of an ACP toolkit will help improve the implementation of ACP.

Advances in medicine, have resulted in an increase of people living longer, which will increase the number of older adults aged 60 and older (Khavinson, Popovich, & Mikhailova, 2020). Studies showed the world population of the older adults aged 60 and older was nearly 962 million and is expected to double by the year 2050 to nearly 2.1 billion (Khavinson, Popovich, & Mikhailova, 2020). The options for treatment and disease management are more abundant with advances in medications and technology and allows healthcare workers to control symptoms and prolong chronic disease progression (Bakula et al., 2019). Advance care planning is the process where healthcare workers discuss with families and patient options for future treatment and plan for end-of-life care while the patient still can be involved in decision making (Howard et al., 2018).

This proposed direct practice improvement project focused on providing an education model using the Carolina Caring Hospice Agency ACP (CCHA-ACP) toolkit to improve patient and family knowledge, benefits of an ACP, and guide the patient on the completion and implementation of an advanced care plan. This toolkit was designed to help patients understand the different types of ACP available and to help aid with implementation (Carolina Caring, 2019). This project utilized evidence-based information that can be presented to patients, families, and providers to help with improving the implementation of ACP. Some of the benefits of utilizing ACP include reducing medical cost, preparing for end-of-life care, reducing family burden, and allowing patients to still make decisions about care (Zwakman et al., 2018). Implementing an ACP can improve the quality of life for older adults and allow them to work with their families to make decisions of care when illness or emergencies of health arise (Steel & Bertfield, 2020). The project aimed to provide a better understanding about ACP and the importance of preparing for end-of-life care.

Chapter 1 provides a background of the specific project along with some of the reasons while it is important for this specific population. It further discusses the problem presented in this project and the clinical questions being addressed. Key terms such as end-of-life care and advanced care planning are operationally defined. An overview of the project methodology and potential limitations and assumptions are also identified.

Background of the Project

Due to the increase in age of the older adult population the likelihood of unnecessary treatment and painful procedures are being used. Most of these treatments are ineffective and become costly for the patient and family members (Howard et al.,

2018). Emergency room visits can be costly to families and can place a burden on patients for invasive and painful treatments that are usually ineffective (Howard et al., 2018). Lack of advanced care planning and alternative treatment options can lead to frequent hospital visits. Majority of these hospital visits are emergency room visits that can lead to emergency admission and unnecessary treatment (Knight et al., 2020). Advanced care planning services can lead to better care and treatment options providing better symptom relief and strategies for more favorable outcomes (Oskoui et al., 2020). Literature has shown that there is a lack of education and awareness surrounding the use of ACP, which can leave patients and families making decisions on a whim rather than having the time to think about what they really want for their care (Bond et al., 2018). The increased emergency room visits, and unnecessary treatments can cause a major impact on healthcare expenditure with poor treatment options and decreased quality of life (Bond et al., 2018).

The rapidly growing older adult population with longevity and serious illness needs to place a focus around the implementation of ACP. Improving and promoting care models that will emphasize the importance of ACP conversation is a must for this populations (Frechman et al., 2020). This has led to a major problem for the older adult population in being able to initiate ACP for their future care. Providing the need for better education about end-of-life care and treatment options outlined in ACP will improve quality of life and reduce the risk of burden for patients and their family members (Howard et al., 2018).

There continues to be a major lack of resources and tools about ACP for older adults living in long-term care facilities such as assisted living facilities. Thus, causing a

problem for lack of understanding and resources for these older adults to make informed decisions about ACP (Mignani et al., 2017). In the assisted living facility where this project was completed there were no resources or interventions in place to help the older adult population living there to implement ACP. To help improve this process an intervention such as an ACP toolkit and improving the understanding of the ACP process is needed.

Problem Statement

It was not known if or to what degree the implementation of the Carolina Caring Hospice Agency ACP (CCHA-ACP) toolkit would impact ACP implementation and reduce ER visits among residents in an assisted living facility (ALF). The use of ACP for the older adult population age 60 and older living in long-term care assisted living facility in Western North Carolina could benefit implementing this toolkit. This community consist of 31 older adults that were age 60 or older and has received no prior education about ACP. They also did not have access to any ACP toolkits or resources to help them with making end of life care decisions. The assisted living setting was designed to provide care to patients who needed around the clock care but require minimal assistance. However, these older adults were meant to age in place within these assisted living communities (Lord et al., 2018).

This assisted living facility continues to send residents out to the emergency room every time they have an issue leading to unnecessary procedures and treatment. An intervention was needed to improve the implementation of ACP and prevent unnecessary medical treatment. This assisted living community had an average of two residents sent to the emergency room each week. Placing these residents at risk of unnecessary medical

treatment that could potentially cause more harm than good. Establishing an ACP can help with making decisions related to care that could help reduce the number of emergency rooms visits. Currently there was only two residents in the facility that had a current ACP. An intervention was needed to improve ACP implementation and reduce the potential of emergency room visits.

Purpose of the Project

The purpose of this quantitative, quality improvement project was to determine if the implementation of the Carolina Caring Hospice Agency ACP (CCHA-ACP) toolkit would impact ACP implementation and reduce ER visits among residents in an assisted living facility (ALF) in Western North Carolina over four weeks. The dependent variable in this project was the implementation of the CCHA-ACP toolkit for older adults living in an assisted living facility. The independent variable is the rate of ACP implementation for older adults in the assisted living facility. Thus, demonstrating that the implementation of the CCHA-ACP toolkit can improve the overall implementation of ACP for older adults living in an assisted living facility.

The DPI project impacted the overall healthcare and future healthcare for older adults living in an assisted living facility. As older adults continue to live longer, they face the possibility of unnecessary emergency room visits and invasive treatment that increases healthcare expenditure and decreases quality of life (Kim, Jung, Kim, Go, & Yoon, 2018). Providing better education on end-of-life care with the use of an CCHA-ACP toolkit will improv ACP implementation to help improve end of life care for the older adult population living in assisted living facilities. This project aimed to provide a better understanding on ACP and educated the older adults living in assisted living

facilities to help reduce burden during the aging process and improving end-of-life care planning. Improving the quality of care at this level can also provide better practice methods that will improve quality of care.

The lack of research specific to ACP implementation for this population provided the need to improve ACP implementation (Mignani et al., 2017). Providing the use of the CCHA-ACP toolkit aimed to improve the implementation of ACP completion and the understanding about future care. This project led to planning for care to help reduce emergency room visits and unnecessary treatment that is provided in this stage of life. Planning for future care will aid in improving quality of life and reduce the burden for both patient and families for unnecessary medical treatment (Kim et al., 2018).

Clinical Question

Through implementation of the CCHA-ACP toolkit for older adults living in an assisted living facility, there was improvement of the implementing of ACP for these older adults. Specifically, this project aimed to disseminate how the CCHA-ACP toolkit for an older adult population can improve implementing ACP and reduce the number of emergency room visits, thus bridging a gap for the lack of ACP implementation among older adults who live in an assisted living facility and improving decision making during critical situations. Participants gained knowledge and understanding that aimed to benefit them in making end of life care decisions for improved quality of life and improved care during this time. The CCHA-ACP toolkit was a resource that improved the decision-making process for these older adults. The clinical questions guiding the project were:

Q1. To what degree would the implementation of the CCHA-ACP toolkit impact ACP implementation among residents in an ALF in Western North Carolina?

Q2. To what degree would the implementation of the CCHA-ACP toolkit would reduce ER visits among residents in an ALF in Western North Carolina?

Advancing Scientific Knowledge

The older adult population has a need for improving end of life care due to longevity of life and multiple comorbidities (Lin et al., 2019). One of the ways to improve end of life care is through the implementation of ACP that will help with making decisions during that end-of-life transition. The older adult population living in assisted living facilities lack the knowledge and resources for utilizing appropriate ACP (Mignani et al., 2017). Thus, providing a need for a better understanding about ACP to improve knowledge and hopefully improve the implementation process. The CCHA-ACP toolkit provides a better understanding of the benefits of ACP and helped to improve the implementation process (Brandt, 2020). The CCHA-ACP is a well-designed toolkit that not only provides information about the different ACP available but also guidance on how to take the steps to implement an ACP (Carolina Caring, 2019). The utilization of this toolkit led to improved ACP implementation also reducing the number of emergency room visits allowing patients and healthcare workers to plan care accordingly.

Using the middle-range theory Orem's self-care model helped bridge the gap for decision-making about ACP. Orem's self-care model focuses on the human and environment as a single unit and allows people to influence one another in a single environment (Khademian, Ara, & Gholamzadeh, 2020). The constructs of this model allowed those who choose to participate to make decisions about their own care, and

making decisions utilizing the ACP toolkit that was provided. Informing these older adults about ACP with the use of ACP toolkit provided knowledge and understanding about ACP but allowed them to make their own decision about ACP implementation. The goal was to hopefully see a change in overall ACP utilization with the implementation of the toolkit. Some of the benefits of this toolkit included preparing for end-of-life care, reducing family burden, reducing unnecessary medical treatment, and improving disease management during the life course (Rhee et al., 2019). This can improve care in assisted living communities by allowing residents to continue to be a part of their decision-making process and care choices. The advances in education will provide a framework that healthcare workers can work with patients and families to help prepare for end-of-life care. It can allow residents to age in place and reduce the burden of making end of life decision on a whim.

The self-care deficit theory offers the structure of this project by allowing the older adults to be involved with making self-care decisions but will also provide a social construct that can improve the lives of others living in the assisted living facility. Orem's theory focused on the individual to make decisions about his or her own care based on the knowledge and tools provided (Khademian, Ara, & Gholamzadeh, 2020). This theory will provide a foundation to improving end of life care and decision making for ACP for the older adults living in this assisted living facility. Improving the implementation of ACP will improve care planning and reduce the number of emergency room visits.

Significance of the Project

This project focused on improving ACP in an assisted living facility in Western North Carolina and was a major need due to limited understanding and resources

available for residents in this facility as seen by the few ACP in place during the initial review of data for this facility. Due to the limited number of implemented ACP in this assisted living facility there is a lack the understanding about the importance of ACP. Creating a gap and need for improvement of the knowledge about ACP and provide the ACP toolkit to aide in making better decisions about end-of-life care. The older adults in this facility failed to implement ACP causing an influx of emergency room visits that could have been prevented with an appropriate ACP. There was an average of two residents going out each week in this facility due to the lack of ACP's implemented. Implementation of ACP can help patients make end-of-life care decision to help reduce the number of emergency room visits.

This project implemented the use of the CCHA-ACP toolkit to support the ACP process and improve patient and family understanding. This project aimed to result in practice changes within an assisted living community to help improve education and discussion around ACP. These conversations started when someone was admitted to the facility so that plans for end-of-life care are started during the admission process. Starting the conversations early and continuing those conversations has shown to have increased usage of the CCHA-ACP (Wichmann et al., 2018). This is a key change in care at the admission process that can help improve patient quality of life and peace of mind as they age within these assisted living facilities.

Rationale for Methodology

The project used a quantitative methodology to determine the impact of the CCHA-ACP toolkit on improving implementation of the CCHA-ACP rates and reducing ER visits in older adults residing in an assisted living facility in Western North Carolina.

Quantitative research explores numerical patterns that were used to express values of how something will change when the variables are manipulated by testing a theory or introducing an intervention (Hannigan, 2018).

Using numerical values about ACP usage before the education model and after the education model allowed the researcher to identify a quantitative value to see how successful implementation of the ACP toolkit was for ACP implementation. A quantitative methodology can help to determine the size of an impact or the strength of relationship for a given intervention (Grootel, Balachandran Nair, Klugkist, & Wesel, 2020). This methodology will also address the reduction in emergency room visits for older adults living in the assisted living facility. The investigator tracked data weekly on ACP implementation and changes through the course of the project to show trends. Utilizing this type of methodology allowed the investigator to identify the value of this ACP toolkit using numerical numbers to represent outcome data. Thus, determining the effects of the ACP toolkit for ACP implementation and reduction in emergency room visits.

Nature of the Project Design

This project used a quasi-experimental design to determine the effects of the implemented CCHA-ACP toolkit. This design was easy to conduct and cost effective for the investigator to conduct and to test the outcome of data post implementation of the intervention. The quasi-experimental design is considered effective if it provides casual relationships between an exogenous variation to the expose of interest that is not controlled by the researcher (Reeves, Wells, & Waddington, 2017). Utilizing this design allowed the researcher to test the implementation of the CCHA-ACP toolkit and see how

it will impact the overall use of ACP for older adults living in an assisted living community. It further demonstrated how increasing the number of ACP's reduced the number of emergency room visits among this older adult population. Data was collected prior to implementation for all participants to determine the value or use of ACP pre-intervention. Upon completion of the educational component, and the data analysis pre and post intervention can be evaluated for its effectiveness and practical implementation. At this point any changes to the intervention or need for additional research can be determined.

