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Development of a Toolkit to Evaluate Efficacy of the Respecting Choices© System of Advance Care Planning

Nicole M. Harpold

Grand Valley State University, zellern@mail.gvsu.edu

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Development of a Toolkit to Evaluate Efficacy of the Respecting Choices© System of Advance
Care Planning

Nicole M. Harpold

Kirkhof College of Nursing

Grand Valley State University

Advisor: Dr. Rebecca Davis

Project Team Members: Dr. Amy Manderscheid & Dr. Iris Boettcher

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Abstract

In 1991 the United States Congress enacted the Patient Self-Determination Act which was an attempt by the government to improve completion rates of advance directives. Despite enactment of this law, completion rates of advance directives have remained relatively unchanged with only 18-36% of adult Americans having completed a document (United States Department of Health and Human Services, 2008). Nearly 90% of healthcare spending in the United States is on the management of chronic conditions (Centers for Disease Control and Prevention, 2015). As the baby boomer generation, which already has a high number of chronic conditions, ages our struggling healthcare system will be further strained. One important aspect of chronic disease management is advance care planning (Prystowsky, 2015). While various advance care planning programs exist, the Respecting Choices© program has been recommended by the Institute of Medicine (2015) as a viable framework to increase advance care planning activities and advance directive completion rates. A not-for-profit health care system located in West Michigan that is comprised of 12 hospitals, nearly 200 ambulatory care sites and network of more than 3,000 physicians, will soon begin implementing the Respecting Choices© advance care planning program. The proposed doctoral project includes development of a toolkit to evaluate the efficacy of the Respecting Choices© system of advance care planning at increasing advance directive completion rates and documentation of the advance directive in the medical record.

Keywords: Patient-Self-Determination Act, Respecting Choices©, advance care planning, advance directives, efficacy

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Executive Summary

Despite enactment of laws by the United States Congress and a consensus reports from the Institute of Medicine (2014), completion rates of advance directives in the United States remain low. Only 18 – 36% of Americans over the age of 18 have completed an advance directive (United States Department of Health and Human Services, 2008). In the United States we face a growing healthcare crisis; an increasing older adult population and rising healthcare costs. It is estimated that nearly 90% of healthcare spending is on the treatment of chronic conditions (Centers for Disease Control and Prevention, 2015). Unfortunately, many patients do not have the opportunity to have conversations with their healthcare provider about advance care planning and how high-risk and high-cost medical interventions may impact their quality and quantity of life (Prystowsky, 2015).

At one large, not-for-profit, healthcare organization in West Michigan, the Respecting Choices© system of advance care planning will be implemented in an attempt to promote advance care planning activities and increase the number of patients that have completed a document and have it available in their medical record. The purpose of this doctoral project was to develop an evaluation plan that the organization could utilize to assess the efficacy of the Respecting Choices© system of advance care planning.

Introduction and Background

The Patient Self-Determination Act (PSDA) was enacted by the United States Congress in 1991 for the purpose of improving completion rates of advance directives. This law requires all healthcare organizations that receive, or expect to receive, Medicare and Medicaid funding to inform patients about their decision-making rights, assess for advance directives, provide employees with education about advance directives and not discriminate on the basis of advance directives. Despite enactment of this law more than 20 years ago, advance directive completion rates in the United States remain low, with only 18 – 36% of adults having completed a document (United States Department of Health and Human Services, 2008).

As the baby-boomer generation ages, a patient population which already has a large number of chronic, co-morbid health conditions, concerns continue to rise about how this will strain already limited healthcare resources and effect healthcare costs and quality. Nearly 90% of current healthcare spending in the United States is on the treatment of chronic conditions including heart disease, cancer, stroke, diabetes, pulmonary diseases, obesity, and arthritis (Centers for Disease Control and Prevention, 2015). An important aspect of effective chronic disease management is advance care planning and having conversations with patients about the risks and benefits of high-risk and high-cost medical interventions (Prystowsky, 2015). While the majority of Americans state that they would prefer to be cared for at home if they were terminally ill (Institute of Medicine, 1997), most have not taken the necessary steps to ensure that their wishes are followed if they are unable to speak for themselves. Failure to participate in advance care planning can result in patients receiving undesired life-sustaining treatments, increased emotional distress of surrogate decision makers (Wendler & Rid, 2011), and increased healthcare costs (Pasternak, 2013).

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The Respecting Choices© system for advance care planning (SACP) was developed in the early 1990s as a collaborative effort between multiple healthcare organizations in La Crosse, Wisconsin to improve advance care planning. The Respecting Choices© SACP is unique in that it was the first of its kind to offer not only printed materials and multimedia references but also face-to-face interactions with trained facilitators. The model demonstrated statistically significant improvements in advance directive completion rates within the first two years of full program implementation and these results were sustained and even slightly improved at 10 years (Hammes, Rooney, & Gundrum, 2010).

The Respecting Choices© SACP divides advance care planning into three stages: First Steps©, Next Steps©, and Last Steps©. First Steps© advance care planning interventions are appropriate for any adult and are aimed at providing the individual with information on how to select a surrogate decision maker, complete an advance directive, and identify goals of treatment if they were to suffer a severe, neurologic illness from which they were unlikely to recover. Next Steps© advance care planning is recommended for any patient with a chronic, life-limiting illness that has experienced a decline in functional status, hospitalization, additional co-morbid diseases, or are at risk for complications that would make them unable to make their own decisions. It is recommended by Gundersen Health System (2015) that Next Steps© advance care planning should be implemented as part of chronic disease management with advance care planning at this level being facilitated by trained healthcare professionals with experience in illness trajectories. The final stage of advance care planning in the Respecting Choices© SACP is Last Steps©. Last Steps© advance care planning is intended for individuals that are likely to die in the next 12 months and is specifically focused on assisting the patient with decisions

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related to life-sustaining treatments such as cardiopulmonary resuscitation, hospitalization, and hospice (Gundersen Health System, 2015).

Problem Statement

A large not-for-profit healthcare system located in West Michigan that is comprised of 12 acute care hospitals, nearly 200 ambulatory care sites, a network of more than 3,000 physicians and advanced practice providers and an insurance provider, will soon begin implementing the Respecting Choices© SACP. Despite the number of accolades that this healthcare organization has received for providing high quality, safe, cost-effective healthcare, data indicate that only 37 – 43% of patients admitted to the heart failure unit of the acute care hospital report having completed an advance directive (Spectrum Health, 2015). The Institute of Medicine (2015) has identified advance care planning as “critically important” (p. 4) to improving end-of-life care in the United States. To better meet the needs of patients and achieve goals set forth by the Institute of Medicine (IOM), this healthcare organization has contracted with Gundersen Health System to implement the Respecting Choices© system for advance care planning.

Implementation of the Respecting Choices© SACP at the organization has already begun within targeted in-patient nursing units and associated outpatient ‘dyad’ clinics. Although the work to attempt to improve advance care