The use of this design will help in selecting participants for this project by reviewing those who did not have any ACP already in place. While the project will be offered to all residents at the assisted living facility even if they do have an ACP it will help to determine those with no ACP or experience with ACP prior to implementation. This project will focus on comparing data for those who participate against those who do not to determine the effects the intervention has on ACP implementation. Once the sample has been selected and the intervention has been implemented all participants will be followed for four weeks and compared to those who did not participate to determine and overall effect of the ACP toolkit for this population.

Definition of Terms

This project uses the following terms operationally throughout:

Advance Care Planning (ACP)

Advance Care Plan is the continued planning and implementation of patients wishes during end-of-life care when they can no longer make verbal decisions (Wichmann et al., 2018). The use of ACP will help patients with planning about their

future care. Depending on individual states ACP can include healthcare power of attorney, living will, DNR, and MOST forms (Wichmann et al., 2018).

End of Life Care

Also referred to as palliative care when life-limiting disease affect a person and comfort measures are put into place to reduce despair and suffering during that period of life (Schroeder & Lorenz, 2018).

Quality of Life

One's perception of his or her health status and overall feelings about health based on their cultural position in life related to goals, expectations, standards, and concerns (Haraldstad et al., 2019).

Assumptions, Limitations, Delimitations

It is assumed that all the patients receiving the education and CCHA-ACP toolkit will have a better understanding about ACP and improve the use of ACP in assisted living facilities. The lack of knowledge about ACP has provided a gap in planning for end-of-life care (Chan et al., 2019). Engaging older adults and implementing the use of the CCHA-ACP toolkit aided patients in these facilities to make informed decisions and improve the use of ACP (Carolina Caring, 2019). Providing proper education and understanding allowed patients and families to formulate appropriate end of life care plans and prepare for the future.

Another assumption is that the use of the CCHA-ACP toolkit can reduce the number of emergency room visits. Emergency room visits have become a major problem for older adults as they receive unnecessary medical treatment that can be costly and painful to the older adult (Kim, Jung, Kim, Go, & Yoon, 2018). The implementing of an

ACP can aid older adults and healthcare workers make decision to not send them out to emergency room visits but rather provide care in the facility to care for the patient. This could reduce healthcare spending and unnecessary medical treatment that many times cause burden to both patients and families (Bond et al., 2018).

A limitation of this project was the lack of participation by older adult's family members. As they were asked to participate if available due to recent limitations on visitors from the recent outbreak of COVID-19. This limited the participation of any family members who could have assisted with the discussion of how important ACP can be for future care planning. This could have skewed some of the results with the lack of family support for implementing ACP. It would be beneficial as the facility can let more visitors come in that they involved family as much as possible which would help the older adult feel more comfortable when making the decision of implementing an ACP.

There are some delimitations related to this project including a lack of time and locations for project implementation. The implementation of this project has only allowed us about four weeks of time, and we can only utilize one specific site. Studies have shown that implementation should allow adequate time to assure success and adequate data to present for new practice implementation (Mathieson et al., 2018). It is also better to implement a project in two or more settings so that you have two different sets of data to compare to assure that the education model being provided is adequate for scalability. It may be beneficial to continue this project in more than one location for a longer period to assure accuracy and success prior to implementation.

This project was based in a smaller assisted living setting and did not include any residents with cognitive impairments. This was to eliminate any bias or ethical dilemmas

when obtaining consent for participation. The assisted living also had a much smaller capacity of residents at the time of the project due to the current pandemic and limiting admissions to this assisted living facility. However, a baseline of data was presented that did provide evidence that this ACP toolkit could be successful in improving ACP implementation.

Summary and Organization of the Remainder of the Project

This DPI project was beneficial for the older adult population living within this assisted living facility. As this population continues to age there is a need to implement ACP to help improve end of life care. It has shown to reduce things such as family burden, medical cost due to unnecessary treatment, and improve quality of life (Zwakman et al., 2018). As literature shows there is a gap in understanding and limited resources surrounding ACP in this assisted living facility which limits implementation that aides in planning for end-of-life care (Mignani et al., 2017). It was found that this population lacks the knowledge and understanding about the use of ACP. This facility has seen an increase in the number of emergency room visits that could be reduced with the implementation of proper ACP. There is a lack of ACP implementation among this population and an intervention and education about the proper use of ACP was needed.

This project will determine the effects of implementing the CCHA-ACP toolkit for ACP implementation in this population. It will further determine if the improvement of ACP will help to reduce the number of emergency room visits among this population. It addresses the clinical question as to how effective this toolkit will be when implemented to this older adult population living in an assisted living facility in Western North Carolina when compared to those not choosing to participate over a period of four

weeks. To improve this gap a well-designed education model using the CCHA-ACP toolkit was developed to educate patients and healthcare workers to improve their understanding about ACP and end of life care.

This project used a quasi-experimental design to help identify how effective the education and the CCHA-ACP toolkit provided were in comparison to no education or no toolkit being used for ACP implementation (Chan et al., 2019). The quasi-experimental design helped the investigator determine the effects of the intervention against the variable of ACP implementation. There was a quantitative methodology to utilize numerical data that will represent the improvements of ACP use after the implementation of the education and the CCHA-ACP toolkit. Numerical data was used to provide statistical analysis on the improvement of ACP implementation in this population (Hannigan, 2018). This project was implemented in an assisted living community in NC where older adults reside. The CCHA-ACP toolkit was presented to patients who chose to participate and helped improve understanding of ACP and to improve communication among everyone to help with future care planning.

Chapter two of this project discusses the evidence that will support this project design along with a literature review to outline the main themes that will be focused on for this project. As we move into chapter three there will be a more in-depth discussion surrounding the methodology, design, and process that was utilized in this direct performance improvement project. Chapter four will outline the summary and data collection that was utilized along with the findings of this project. It will be represented with both numerical data and graphs to represent the final project outcomes. The final chapter will discuss all results including a discussion on the success or need for changes

within the project. It will be here where any limitations and changes that will need to be made for future projects to improve results and success.

Chapter 2: Literature Review

This project aimed to determine the effects of implementing the ACP toolkit to help improve the implementation of ACP for older adults living in an assisted living facility. As medicine advances older adults are living longer, leading to a higher need for ACP implementation prior to end-of-life care. Improving the process of ACP implementation provides a better understanding and resources about ACP and the implementation process (Howard et al., 2018). Due to the lack of education and understanding about ACP for this older adult population this provided a need for assuring education and resources were provided to these older adults (Mignani et al., 2017).

The literature review focused on four main themes to improve the ACP process. The three main themes identified included ACP implementation experience and barriers, advance care plan tools and interventions, and educational models. Each theme will be subcategorized with six subthemes that will help explain how important this process is to this population. The literature review process laid the foundations of the need for this project and how it will benefit the given population. This also provided evidence-based practice supported not only the implementation of this project but the improvements in quality care and end of life care. Identification of supporting literature adds sustenance to this project and supports the findings and conclusion found.

Once the themes were identified to support the implementation of this project the investigator started searching for literature that would support the needs of this project. Search terms such as advance care planning, older adults, assisted living, long-term care, quality of life, end of life care, and advance care plan toolkits were used. There were several databases used such as National Center Biotechnology Information, Journal of

American Medical Association, and BioMed Central were used to identify literature that would support the implementation of this project. While there were several articles that were identified there was limited literature surrounding specifics for ACP in assisted living facilities. This provided an increased need for this project to be completed for this population.

The older adult population continues to live longer leading to the need for management of chronic diseases. This can lead to unnecessary emergency room visits and poor care planning. This population has a lack of understanding or resources to help with the implementing of an ACP. Thus, leaving a need to improve that process by implementing the CCHA-ACP toolkit that can help with guidance and understanding of how implementing an ACP works and its benefits. Implementing an ACP can help with care planning and reduce the number of emergency room visits and unnecessary medical treatment.

Theoretical Foundations

The use of Orem's middle-range theory provided a theoretical foundation to improve ACP for older adults living in an assisted living community. The ACP process can be a difficult conversation to have and there are barriers to starting this process. Studies have shown that initiating these conversations can be the first step to improving the ACP process (Wichmann et al., 2018). Utilizing Orem's theory focuses on involving the patient and can encourage them to be involved with starting this ACP process and improve the implementation process.

Review of the Literature

The literature review provided support for the need of this project along with

evidence that the older adult population would benefit from increasing the use of ACP. There are three main themes identified for support of this project including ACP implementation experience and barriers, ACP strategies, and ACP benefits. Each of these themes will be discussed in this literature review and will be further reviewed using three subthemes to provide a better understanding of how they support this project. This literature review will also support the intervention being used to improve the ACP process for older adults living in an assisted living facility.

Advanced Care Plan Implementation

One of the major focuses that can hinder the appropriate implementation of ACP includes the implementation experience and barriers that can prevent implementation. These barriers can prevent the actual implementation process leading to a lack of ACP and poor future care planning. The experience and barriers are subcategorized into three subthemes including vulnerable populations, patient experience, and lack of resources. Each of these subthemes will help to identify the different barrier that older adults face to implementing ACP. This can be important when attempting to identify appropriate interventions to improve the ACP implementation process.

Vulnerable Populations. According to Tilburgs et al. (2018) a vulnerable population that faces many different barriers to ACP implementation is that of the older adult especially those age 60 years and older (Tilburgs et al., 2018). Cognitive barriers can hinder timeliness of implementation, unwillingness to participate, and family denial (Tilburgs et al., 2018). This also provides a legal barrier forcing the POA or representative to be engaged in ACP decision making. The dementia population can be found living in assisted living facilities and it is important to identify those with cognitive

barriers to assure appropriate ACP implementation is completed for this population. Tilburgs et al. (2018) assessed older adults with dementia to understand how it affects decision-making, who is involved, and how ACP implementation is affected. Utilizing an integrated systematic review, the authors were able to identify theoretical, qualitative, and quantitative studies to determine how dementia poses as a cognitive barrier that can hinder ACP implementation (Tilburgs et al., 2018). The ACP implementation process can be delayed or not utilized due to cognitive impairments such as dementia. The involvement of general practitioners is crucial in initiating this process early prior to the disease or while it is mild to help promote and improve the ACP implementation process for this population (Tilburgs et al., 2018).

Patients facing a poor prognosis can have a difficult time with engaging into the ACP process. According to Peck et al. (2018) older adult patients with poor prognosis can serve as a barrier to engaging in discussion about ACP and end-of-life care (Peck et al., 2018). This study used a qualitative analysis to identify facilitator and barriers for ACP implementation in this population. A qualitative study allowed the authors determine experience and feelings of those patients who were diagnosed with a poor prognosis. The burden of this news allowed patients to lose hope in thinking that the use of ACP could improve the quality-of-life and provide better days in the future (Peck et al., 2018). The study found that early engagement would help improve the implementation of ACP. The authors identified that timeliness of ACP engagement is a barrier that could impact the patient initiation about future care (Peck et al., 2018).

Older patients face a potential problem with multiple comorbidities leading to the need for multiple hospital visits and treatments. Many of these patients lack the value and

understanding of ACP (Gabbard et al., 2019). The study conducted by Gabbard et al., was a randomized pragmatic effectiveness trial for those patients who were 65 or older having multimorbidity along with poor physical or cognitive functioning. The authors were aiming to identify at what point did the nurse navigators or primary care providers initiate the conversation with patients meeting criteria of having multimorbidity (Gabbard et al., 2019). The authors were able to identify that using the quality of end-of-life care communication tool (QOC) would help to identify how successful the communication was to implementing ACP. The results of this study provided strategies and optimal solutions for implementing ACP and how it would improve outcomes for patients with multimorbidity's (Gabbard et al., 2019).

One of the barriers faced by older adults is that of them being a vulnerable population. This can lead to comorbidities including poor cognition, other comorbidities with poor prognosis such as cancer, and even multimorbidity's that can influence the lack of or even poor implementation of ACP. Those patients with cognitive impairments can have delay implementation or make rash decision due to lack if any involvement from caregivers (Tilburgs et al., 2018). Those with life threatening or poor prognosis can also make very rash decisions concerns their end-of-life care since they think that an ACP could not do any good to improve quality of life (Peck et al., 2018). Finally, those with multimorbidity's continue to delay the implementation of ACP due to lack of involvement from caregivers and or family that leads to poor or lack of ACP implementation (Gabbard et al., 2019).

Patient Experience. The experience that someone faces in any situation can play a vital role in the changes or actions taken for change. A systematic review study

conducted by Zwakman et al. (2018) discusses patient experiences with implementing ACP in those who are terminally ill (Zwakman et al., 2018). The authors conducted a systematic review to determine major themes of patient feelings that would need to be accounted for and put in place. These themes included ambivalence, readiness, and openness to having discussions about ACP (Zwakman et al., 2018). The authors found that the three major themes outlined in this study were key factors related to patient participation and willingness to participate in ACP. Making ACP more personable could help reduce the barriers of implementation of ACP for end-of-life care. There are further studies needed to identify interventions that could be useful in improving the patient experience and engagement of ACP (Zwakman et al., 2018).

The focus of patient-centered care continues to be a necessity in healthcare and can be especially true when focused on ACP. In the study by Lund et al. (2015) the authors used a systematic review to identify studies to identify barriers for ACP implementation. The study discusses the involvement of shared decision making among patients, families, and healthcare workers (Lund et al., 2015). With the use of an explanatory systematic review the authors were able to identify specific barriers that will hinder ACP implementation. It was identified that interactions and procedural process when not facilitated by healthcare workers can hinder the ACP process (Lund et al., 2015). The authors identified that to effectively implement ACP it would be important to engage patients, families, and healthcare workers together to engage into the decision-making process. It is not feasible for healthcare workers or providers to act alone in implementing ACP or ACP education. This review identified these barriers to ACP

implementation showing that this should be a shared decision-making process to be successful (Lund et al., 2015).

When implementing ACP there are multiple people who are involved in the working with patients and the process. This includes different healthcare professionals that have received poor training, lack of experience, and minimal dealings with ACP (Miller et al., 2019). The qualitative study by Miller et al. (2019) provided training to general practitioners in Sydney and then conducted interviews with patients identified as needing ACP to get their feelings on the ACP discussions. The authors were able to identify six major themes with patient experience including working through ideas, therapeutic relationships with nurses, challenges of family communication, autonomy in decision-making, protecting family from burden, and making wishes known (Miller et al., 2019). Each of these are things that patients face as they decide if they will be implementing ACP or not.

Patient experience is another very important aspect to consider when thinking about experience and barriers. The experience or perception that someone has with ACP can impact their ability to implement ACP and what barriers pose a problem with ACP implementation (Zwakman et al., 2018). As healthcare workers we strive to involve patients in their own care and make things patient centered. Involving the patient in his or her own care can decide if the patient will implement and ACP or not (Lund et al., 2015). The final element of patient experience is the healthcare workers and their involvement in the ACP process. It is important that healthcare workers gain knowledge and understanding to improve the implementation process and provide patients with a good experience for this process (Miller et al., 2019).

Lack of Resources. Healthcare can be a complex entity itself and the environment can have an impact on the implementation of ACP. A study by Hagen et al. (2015) discusses the implementation of ACP across a large publicly funded healthcare setting (Hagen et al., 2015). Using a convenience sample and group interviews with different department leaders the authors were able to identify barriers that could hinder ACP and planning of end-of-life care for this population (Hagen et al., 2015). A barrier found was the knowledge about ACP and could have hindered the implementation process. Another barrier was the complexity and difference across the healthcare spectrum depending on the setting (Hagen et al., 2015). Hagen et al. (2015) also identified group discussions could be an inexpensive way to mend this barrier and improve ACP implementation (Hagen et al., 2015).

Older adult patients living in assisted living facilities rely on the healthcare workers also known as caregivers to provide care and guidance every day for their health. The cross-sectional study by Howard et al. (2018) utilized interviews to identify barriers and enablers for healthcare workers and general practitioners. The identification of these barriers was important to identify barriers between caregivers and older adults. Older adults trust and rely on these caregivers to help guide them into appropriate directions and paths for their care. According to Howard et al. (2018) the involvement of these healthcare workers can be a crucial piece to improve the ACP process (Howard et al., 2018). Utilizing a cross-sectional study, the authors questioned various healthcare workers to determine what barriers they felt were hindering ACP implementation (Howard et al., 2018). All participants were volunteers and identified what they felt were some of the barriers to ACP implementation in the older adult population. Some of the

barriers identified were lack of knowledge and timing that could place a burden on ACP implementation. Caregivers have an impact on the timing and knowledge about ACP implementation and could pose as a barrier to this process study (Howard et al., 2018). The lack of caregiver support and knowledge becomes a barrier to helping with ACP implementation and could affect overall patient outcomes and future care planning.

Many older adults face a challenge with the basic understanding about what ACP is let alone the understanding of its benefits. Many older adults lack the basic health literacy to fully understand the ACP process and this relates to the lack of ACP engagement among this population (Nouri et al., 2019). A cross-sectional study by Nouri et al. (2019) was used to assess the basic knowledge and health literacy of older adults. It further sought to assess the basic understanding of these older adults about ACP and its process (Nouri et al., 2019). The authors were able to identify that average age of participants were 65 or older and more than half of the participants were men. A patient's socio-demographics and health literacy were stronger predictors for ACP implementation than any experience or knowledge solely surrounding ACP (Nouri et al., 2019).

A major barrier for the older adult's population is the lack of resources that they have for ACP implementation. Many healthcare settings lack the knowledge or resources in their complex entity to properly train staff or educate older adult's patients about ACP (Hagen et al., 2015). Another issue is the lack of understanding by the healthcare workers who provide day to day care. These are the people that patients see every day and when they lack the basic knowledge or understanding to ACP implementation is provides another barrier for ACP implementation (Howard et al., 2018). Another issue with patients is having poor health literacy and lack of resources to support the

implementation of ACP (Nouri et al., 2019). Lack of efficient resources can be a major barrier for ACP implementation for older adults.

The lack of ACP implementation among older adults is due to the barriers and experiences that are faced by healthcare workers, patients, and families. Literature shows that some of the main focuses when looking at barriers and experiences with older adults includes vulnerable populations, patient's experiences, and lack of resources. The vulnerable populations include those with cognitive impairments such as dementia that serves as a barrier to ACP implementation (Tilburgs et al., 2018). Other vulnerable populations include those with poor prognosis and multiple comorbidities. Each of these components can serve as a barrier to ACP implementation. Another focus was around patient's experience and how they perceive the ACP process. The experience that we have with processes can either hinder or improve the process of implementation of ACP as it will determine the patients comfort level (Linnemann et al., 2019). A patient' s experience will determine his or her readiness for the ACP process (Zwakman et al., 2018).

The final barrier or focus for this theme was the lack of resources found for older adults. The understanding of healthcare itself as well as the ACP process can be very complex and patient can lack the basic knowledge for ACP implementation (Hagen et al., 2015). Many patients and healthcare workers lack the knowledge and understanding about the ACP process and the limited resources to provide adequate training and understanding (Howard et al., 2018). Being able to identify the barriers and improving the experiences of the patients is the first step to helping improve the ACP process.

Advanced Care Planning Strategies

Designing effective ways to implement ACP across a healthcare entity can be especially important for the ACP process. There are many different tools and interventions that have been identified to aide with implementing ACP. This theme focuses on the different strategies available to implement ACP. The three subthemes digital tools, institutional tools, and implementation planning that will help to provide a better understanding about the importance of this theme. These interventions and tools will be beneficial to the implementation process of ACP and can be vital to the success of that process.

Digital Tools. One valuable tool that is utilized more frequently today is the use of video training and education. A study completed by Sadeghi et al. (2016) discusses the use of video training in a hospital setting to improve the education and understanding of ACP (Sadeghi et al., 2016). This feasibility study used non healthcare educators to offer video training about ACP for patients in a hospital setting. It was used to determine how this video education could help engage heart failure patients who were in the hospital in ACP implementation (Sadeghi et al., 2016). These authors concluded that utilizing this video training was feasible among this population in helping with ACP training and implementation. This training should help facilitate the process of ACP and will help to engage patients with ACP implementation (Sadeghi et al., 2016).

Most healthcare settings now offer portal-based tools and access to records or tools that can be utilized for planning care. Many healthcare settings have utilized tools like these to help improve patient engagement with following their healthcare plans and results (Irizarry et al., 2015). According to Irizarry et al. (2015) the implementation of

portal-based ACP tools including MDPOA form, patient education page, online chatting, and access to other advance directives was completed. This feasibility study was to determine if using these portal-based tools could improve the implementation and engagement of ACP (Irizarry et al., 2015). The authors found that using these tools with stakeholders' input and the availability of ongoing changing of tools to assure success was feasible in this healthcare setting. Providing these tools and resources aided in improving the ACP process as it provided access to resources and documents that were needed for this process (Irizarry et al., 2015).

As we progress into new technology and interventions for care we have started moving more and more into the digital world of computerized access. Making things more digital can help improve access to these forms, reduce error in transcribing, and improve the processing time of data (Kruse et al., 2018). According to Fine et al. (2017) the use of digital ACP can help improve the implementation and engagement by patients during this process. This study discusses if utilizing a digital access could be more reliable and feasible that just using paper forms (Fine et al., 2017). The authors conducted a random controlled study to included 900 participants who were utilizing a digital access to ACP tools across all 50 states in the United States (US) to identify a broad response. The use of descriptive statistics was used to identify patient responses on the usability of digital ACP (Fine et al., 2017). The authors concluded that early use of a digital platform for ACP implementation is more effective than the standard paper format. This digital platform did offer many advantages such as being able to ask questions and engage into conversations about ACP implementation (Fine et al., 2017).

As we continue to move into a digital world there is more and more of a focus on the use of portal-based tools and computer-based tools. One such digital tool is the use of video training that allows older adults to learn about ACP by watching videos to provide education (Sadeghi et al., 2016). Another digital tool would be portal-based tools that can allow the patient to become more engaged with actively learning and implementing ACP (Irizarry et al., 2015). The use of digital ACP platform can also help with providing engagement and ease of implementation of an ACP for older adults (Fine et al., 2017). These digital tools can be useful to help the older adult population with ACP implementation.

Institutional Tools. The use of an electronic health record (EHR) is a tool that is now being utilized worldwide to improve communication, training, and monitoring of patient care. The study conducted by Lum et al. (2019) discusses the use of an EHR system that has portal-based ACP documents that patients will have access to and utilize to monitor, change, or implement ACP (Lum et al., 2019). This exploratory qualitative analysis utilized patient interviews and EHR data to analyze the results of utilizing these tools. Each patient was offered access to this portal where they could explore the different ACP tools and engage into implementation (Lum et al., 2019). It was found that patient who engaged in the use of these patient portals were more likely to engage in the ACP process. The patient experiences included accessible, better understanding, and improved the discussion process (Lum et al., 2019). The use of these patient portal tools can improve the value and quality of care along with making it more patient-centered. The use of an EHR with patient portals was found to be useful for ACP implementation (Lum et al., 2019).

One of the first lines of ACP implementation can be effective communication. A study by Austin et al. (2015) discusses communication tools that aide in mending the gap for those patients who are seriously ill (Austin et al., 2015). Austin et al. (2015) used randomized and non-randomized clinical trials to identify successful tools to help reduce the burden of hasty decision making for those seriously ill patients. These tools will help to reduce unnecessary treatments to prolong life but could cause poor quality of life (Austin et al., 2015). These authors identified that the use of web-base, videos, and test print could help with improving knowledge and engagement of ACP for those seriously ill patients. These tools can provide education and understanding about the barriers, benefits, and methods to engage into ACP discussions and implementations (Austin et al., 2015).

There are people who specialize in ACP for patients facing diseases or need to have ACP implemented. A study by Pearse et al. (2019) discussed a systematic review process for critically ill patients to determine if rapid response team reviews can help engage palliative care specialist to aide in the implementation of ACP. The rapid response teams would help to engage patients during critical situations to help engage palliative care specialist (Pearse et al., 2019). A systematic review was used to identify how different rapid response teams engaged palliative care specialist based on patient's condition and feelings towards ACP (Pearse et al., 2019). It was found that the use of these reviews can help to implement palliative care specialist when needed. It also identified more specific interventions that will need to be utilized during critical situations in patient care and help engage critical patients in ACP implementation (Pearse et al., 2019).

Some institutions utilize their own personal tools that can help with the implementation process of ACP. One of these tools is the use of and EHR that can help track and update ACP changes (Lum et al., 2019). Some institutions utilize videos or videos or web-based tools to help train and education patients about ACP (Austin et al., 2015). Another specific tool is healthcare workers themselves serving as tools to ACP implementation for the older adult population. According to Pearse et al., (2019) the use of rapid response teams is useful in engaging palliative care workers to help critically ill patients (Pearse et al., 2019). Institutional tools can be very important if utilized appropriate to help engage and implement ACP for older adults.

Implementation Planning. Planning for ACP implementation is an important part of the end-of-life process. Most often patients tend to wait until they are critically ill and could possibly make rash decisions about care (Waller et al., 2018). Posing the need for timeliness of ACP planning. According to Waller et al. (2018) advanced personal planning is a way to improve the end-of-life care process. This study was conducted to discuss the need for engaging into ACP implementation and planning before critical life-threatening times approach (Waller et al., 2018). Using a systematic review, the authors identified using a community action approach to improve the advanced personal planning prior to emergency rooms visits or active dying phases of end-of-life care (Waller et al., 2018). It was found that improving the community-based approach and evidence-based strategies could have some promising results but would require some more evidence and investigation (Waller et al., 2018).

One major barrier in healthcare today is the lack of appropriate communication among healthcare workers and patients. The delivery of good healthcare fundamentally

and critically can be ascertained to effective communication (Koul, 2017). A study by Oczkowski et al. (2016) discusses the importance of effective communication and how important it is on end-of-life decision making. This systematic review was to identify specific tools and training that would help patients in an ambulatory care setting with making decisions about end-of-life care (Oczkowski et al., 2016). The authors used a systematic review along with a meta-analysis to identify effective communication tools that could be used by this population (Oczkowski et al., 2016). The authors concluded that while there are many different tools and interventions identified structured communication would produce the best results. It showed that structured communication could improve the communication process and to some degree improve patient outcomes (Oczkowski et al., 2016).

A major focus in healthcare settings in the implementation of patient-centered care and involving patient in decision making about their own care. This can be important as it relates to end-of-life care decisions. According to Aasmul et al. (2018) by utilizing a train the trainer approach about effective communication for ACP and end-of-life care can help with this decision-making process. By training leaders to continue ongoing training about communication can help improve the communication between patients or their families and healthcare workers about ACP (Aasmul et al., 2018). This study used a cluster randomized control trials to identify studies to support the evidence found in this study. All data was surrounding older adults 65 or older living in a long-term care facility (Aasmul et al., 2018). The authors of this study found that communication improved the satisfaction of patient, families, and nurses. The nursing staff distress was reduced and

enhanced staff knowledge and competency for providing the intervention to improve decision-making and end of life care decisions (Aasmul et al., 2018).

A major focus to help with implementing ACP is the process or planning processes used to help engage and implement ACP for older adults. One of the first major steps is early planning which can lead to better decisions about ACP (Waller et al., 2018). Another important part of planning includes the knowledge and communication techniques of healthcare providers. The techniques and strategies used by healthcare workers can impact the outcomes of ACP implementation (Oczkowski et al., 2016). Planning for ACP should always be focused around the patient and their needs. Utilizing patient-centered care is one of the foundations for healthcare and should be no different when discussing ACP (Aasmul et al., 2018). Appropriate planning can help with the success of ACP implementation.

This theme discusses the strategies that can be taken by older adults to help improve the implementation process of ACP. These strategies are broken down into sub-themes including digitals tools, institutional tools, and implementation planning. A great strategy and new idea that is becoming more and more utilized is our digital world. Utilizing digital tools was designed to save time and increase efficiency of many different processes (Alotaibi & Federico, 2017). Some of the digital strategies can include video training, portal-based education tools, and digital ACP. Each of these tools can be easily accessed and will help provide information and technology to improve the ACP implementation process. The use of institutional tools can also be helpful with the ACP process. These institutional tools can include such things as an EHR, specific communication techniques or tools, and specific web-based tools. Most specific

institutions design their own tools for ACP to help patients understand and learn the process for ACP implementation. These tools can be very useful if utilized properly for ACP implementation.

The final subthemes focused on implementation planning. This could be the most important strategy of them all as it focuses on specific areas the patient will need to focus on to assure success with ACP implementation. Some of these implementation strategies include patient-centered care, early planning, and structured communication from healthcare workers. Each of these are important when attempting to plan out the implementation of ACP and can help to improve the process. Following these strategies will improve ACP implementation process and can help older adults plan for their future care.

Benefits on Advance Care Planning

The final theme in this literature review centers around the benefits of advance care planning. This theme is very important as it is the most important focus for implementing ACP. When older adults look at implementing ACP, they want to know how it will benefit them and their healthcare. This theme was broken down into 3 smaller sub-themes including improving treatment options, improving patient and family outcomes, and improving provider engagement.

Improving Treatment Options. A primary focus for all older adults is the expensive cost of medical care. There are many things that can drive up the cost of medical care including intense therapy, frequent hospital stays, and frequent emergency room visits (Ashana et al., 2019). The cohort study by Ashana et al., (2019) reviewed patients with ACP and who were critically ill to determine the course of actions they

would take when compared to those with no ACP in place (Ashana et al., 2019). This cohort study focuses on gather data from the HealthCore Integrated Research Database (HIRD) for medical and pharmacy claims from 14 different commercial health plans across the United States. All participants were age 65 and older and lived in the Southern United States (Ashana et al., 2019). The authors concluded this study that those with implemented ACP were more likely to engage in services such as hospice care rather than making multiple trips to the emergency room or hospital. Those with implemented ACP were also less likely to engage in intense therapies Ashana et al., 2019).

One of the factors that drives medical cost and expenses is the multiple trips to the emergency room. These patients are known as frequent flyers in the hospital and are seen a lot for uncontrolled symptoms or chronic progressive diseases (Bond et al., 2018). According to Bond et al., (2018) the use of ACP allows patients to have preferences in their own care and can reduce the need for emergency room or hospital visits (Bond et al., 2018). This was a case-controlled study and focused on Medicare beneficiaries in a rural-suburban accountable care organization from January 2013 to April 2016 (Bond et al., 2018). The showed a reduction in healthcare cost with an average of $9,500.00 for each patient. The authors of this study concluded that increased ACP was associated with an overall reduction in cost for healthcare by reducing frequent trips to the hospital (Bond et al., 2018).

A major worry for older adults is the possibility of invasive and unnecessary treatments. As adults age and become frailer and they would prefer less aggressive medical care and treatment. Thus, causing a need for implemented ACP to help prevent these invasive and aggressive treatments (Hopkins et al., 2020). According to Hopkins et

al., (2020) a systematic review was completed to identify how implementing ACP impacted patient care specifically those older and frail patients in the hospital. The authors searched electronic databases such as MEDLINE, CINAHL, ASSIA, PsycINFO, and Embase from January 1990 to May 2019 looking for patients in studies with ages older than 75 and diagnosed with a terminal condition (Hopkins et al., 2020). The authors were able to identify that implementation of ACP for older adults could improve quality of life during this time and reduce the burden of unnecessary and invasive medical treatments. They also determined that while this did improve quality of life there was still limited or low numbers of ACP implementation leading to a need for better understanding or implementation processes (Hopkins et al., 2020).

A major benefit to implementing ACP is that it can improve treatment options for the patient and families. One of those benefits surrounds the reduction of overall medical cost. Implementing and ACP can reduce the likelihood of a patient having to go to the hospital and spend money on unnecessary medical procedures (Ashana et al., 2019). Another benefit is and ACP can help to reduce emergency room visits. Having an ACP can spell out what treatment the patient is willing to receive and will help reduce the number of emergency room visits (Bond et al., 2018). The reduction of unnecessary medical treatment can also serve as a benefit for ACP. Patient frail state and multi comorbidities place them at high risk for continued unnecessary treatment (Hopkins et al., 2020). Each of these serve as a benefit for implementing ACP and improving treatment options for older adults.

Improving Patient and Family Outcomes. Family burden is one of the many things that older adults must think about as they age. When they are limited or unable to

make their own decisions about their healthcare choices anymore this leaves a burden on the family to make those tough decisions (Rhee et al., 2019). Utilizing a random controlled trial study Rhee et al., (2019) analyzed patients who received discussions about ACP versus those receiving just written literature about ACP and how it affected implementation (Rhee et al., 2019). The authors concluded that ACP introduced in a healthcare setting by a provider versus just receiving written literature did improve the implementation process. They also concluded that implementing ACP reduced family burden and improved quality of life for both the family and caregivers (Rhee et al., 2019).

One of the major focuses for older adults as they age is the type and quality of care they receive. Many time's due to age and underlining medical conditions older adults may receive minimal or poor quality of care leading to poor outcomes and repeat treatments (Fleuren et al., 2020). According to Fleuren et al., (2020) there are five major areas to focus on when looking at ACP and one of those is to focus on the quality of care. This includes tailoring care to meet patient specific needs and the use of ACP can help outline that care needed (Fleuren et al., 2020). These authors used a systematic literature review using PubMed, EMBASE, PsychInfo, CINAHL, and Cochrane library looking for articles on the normal focus for aspects of ACP (Fleuren et al., 2020). The authors concluded there were a total of 183 total articles that were found and included to determine that there were five main focus areas for ACP including patient autonomy, improved quality of care, strengthening relationships, preparing for end-of-life care, and reducing over treatment. Implementing ACP to improve quality of care alone can help to improve many of these areas of focus for all patients (Fleuren et al., 2020).

During the end-of-life transition it can be a very scary time and can lead to hasty decisions when planning for care. This causes a need for implementing and ACP to help improve the decision-making during this time. Already implementing an ACP can help outline what care needs to be provided during the end-of-life care transition (Sævareid et al., 2019). A qualitative study completed by Sævareid et al., (2019) was focused in four nursing homes in Norway to determine patient's feelings about ACP after receiving education and training about ACP (Sævareid et al., 2019). With conducting 20 follow-up interviews following the education in these four nursing homes the authors were able to identify areas of improvement and benefits of ACP. The authors concluded that with implementing ACP patient were able to improve communication about what they wanted along with making more informed decisions about treatment options during this time (Sævareid et al., 2019). Allowing the patients to discuss future care including fears and worries about future treatment also improved decision-making for future care (Sævareid et al., 2019).

Another benefit of ACP is improving patient and family outcomes with their healthcare. Family burden in a major-issues that is found during end-of-life care. Mostly due to the lack of ACP implementation by older adults (Rhee et al., 2019). Improved quality of care is another benefit to implementing ACP. This allows the patient to spell out their wishes and receive appropriate care based on their condition (Fleuren et al., 2020). A final sub-theme for this theme would be improving the decision-making process. Improving the decision-making process allows patients to receive care that they want and make informed decisions about their healthcare (Sævareid et al., 2019).

Improving patient and family outcomes is a very important benefit for ACP implementation.

Improving Provider Engagement. A major need of ACP is understanding the process of end-of-life care and what to expect. Each patient will deal with this in a different manner as they deal with this transition. Improving the understanding and communication surrounding end-of-life care can help improve the ACP process. According to Chung et al. (2016) discusses self-efficacy among healthcare workers post receiving training and education about the use of ACP. It is also found how effective the training and education models were that were implemented (Chung et al., 2016). The authors used a systematic review and meta-analysis the authors searched through multiple databases using key terms such as advance care planning, advance medical planning, and advance health care planning (Chung et al., 2016). The authors found that there was consistent but low-quality evidence to support communication training rather than normal curriculum (Chung et al., 2016). The authors also identified that this type of training would improve the knowledge and self-efficacy surrounding ACP implementation and end-of-life care (Chung et al., 2016).

Many times, the lack of engagement from providers hinders this process from taking place and happening (Howard et al., 2018). A study completed by Curtis et al. (2013) focuses on the use of simulation communication training to improve communication among providers. More specifically it focuses on nurse practitioners and general practitioners to provide more training about the communication process of ACP with patients and families (Curtis et al., 2013). This was done through a four-week simulation training that was done for nurse practitioners and general practitioners who

were chosen at random form a specific setting. They then analyzed satisfaction responses from patients and families to determine the effects of this education (Curtis et al., 2013). Results found that simulation-based communication training did not improve the quality of communication. This raised some concerns about the effects of simulation training versus real patient training (Curtis et al., 2013).

The primary focus of APC implementation is with the primary care provider (PCP) due to the time spent and understanding about healthcare with the PCP. Much of this is due to the trust and relationship that already exist between the patient and PCP (Abu Al Hamayel et al., 2019). A qualitative interview study completed by Abu Al Hamayel et al., (2019) interviewed 20 older adult patients that were involved in the clinics ACP improvement program. The interview processes identified four major themes including relevance or importance of ACP, conceptualizing wishes and preferences, engagement from the PCP, and outcomes of ACP discussions (Abu Al Hamayel et al., 2019). The themes identified in this study will help PCP to identify key interventions and approaches to take to improve the implementation process of ACP. Allowing the patient to be involved with decision-making and ACP planning can improve the implementation process and outcomes for the patient (Abu Al Hamayel et al., 2019).

A final benefit for ACP implementation is improving provider engagement. Healthcare workers and patients need to have that trust and relationship between one another to make sure that patients receive the care they need. One way to improve provider engagement is assuring that providers have appropriate communication training (Chung et al., 2016). Communication is an important key to assuring patients implement ACP. Another sub-theme is making sure that practitioners and medical providers engage

patients in communication about ACP. They should assure that appropriate communication techniques are used but also shared with patients and families to aid in ACP implementation (Chung et al., 2016). The final sub-theme is about the involvement of PCP with this process. Old adult's patients trust their PCP since they spend so much time with them over the years and have built a relationship with (Abu Al Hamayel et al., 2019). Each of these aspects are benefits for involving health providers to help implement ACP.

There are many benefits to implementing ACP and can help to improve patient experience as well as quality of life. These include improving treatment options, improving patient and family outcomes, and improving provider engagement. When patients go to the hospital, they focus on the types of treatment including cost and invasiveness of the treatment. Implementing ACP can help to improve cost, reduce emergency room visits, and prevent unnecessary treatment. Another benefit is improving the quality of life for patients and families. Many times, families face burden with making end-of-life decisions for their loved one. Patients also face the having to make tough decisions during this process as well but implementing an appropriate ACP can help outline the care that they wish to receive alleviating both family burden and improve patient decision-making.

A final benefit for ACP is the involvement or engagement from healthcare workers. Healthcare workers are the faces that patients see for their medical treatments and have access to the knowledge that is needed to make informed decisions about their future care. It is important that healthcare workers use appropriate knowledge and received communication training to help discuss these matters with patients to improve

ACP implementation processes and outcomes. Primary care providers should also be involved as many patients have developed a relationship with these PCP's over the years and trust them. Having PCP's involved will help to identify new trends and interventions that can be used to improve ACP implementation. Each of these aspects are key elements and benefits to ACP implementation and should be discussed with patients to help provide an overview of the benefits of ACP.

Summary

This chapter provided an outline for the theoretical foundation and the literature review that provided evidence to support the need for this project and how it could improve ACP implementation in this older adult population. Utilizing Orem's self-care model, the investigator was able to design a project implementing the CCHA-ACP toolkit that would improve the overall ACP implementation in this population. Orem's self-care model also places some value on the patient's involvement in care and when discussing the use of ACP, it is important for these older adult residents to take initiative to improve his or her own care even after receiving education and an ACP toolkit. This chapter also provided a review of literature that supports the need for this project and how it will impact and benefit the older adult population living in an assisted living facility.

The literature review outlines three main themes including ACP implementation experience and barriers, ACP strategies, and ACP benefits. Each of these were discussed with subthemes and how this literature provided a need for this project. The literature review provides the foundations and a need for this project to be carried out to improve the ACP implementation process for older adults living in an assisted living facility. The next chapter will discuss the key elements of this project some of which was outlined in

chapter 1. It will provide a more in-depth discussion of how the project was designed and the different methods that were used to carry it out.

Chapter 3: Methodology

Advance care planning is the process where someone plans for future care by outlining in a formal document what their wishes would be if they can no longer make their own decisions (Wichmann et al., 2018). There is a need to improve advance care planning for older adults living in an assisted living facility. Improving the implementation of ACP leads to reducing emergency room visits and improving quality of life. The purpose of this quantitative, quality improvement project was to determine if the implementation of the Carolina Caring Hospice Agency ACP (CCHA-ACP) toolkit would impact ACP implementation and reduce ER visits among residents in an assisted living facility (ALF) in Western North Carolina over four weeks. The project was implemented over a four-week period in Western North Carolina. The project aimed to demonstrate how effective the implementation of education and the use of an ACP toolkit was in improving the implementation of ACP. Further discussion showed how this ACP implementation process impacted emergency room visits for older adults living in an assisted living facility.

This chapter outlines the specific methodologies and strategies that were used in this project to determine the effects of an education model against improving ACP implementation. It also discusses the identified problem with the different methods and steps taken for implementing and presenting data findings of this project. The data that was gathered and analyzed through the course of this project and how it will be presented in chapters four and five. It further discusses the need of this project and how will impact the focused population and healthcare setting.

Statement of the Problem

It was not known if or to what degree the implementation of the Carolina Caring Hospice Agency ACP (CCHA-ACP) toolkit would impact ACP implementation and reduce ER visits among residents in an assisted living facility (ALF). The assisted living facility continues to have issues with having to send residents out to the emergency room for ongoing issues that lead to unnecessary procedures and treatments. This assisted living facility had an average of two residents a week being sent out for emergency room visits. Implementing ACP can help improve the decision-making process and help reduce the number of emergency room visits. At this facility there was only two residents that had an implemented ACP. An intervention to improve the ACP implementation process was needed to reduce the potential for emergency room visits.

Clinical Questions

The clinical questions guiding the project were:

Q1. To what degree would the implementation of the CCHA-ACP toolkit impact ACP implementation among residents in an ALF in Western North Carolina?

Q2. To what degree would the implementation of the CCHA-ACP toolkit would reduce ER visits among residents in an ALF in Western North Carolina?

The dependent variables include the number of implemented ACP and the resulting reduction of emergency room visits following implementation of the ACP by assisted living residents. The independent variable was the CCHA-ACP toolkit.

The CCHA-ACP toolkit aimed to increase the implementation of ACP in an assisted living community located in Western North Carolina. This project focused on the implementation of any components of the CCHA-ACP including healthcare power of

attorney, living will, do not resuscitate (DNR), or the medical orders for scope of treatment (MOST) form. Following implementation of the CCHA-ACP toolkit data related to the completion and implementation of the components of the ACP and Emergency department transfers was collected from the assisted living facility electronic health record (EHR) system that tracked the data.

Project Methodology

The DPI project used a quantitative methodology to help provide statistical analysis of the dependent variables including end of life care education and use or implementation of ACP. The use of quantitative methodology allows the researcher to utilize numbers and statistical analysis to express outcome data that was identified through the project. Quantitative research explores numerical patterns that will be able to express values of how something will change when the variables are manipulated (Hannigan, 2018). This methodology allowed the investigator to answer the clinical question if the ACP toolkit could improve ACP implementation. Providing numerical values that represented how the dependent variable of ACP implementation was affected by the independent variable of the ACP toolkit.

The use of a qualitative methodology is one that utilizes observation or questionnaires to obtain data to be presented and is usually non-numerical in value (Hannigan, 2018). The use of a qualitative project would not have been beneficial for this project as it would not have provided statistical data to represent how the implemented intervention affected the clinical question and determined an outcome. When manipulating variables and needing to provide statistical analysis utilizing the quantitative methodology was the better choice to assure that data represented how the

intervention was successful for improving ACP implementation. The use of quantitative methodology was appropriate for this project as it allowed the investigator to manipulate the variables and utilize statistical analysis to provide proof that the given intervention was successful.

The use of quantitative methodology in this project provided numerical data to support the implementation of this ACP toolkit for this older adult population. The investigator was able to abstract data each week that represented if an ACP toolkit was useful in improving the implementation of ACP for older adults living in an assisted living facility. Utilizing this type of methodology also allowed the investigator to identify any changes that will need to be made to the intervention prior to full organization scaling. Making changes prior to scaling will allow for a successful implementation for the organization.

Project Design

This project used a quasi-experimental design that was easy and cost effective to conduct. This design tested the dependent variable and provided outcome data that can be analyzed and measured to determine the effects of the independent variable (Reeves, Wells, & Waddington, 2017). Using this project design allowed the investigator to test the implementation of an effective education model and ACP toolkit surrounding end of life care and ACP to determine the impact of overall ACP implementation. Data was collected pre intervention for all participants to decide the current use of ACP. Upon completion of the educational component a data analysis pre and post intervention was evaluated for its effectiveness and scalability of implementation. This project design aligns nicely with a quantitative methodology as it will provide numerical data that will

represent an increased use of ACP among older adults living in an assisted living community.

In this project the focus of the dependent variable will be implementation of ACP post an education model and reduction in hospital stays. The data was abstracted from an EHR system that is utilized within the facility. Each participant had their data tracked before the intervention, during the project, and post the project to determine the effects of the implementation of an ACP toolkit and education. The implementation of ACP toolkit was the independent variables of this project that were used to manipulate the dependent variable of ACP implementation. Using a power point presentation and hand-outs created for each participant there was onsite education provided with ongoing monitoring and assistance from healthcare workers to help implement ACP for these older adults. Each session had two or more participants and these handouts and power point presentation were presented in a 30-minute session.

Data was abstracted weekly for a period of four weeks focusing on implementation or change in ACP. After the completion of the project data was also abstracted to determine the number of emergency room visits that utilized post the intervention. Using a chi square table, a statistical analysis was provided to show how the ACP toolkit affected ACP implementation. There is a comparison table provided to determine the change in emergency room visits pre and post intervention implementation.

Population and Sample Selection

This assisted living facility is found in a small rural area in Western North Carolina near the mountain region North Carolina. This is a small town with only 2,143 current residents, most of which graduated from high school (83.6%) and only about 15%

who have graduated college (CoreLogic, 2019). While this was a smaller town it does have several attractions to visit such as different mountain views and other attractions that you can find at different mountain locations. The current average family income was $40,913 per year with an individual average income of $23,901per year. Most of the population was a white at 86.3% with the next highest being the Hispanic population with 11.3% (CoreLogic, 2019).

The participant population was selected in an assisted living community in Western North Carolina. The community is a privately owned facility that accepts Medicare and Medicaid residents. This facility had a census of 31 older adult residents that are 60 years old or older that require assistance with activity of daily living. The project focused on all residents within this assisted living facility to provide education, handouts, and an opportunity to engage into discussion of ACP and utilization of an ACP toolkit. The project assisted these older adults with planning future end-of-life care through the implementation of an ACP whether that be a healthcare power of attorney, MOST form, DNR, or a living will.

While the focus of this project's intervention was presented to all residents in this facility only those who chose to participate, and complete ACP documents were included in the data collection and analysis. The initial set up of this intervention included presenting the education model through an onsite presentation using power point and handouts about the different ACP's too all residents, families, and providers of this community to participate. The specific aim was to engage all parties to start discussing end-of-life care and to implement one or more ACP to help improve quality of life through the aging process. Due to the population and sample, there were no excluded

parties unless they choose not to participate. The project also continued to focus on those who already have ACP to either update or implement more ACP based on current comorbidities and health status.

Participants received education discussing the importance and need of ACP. It further discussed the benefits and types of ACP along with some visual handouts such as paper forms of the ACP and pamphlets that will discuss options and benefits. This intervention determined if improving the understanding and engagement process of ACP also improved the implementation and care planning of end-of-life care. The inclusion criteria included older adults 60 years of age or older, currently living in the assisted living community, and could either make informed decisions or had a willing Power of Attorney to let them participate.

Instrumentation and Sources of Data

The CCHA-ACP toolkit designed by the Carolina Caring Hospice Agency was implemented to serve as a guide and resource for this population to make decisions about ACP. This toolkit outlines the different types of ACP that are offered to residents living in North Carolina (Carolina Caring, 2019). The toolkit provides a guide and next steps to work on the implementation process and resources that can help provide more information about ACP (Carolina Caring, 2019). The toolkit also discusses the benefits of each of the individual types of ACP and who would be involved in the implementation process.

The electronic health record (EHR) within the organization was used to abstract data for this project. This community currently uses the Matrix Care System which is a health information exchange (HIE) platform to obtain specific patient information

(Alexander et al., 2016). The EHR system tracks any new or changed ACP data for all residents that live in the facility. Anytime a new ACP was implemented or changed the facility would upload the document to the resident's record and it would then be able to be tracked within the EHR system. The Chief Medical Officer of the organization will abstract data 30 days prior to the start of the project, then weekly, and then 30 days post implementation of the project to provide to the investigator. This EHR system would track all ACP including healthcare power of attorney, living will, do not resuscitate (DNR), and the medical orders for scope of treatment (MOST) forms.

Data to determine the number of emergency room visits will also be tracked and abstracted from the EHR system. This data will be pulled 30 days prior to implementation of the project and 30 days post implementation of the project. This data will also be provided by the Chief Medical Officer and will be analyzed by the primary investigator and presented in the findings. This data will include any older adult that resides at the facility who must be sent out to the emergency room for treatment.

Validity

The CCHA-ACP toolkit provides various types of ACP that can be offered to this population based on state regulations and guidelines. It also provided understanding on steps to take to achieving the implementation of one or more ACP to help guide the patient for their end-of-life care decisions (Carolina Caring, 2019). The CCHA-ACP toolkit was developed based on the need for a better understanding to ACP. The Carolina Caring organization identified that nearly 65% if families had no idea about the type of end-of-life care and fewer than 60% of physicians know if their patients have a living will or not (Carolina Caring, 2019). They also found out that more than 50% of

terminally ill patients had not completed some sort of advance care plan (Carolina Caring, 2019). This organization was able to identify the constructs of this CCHA-ACP toolkit utilizing this information to tailor it specific to patients and their needs for ACP (Carolina Caring, 2019).

Reliability

The data that was abstracted from an electronic medical record (EHR) that was utilized by the assisted living facility. The goal was to abstract data to determine how many ACP were implemented post receiving the CCHA-ACP toolkit. Data was also gathered to determine the number of emergency room visits pre and post implementation of the intervention. The EHR system used was the MatrixCare system which is an innovative post-acute care system that was built to deliver quality data in real-time format. This system is first in its class providing focus of care and data on the entire care continuum and utilizes top notch data security to maximize data accuracy and prevent threats (MatrixCare, 2020). While this system can still have some room for errors as it requires data entry from staff, it does track and provide consistent data from a real-time EHR system. Thus, assuring that data provided for data analysis is accurate and easy to access.

Data Collection Procedures

Following approval from the institutional review board at Grand Canyon University, the organizational leaders and staff at the facility were introduced the design of this project and how it would be implemented. Each staff were instructed on his or her role for this project and how they would be involved during a scheduled staff meeting during the onsite visits made by the investigator. All residents at the facility were

screened against inclusion criteria which is age 60 or older, current resident of the facility, and having at least two chronic comorbidities.

All participants were screened to observe their understanding about end-of-life care and ACP prior to implementation of the project. Once all pre-screening was completed each participant received the CCHA-ACP toolkit designed and focused around, end of life care and the use of ACP to prepare patients for future care. The presentation of the ACP toolkit was completed through a power point presentation that was provided to all participants on various days in September 2020. Each of these sessions were approximately 15-20 minutes long and a copy of the CCHA-ACP toolkit was provided to each participant.

All data that was collected was stored in a locked cabinet with the investigator for access and to protect information. The abstracted data that was submitted was de-identified by blocking out any identifiable information for all information that was submitted to the investigator. This was to protect any information provided from being able to be identified if found. The data that was collected will be kept for at least 6 months after abstraction to assure that it is no longer needed. Once the data is no longer needed it will be destroyed by shredding through a shred bin as per the organizations policy and procedure.

Data Analysis Procedures

The data was analyzed to determine if the ACP intervention implemented was successful in improving ACP implementation for these older adults living in an assisted living facility. All data was transferred to IBM SPSS version 27 for statistical analysis. Preliminary analysis was conducted to check for missing data or inaccurate data entries

using frequency checks and range scores. The patient outcome was implementation of a new or updating an existing ACP, which was coded as 1= Yes or 0=No for each patient. The patient outcome was categorical and was compared between two groups (intervention vs comparative) using a non-parametric Chi-square test which aligns with the planned analysis summarized in the previous chapter.

A chi-squared test was chosen because it is a non-parametric test designed to analyze group differences when the dependent variable is measured at a categorical level (Schober & Vetter, 2019). The assumptions for conducting a Chi-square test include: the data in the cells should be frequencies or counts of cases; the levels (or categories) of the variables are mutually exclusive, and the study groups must be independent. The data collection for this project met the assumptions for a Chi-square test. The level of significance was set to .05, indicating that a p-value of less than .05 would suggest statistical significance. Data that was abstracted 30 days pre and post intervention implementation was analyzed surrounding emergency room visits. This data will be reviewed to determine if implementing the ACP toolkit will decrease emergency room visits. The data was presented using a comparison chart to determine the effects of ACP implementation.

Potential Bias and Mitigation

There was potential bias found for this project including the discussion of benefits for using the ACP toolkit. The toolkit was provided to all participants and discussed about how this would be a resource to help implement ACP. This could have led participants to believe that this toolkit was the only way to start the process of implementing and ACP. However, with no comparison to other resources and tools to

utilize it would have led to some bias that this toolkit was the only way to implement ACP.

It could be beneficial for further studies to compare other toolkits with this ACP toolkit too remove any bias towards the “Don’t Travel Without a Map” toolkit. It would also help provide data that could determine if there was another toolkit or method that could be more beneficial for implementing ACP in this population. This would provide a benefit also to these older adults to have multiple resources for achieving ACP implementation and improve their quality of life during end-of-life care.

Ethical Considerations

This project had two ethical considerations that were addressed including the review of patient charts to obtain data and understanding of ACP implementation. It was important that this information was kept confidential, only shared when appropriate, and kept stored in a secured lock area within the home of the investigator. The misuse of confidential research information can be considered research misconduct and null any information obtained if improperly used. Guidelines to obtaining and using confidential information should be followed in order to prevent ethical dilemmas (Noroozi, Zahedi, Bathaei, & Salari, 2018). The data that was abstracted contained confidential information such as patient’s names that could identify them and breech privacy acts. It was important that all transferring of data was done so on encrypted computer systems and software to reduce the risk of data being accessed by others.

Another ethical issue was to assure that any resident who chose to participate and implement an ACP had a full understanding about ACP and their uses. Sometimes when providing care residents will take the word of a healthcare worker and not even

understand what they are signing or agreeing too. This can be bad in the situation of ACP as it outlines treatment plan for future care when that patient may or may not be able to make further decisions. Assuring the understanding of their choices and options they are choosing was a key factor in the ACP implementation process. It will be important that all healthcare workers are trained adequately to assure that these ACP discussions are handled in a manner that the resident can still make his or her choices about their care and not just sign something they do not agree too. It is important to respect the patient wishes during the time of making these decisions and do not rush them into signing or completing these forms if they do not feel comfortable in making that decision.

Limitations

Limitations were identified in the results of this project. One limitation was the sample size of residents. While the sample size for an individual facility was sufficient to determine generalizability and scalability this project would need to be implemented into more than one facility. The implementation of this project into multiple communities would help to determine if this project would be able to be scaled throughout this organization. Another limitation of this project included the short time frame of implementation. Many projects can require more time than just four weeks of implementation to identify a change. The lack of time and resources can be a major contribution to the success or failure of a project (Li, Cao, & Zhu, 2019). A smaller time from of four weeks such as this project could have led to some unreliable data that would hinder outcome results. It will be important for the writer to continue implementing this project post the end of the time allotted to assure success and scalability within the organization.

Summary

Chapter 3 discussed the methodologies that will be outlined in this project. A quasi-experimental design allowed the writer to present data that will support the implementation of an education model surrounding ACP. There was descriptive statistics utilized to discuss the implementation of MOST, DRN, healthcare power of attorney, and living will forms post the education model intervention. The problem statement and purpose of the project are reintroduced to discuss the reasons for improving ACP in this population. This project focused on an older adult population living within an assisted living community in NC. The focus was to improve ACP through implementing and ACP toolkit and education.

Data was collected through the EHR system that is being used within this community. Data was abstracted for implemented ACP including HCPA, living will, DNR, and MOST forms. Data was also collected to determine if there was a decrease in emergency room visits with increased implementation of ACP. The data was tracked prior to the implementation, weekly through the course of the project, and then again 30 days post project implementation. Some limitations of this project include the size of the study and the limited time of implementation. These limitations could have hindered generalizability and outcome data that was presented in this study. The validity and reliability of data analysis and data abstracted was presented. This was to determine that the investigator was identifying appropriate data.

There was potential for bias within this project as the ACP toolkit was the only intervention that had been implemented at the facility. This could have led participants to believe this was the only process for ACP implementation. There was also a discussion

about ethical dilemmas that could have been potential. This included the potential misuse of personal private health information and the potential of making decisions just because healthcare workers recommended them. The next chapter will present the data that was abstracted and discuss the statistical analysis of this project.

Chapter 4: Data Analysis and Results

The first clinical question clinical question guiding this project was: To what degree would the implementation of the CCHA-ACP toolkit impact ACP implementation among residents in an assisted living facility (ALF) in Western North Carolina? A subsequent clinical question was: To what degree would the implementation of the CCHA-ACP toolkit impact ACP implementation and reduce ER visits among residents in an assisted living facility (ALF) in Western North Carolina? There was limited knowledge and resources in the assisted living setting surrounding the implementation of ACP that can help with end-of-life care decision making (Mignani et al., 2017). This project proposed an ACP toolkit that would aide in improving ACP implementation for older adults living in an assisted living facility and reduced the number of emergency room visits (Bond et al., 2018). Providing education using an ACP toolkit each resident was offered to participate in an educational program to improve their knowledge and provide resources for ACP.

This chapter provides descriptive data for the intervention group. Demographic data for the participants in the comparative group were not collected as per the facility's guidelines to protect personal information. The data analysis procedures are summarized, and results of the data analysis are presented in written format along with graphs and tables to represent the data. The chapter concludes with a summary of the results that were found for the four weeks of the project.

Descriptive Data

The sample for this project included 31 participants, n=31 in the comparative group and n=10 in the intervention group. All were current residents at the facility.

Demographic data (gender, age, and ethnicity) were collected on each of the 10 participants from the assisted living facility located in Western North Carolina and is displayed in Table 1. There were more female participants (*n*=7, 70%) than male (n=3; 30%). Participants were primarily between the ages of 65 – 70 (n=5; 50%) with the second largest age group between 60-64 (n=3; 30%) and the least participation age group was greater than 70 years of age (n=2; 20%). All participants were Caucasian (*n*=10, 100%).

Table 1

Demographic Data

Characteristic	*n*	%
Gender		
Male	3	30%
Female	7	70%
Age		
60-65	3	30%
65-70	5	50%
>70	2	20%
Orientation		
Caucasian	10	100%

Data Analysis Procedures

Following Grand Canyon University IRB approval, data was abstracted by the Chief Medical Officer, weekly on the implementation of the different ACP's found in the ACP toolkit and provide it back to the primary investigator for data analysis. Data was entered into an Excel using a coding scheme of "1" indicating at least one ACP was implemented and "0" indicating an ACP was not implemented or updated during the four-week study period. A password-protected personal computer was used for the duration of data collection and analysis. Upon completing this quality improvement

project, all data will be transferred to an external digital storage device and stored in a locked file cabinet for three years. The data file will be permanently deleted from the external digital drive. The principal investigator ensured data security and maintained data confidentiality.

The data represented the implementation of each ACP including the HCPOA, DNR, MOST, and living will. An increase in the percentage of ACP's over the implementation period would support the notion that implementing the educational toolkit will improve ACP use for older adults living in assisted living facilities (Carolina Caring, 2019). After data entry was complete, data were transferred to IBM SPSS version 27 for statistical analysis. Preliminary analysis was conducted to check for missing data or inaccurate data entries using frequency checks and range scores. The patient outcome was implementation of a new or updating an existing ACP, which was coded as 1= Yes or 0=No for each patient. The patient outcome was categorical and was compared between two groups (intervention vs comparative) using a non-parametric Chi-square test which aligns with the planned analysis summarized in the previous chapter. This test was chosen because the Chi-square statistic is a non-parametric test designed to analyze group differences when the dependent variable is measured at a categorical level (Schober & Vetter, 2019). The assumptions for conducting a Chi-square test include: the data in the cells should be frequencies or counts of cases; the levels (or categories) of the variables are mutually exclusive, and the study groups must be independent. The data collection for this project met the assumptions for a Chi-square test. The level of significance was set to .05, indicating that a p-value of less than .05 would suggest statistical significance.

Data was abstracted 30 days prior to the initiation of this project to determine the number of emergency room visits among the older adults in this community. There was also data abstracted 30 days post implementation of the intervention to determine if the number of emergency room visits had changed. A comparison table was completed to determine the change in emergency room visits pre and post the intervention. The next section of the chapter offers the results of statistical analysis for the patient outcome of implementing a new or updating an existing ACP. A narrative overview and chart format are presented for the results. The chapter concludes with a summary of the results.

Results

The project aimed to answer the clinical question: To what degree would the implementation of the CCHA-ACP toolkit impact ACP implementation among residents in an assisted living facility (ALF) in Western North Carolina? Analysis was performed to determine the impact of two separate dependent variables leading to the question: The results of the statistical analysis are presented in Table 2. A Chi-square analysis demonstrated a statistically significant improvement in the percentage of patients that implemented a new or updated an existing ACP during the implementation period (n=3, 30%), X^2 (1, N=31) = 6.98, p= .008. The increase in implementation of the ACPs during the implementation of the project demonstrates the CCHA-ACP toolkit is effective for improving the ACP implementation process for these older adults living in an assisted living facility.

Table 2

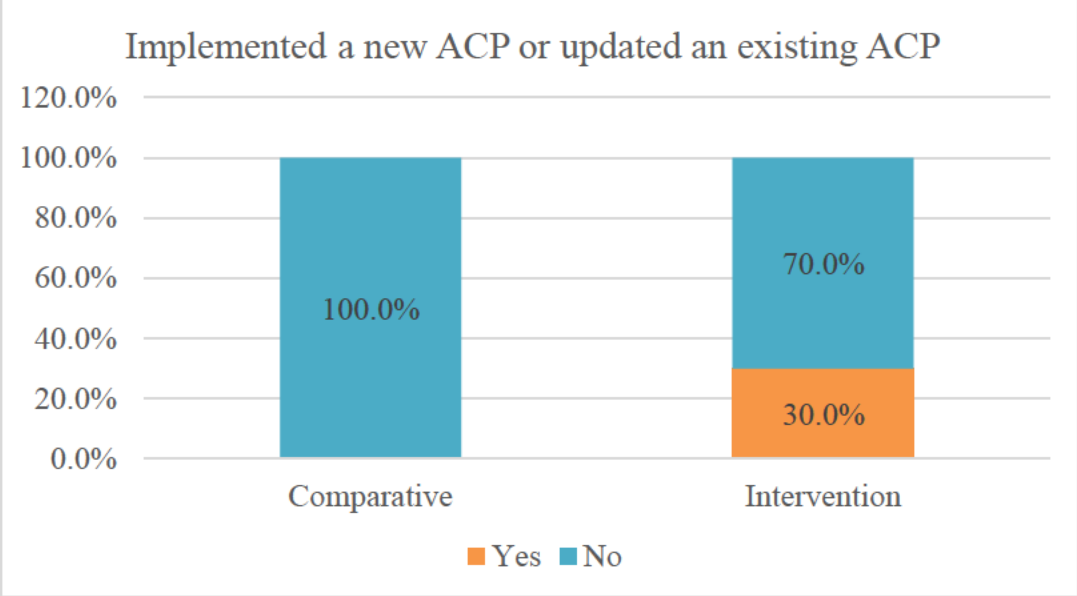
Chi-Square Results Comparing Comparative and Intervention Participants on Implementing a New or Updating an Existing ACP

Implemented a new or updated an existing ACP	Comparative (n=21)		Intervention (n=10)		X^2	p-value
	n	%	n	%		
No	21	100.0	7	70.0	6.98	.008
Yes	0	0.0	3	30.0		

Figure 1 displays the percentage of patients that implemented a new or updated an existing ACP during the implementation period. The comparative group did not have any participants that implemented a new or updated an existing ACP (0%), whereas the intervention group had three participants (30%) that did implement a new ACP.

Figure 1

Percentage of Participants That Implemented a New ACP or Updated an Existing ACP for Comparative and Intervention Groups



The second dependent variable was evaluated to answer the following clinical question: Q2. To what degree would the implementation of the CCHA-ACP toolkit

impact ACP implementation and reduce ER visits among residents in an assisted living facility (ALF) in Western North Carolina? Emergency room (ER) visits were examined between all facility patients in the comparative and intervention periods using a chi-square test. There were 31 patients at the facility during the four-week comparative period and 31 patients at the facility during the four-week intervention period. The results are presented in Table 4. For the comparative group *(n* = 31), there were 11 ER visits (35.5%) which decreased to nine ER visits (29.0%) in the intervention group (*n* = 31), X^2 (1, *N* = 62) = .295, *p* = .587. The *p*-value is greater than .05 which indicates that the decrease in ER visits was not statistically significant. The results do support clinical significance, however, as a decrease in ER visits is improvement.

Table 3

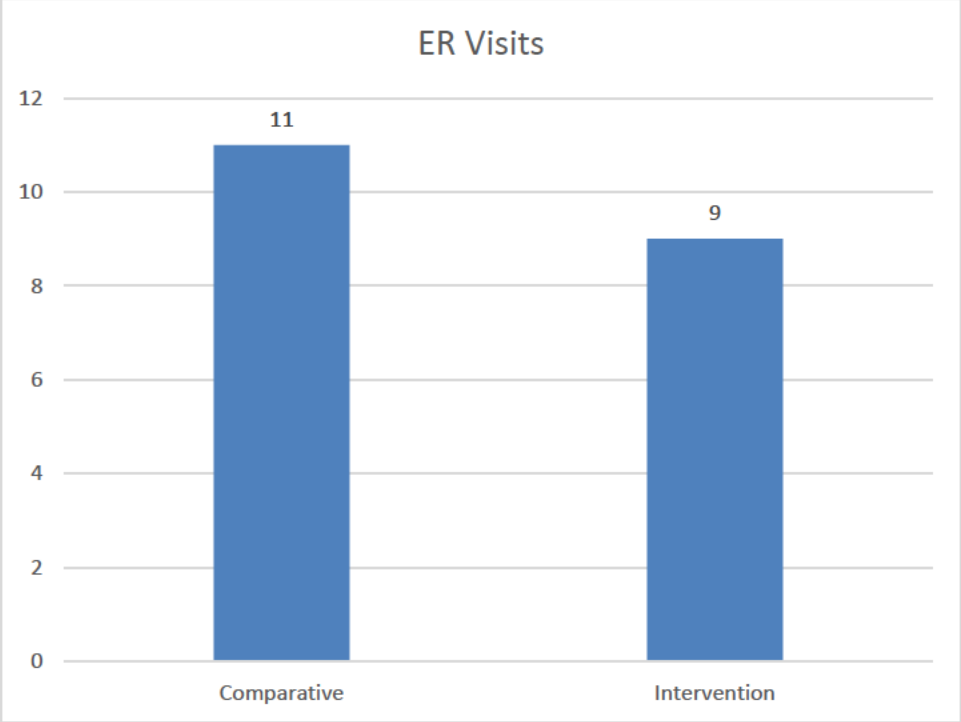
Chi-Square Results Comparing Comparative and Intervention Periods on ER Visits

ER Visit	Comparative (*n*=31)		Intervention (*n*=31)			
	n	%	*n*	%	X^2	*p*-value
No	20	64.5	22	71.0	.295	.587
Yes	11	35.5	9	29.0		

Figure 2 displays the number of emergency room visits in the comparative and implementation groups. There were 11 visits in the one-month for the comparative period and 9 ER visits in the four week intervention period.

Figure 2

Number of Emergency Room Visits for Comparative and Intervention Time Periods



Summary

This quantitative quasi-experimental DPI project was completed to evaluate the impact of an educational intervention and ACP toolkit on the implementation of a new or updating an existing ACP for older adults 60 and older living in assisted living facilities. The clinical question guiding this project was To what degree would the implementation of the CCHA-ACP toolkit impact ACP implementation among residents in an assisted living facility (ALF) in Western North Carolina? The dependent variable was the percentage of ACP's that were implemented or updated for participants. A total of 31 participants were included in the study, n=21in the comparative group and n=10 in the intervention group. Demographics for the intervention group were collected (n=10) and

showed that the majority were female (*n*=7, 70%), and 50% were between the age of 65 to 70 years old. All intervention group participants (*n*=10, 100%) were Caucasian.

A Chi-square test was conducted to address the clinical question and revealed a statistically significant improvement in the percentage of patients that implemented a new or updated an existing ACP from the comparative (*n* = 0, 0%) to the intervention group (*n* = 3, 30%), X^2 (1, *N* = 31) = 6.98, *p*= .008. The results support the use of this educational toolkit as successful for this population in implementing ACP. By implementing the CCHA-ACP toolkit, providers can help aide residents living in an assisted living facility to implement one or more ACP's to help plan for end-of-life care (Carolina Caring, 2019).

Emergency room (ER) visits were examined between all facility patients in the comparative and intervention periods using a chi-square test. For the comparative group *(n* = 31), there were 11 ER visits (35.5%) which decreased to nine ER visits (29.0%) in the intervention group (*n* = 31), X^2 (1, *N* = 62) = .295, *p* = .587. The *p*-value is greater than .05 which indicates that the decrease in ER visits was not statistically significant. A decrease in ER visits is improvement and the ER visit rate decreased after the implementation of the ACP toolkit which supports clinical significance.

The next chapter will provide a summary of the findings and conclusions based on the results. The theoretical and practical implications of the results will be discussed, as well as recommendations for future research and applied settings.

Chapter 5: Summary, Conclusions, and Recommendations

The purpose of this quantitative, quality improvement project was to determine if the implementation of the Carolina Caring Hospice Agency ACP (CCHA-ACP) toolkit would impact ACP implementation and reduce ER visits among residents in an assisted living facility (ALF) in Western North Carolina over four weeks. This toolkit provided a better understanding about the benefits and process for implementing an ACP to help improve quality of life and plan for future care. This final chapter of this project explains the outcome of the project as well as provides a better understanding about the findings. It also provided knowledge about the improvement for future projects and how to make this toolkit more successful for scalability across an organization.

This chapter will discuss the findings of this project post implementation of the CCHA-ACP toolkit. There will be a summary of the project including how it was implemented and for how long. It will further discuss the statistical analysis identified with ACP implementation and reduced ER visits as they correlate with the given intervention. This chapter will also provide the implications and recommendation for continuation of this project. It will finalize with overall recommendations for current and future practice changes to scale the use of the CCHA-ACP toolkit.

Summary of the Project

Aiming to help improve patient outcomes the clinical question was asked: To what degree would the implementation of the CCHA-ACP toolkit impact ACP implementation among residents in an assisted living facility (ALF) in Western North Carolina? The CCHA-ACP toolkit was implemented for all older adult residents 60 and older to aide in making an informed decision about future care (Carolina Caring, 2019).

Following implementation of the CCHA-ACP toolkit each participant was followed weekly for four weeks to determine the implementation of at least one of the four ACP's found in this toolkit including the DNR, MOST, HCPOA, and living will. This project was able to determine the effects of implementing this toolkit for these older adults against ACP implementation. The results showed that there was a significant correlation between the implementation of the CCHA-ACP toolkit against ACP implementation. Emergency room visits for older adults with the ACP was also analyzed to determine if the implementation of the CCHA-ACP would reduce emergency room visits. Prior to implementation of this project there were on average about 2 emergency room visits per week for this population. There was a small reduction in the number of emergency room visits 30 days post intervention implementation.

Summary of Findings and Conclusion

The project investigated the following question: To what degree does the implementation of education and the CCHA-ACP toolkit impact the implementation of ACP when compared to those not receiving the education or toolkit for the older adults living in an assisted living facility in Western North Carolina during a four-week period? It was determined that prior to implementation of this project there were 6% of residents at this facility that were already utilizing one or more ACP's. After implementing the education model utilizing the ACP toolkit there was a 30% increase among the intervention group. A Chi-square test was conducted to address the clinical question and revealed a statistically significant improvement in the percentage of patients that implemented a new or updated an existing ACP from the comparative (n = 0, 0%) to the

intervention group (n = 3, 30%), X^2 (1, N = 31) = 6.98, p= .008. The results support the use of this educational toolkit as successful for this population in implementing ACP.

This project indicated that by implementing this intervention there was an increase in the use of ACP among this population especially when compared to those who did not receive the education and toolkit. It would be beneficial for this process to be discussed and the toolkit provided upon admission to the assisted living facility. While this project focused on those older adults aged 60 and older it is never too early to start that process especially as they are faced with chronic diseases and comorbidities. It would benefit assisted living organizations to design an effective process to discuss and educate these patients about the importance of ACP implementation for future end of life care.

Prior to implementation of this project there were on average about 2 emergency room visits per week for this population. It was determined that the average while remaining the same after implementation still provided a slight decrease in the number of emergency room visits. Data showed there were 11 emergency room visits 30 days prior to implementation and only nine 30 days post implementation. Further studies and analysis will be needed to determine if there is a major correlation between ACP implementation and reduced emergency room visits.

Implications

This project impacted how ACP is introduced and discussed with older adults living in this type of setting. Providing knowledge and understanding about ACP use helped to reduce painful medical procedures, reduce family burden, and improve quality of life for older adults living in this setting. Bridging the gap for lack of knowledge about

ACP usage and helping with planning end-of-life care. This project also aided in reducing the number of emergency room visits for this population. Thus, allowing these older adults to make informed decisions about future care and how they want to manage their comorbidities to help improve quality of life during the end-of-life transition (Zwakman et al., 2018).

Theoretical Implications

The use of Orem's self-care model allowed the writer to show how implementing this intervention would help bridge the gap of ACP implementation for this population. This project provided evidence that the intervention did improve the use of ACP for the older adults living in an assisted living facility. The collection of data prior to the project and then weekly for four weeks through the project determined that this intervention was effective against implementation of at least one or more ACP. While there was a small reduction in emergency room visits it still showed some improvements in this area. Showing that there is a small correlation between ACP implementation and emergency room visits.

Practical Implications

The implementation of this CCHA-ACP toolkit was to provide education and knowledge about the benefits of ACP utilization. The toolkit provided understanding of how the process of ACP should work and allowed patients to become more engaged with having those tough conversations with medical providers and family members to initiate implementation of an ACP. This will improve the quality of life and plan for end-of-life care for these older adults living in assisted living facilities.

Future Implications

Continuation of this project should focus on the implementation of this project in multiple facilities to determine the effects across an organization. Scaling the project across the organization will determine how successful the intervention was at improving ACP implementation and help with determining changes in practice. Utilizing a longer time frame to gather more data would also be beneficial for future studies. The time frame for this study was relatively short at only four weeks and a longer time frame can provide specific data to determine the effects of the intervention.

Recommendations

There are several recommendations that can be made based on this project's results. Six recommendations are made for future projects to promote the increased use of the CCHA- ACP in the ALF community. Recommendations for future practice are presented aiming to encourage practice change and continued engagement of the CCHA-ACP in the ALF community. The recommendations point to increasing care planning for the elderly population.

Recommendations for Future Projects

While this project was marginally successful in implementing ACP for the older adult population living in an assisted living facility there are some recommendations that could help improve outcomes. One recommendation would include involving the family and friends in the ACP process. Involving family can offer support to residents while making those tough decisions in planning for end-of-life care. The family and friend participation would while also increasing completion rates for ACP's in the population.

Another recommendation would include educating and involving primary care providers (PCP) in the implementation of the CCHA-ACP for the patients. The PCP is someone who usually knows the complete health history and can aid the resident in determining challenges and expectations for disease management. This will help the resident to determine what would be the best ACP plan to implement to assure future care is aligned with optimal health and aging.

A third recommendation could be longer implementation of the project. Implementing a project for 30 days can offer some baseline data to determine preliminary effects of a given intervention. However, implanting a project for at least 90 days or longer can offer more concise data that will help determine the effects of the given intervention. A longer time frame can also give the project leader time to identify major changes that will need to take place prior to practice implementation.

A fourth recommendation for this project would include focusing on a targeted population to include a specific age rage or those diagnosed with a certain disease. Targeting those who are more likely to need ACP due to chronic diseases or aging can help with getting them assistance for future care planning. The future planning for target populations can help improve quality of life and reduce stress and burden for residents and families.

A fifth recommendation would be to implement this toolkit on a web-based portal for ease of access. As the world continues to become more and more modern the use of computers and easy access to documents and forms is becoming more prevalent. Literature has shown and drastic increase in the use of portal-based tools and how much more they are utilized than paper documents to be completed. The use of portal-based

tools provides a sense of not having to go out and speak with someone but allows the patient to make choices in their own homes or comfort zones.

A final recommendation would be having group sessions to allow older adults to discuss feelings about the ACP. This is a hard process to discuss with family and loved ones, one of the first steps to completing the ACP can be having the discussion regarding wishes. Providing a support group where they can discuss their feelings and relate to someone who may be having the same fear or trouble's they are having could help improve the implementation process. A group therapy session could improve the initial conversation process for these older adults.

Recommendations for Practice

The implementation of this CCHA-ACP toolkit, it will help to determine way to change and implement new practice. This project has determined that implementing the CCHA-ACP toolkit can help with making decisions about ACP implementation. Organizations who utilize this toolkit to improve ACP use will need to work with staff, families, and providers to help assure that ACP implementation is an easier transition. It will also be important for organizational leaders to have someone who will spearhead the implementation of this toolkit to assure that it can be scalable across the organization.

In larger organizations the implementation process can be important to make it a change in practice. It will be important to focus on implementation in multiple facilities rather than just isolating it to one facility to help determine the need for scaling and implementing practice change. The organizational leader who will oversee this must continue to follow the implementation to identify any changes or adjustments that would need to be made to make it more successful. The implementation process and proper

management of the project are important to tailor the new practice specifically to meet needs of the organization and the population they service.

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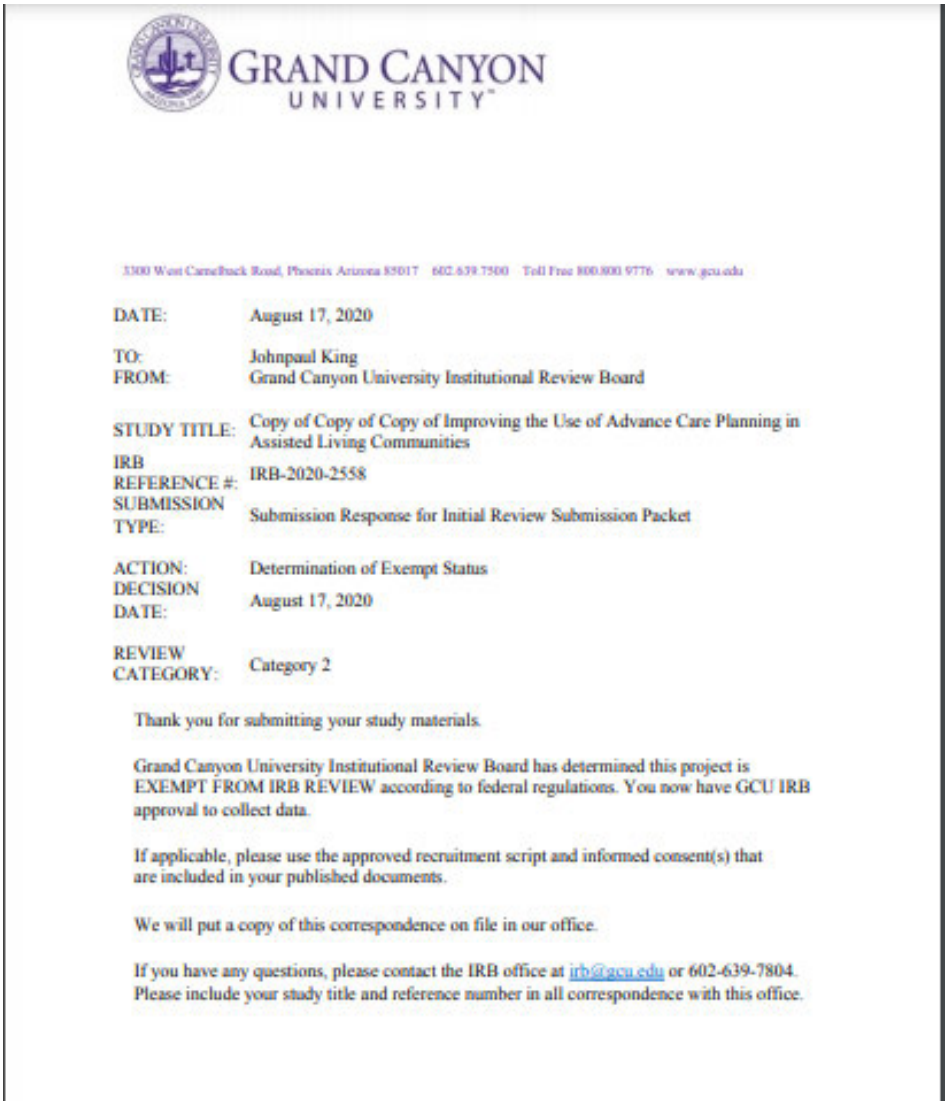
Appendix A

Grand Canyon University Institutional Review Board Determination Letter



GRAND CANYON UNIVERSITY

3300 West Camelback Road, Phoenix Arizona 85017 602.639.7500 Toll Free 800.800.9776 www.gcu.edu

DATE:	August 17, 2020
TO:	Johnpaul King
FROM:	Grand Canyon University Institutional Review Board
STUDY TITLE:	Copy of Copy of Copy of Improving the Use of Advance Care Planning in Assisted Living Communities
IRB REFERENCE #:	IRB-2020-2558
SUBMISSION TYPE:	Submission Response for Initial Review Submission Packet
ACTION:	Determination of Exempt Status
DECISION DATE:	August 17, 2020
REVIEW CATEGORY:	Category 2

Thank you for submitting your study materials.

Grand Canyon University Institutional Review Board has determined this project is EXEMPT FROM IRB REVIEW according to federal regulations. You now have GCU IRB approval to collect data.

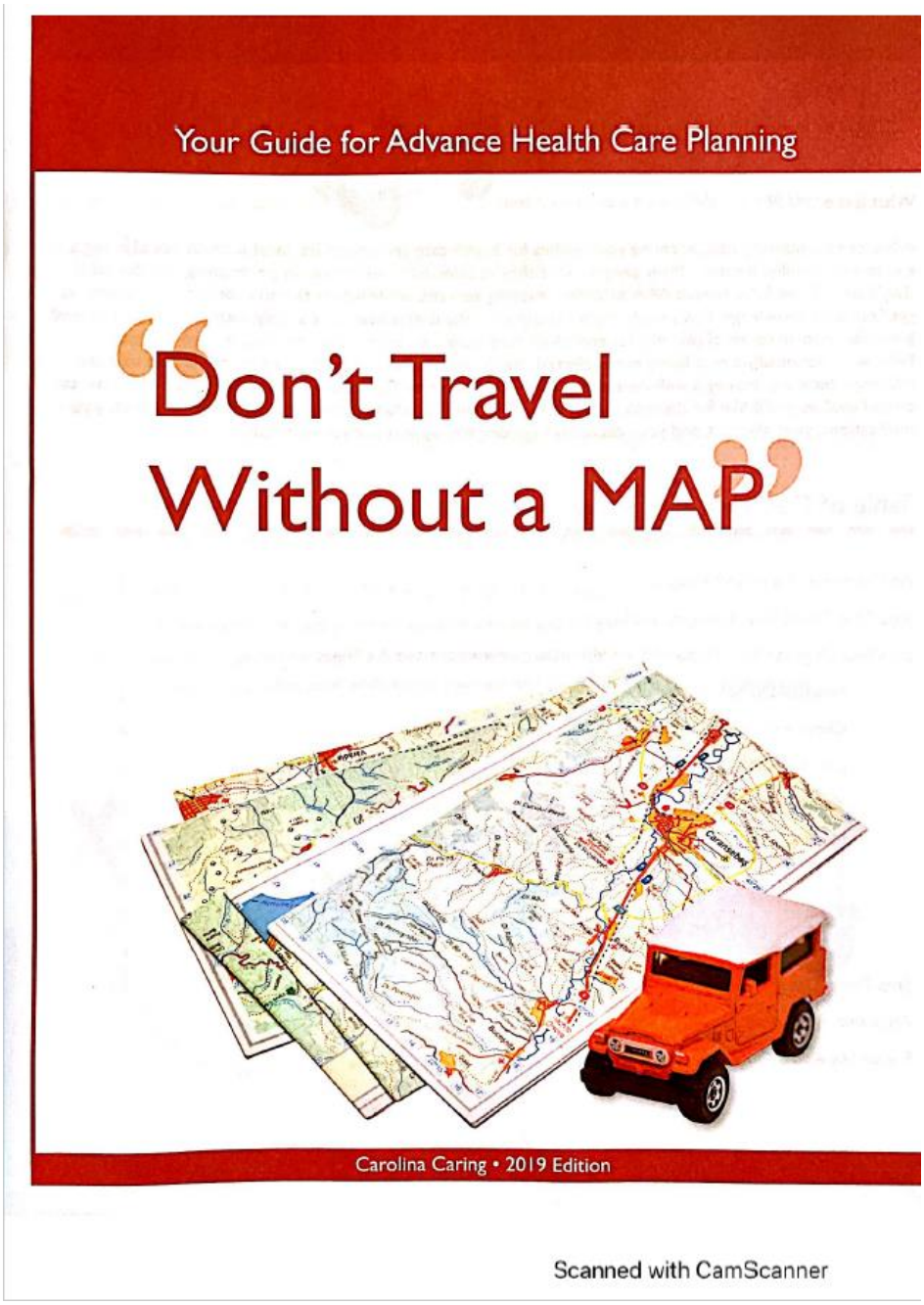
If applicable, please use the approved recruitment script and informed consent(s) that are included in your published documents.

We will put a copy of this correspondence on file in our office.

If you have any questions, please contact the IRB office at irb@gcu.edu or 602-639-7804. Please include your study title and reference number in all correspondence with this office.

Appendix B

Advance Health Care Planning Educational Tool



Appendix C

Permission to Use Advance Health Care Planning Educational Tool

May 22, 2020

Dear IRB Members,

This letter provides limited, revocable authorization to JohnPaul King to utilize Carolina Caring's "Don't Travel Without a Map" advance care planning toolkit for the purpose of completing his thesis for his Doctor of Nursing Practice. This authorization shall expire eighteen (18) months from the date set forth above.

Sincerely,

Angela Gruebbel, CPHRM
Chief Officer of Risk & Contract Management
Direct Dial: 502-751-2252
agruebbel@teleioscn.org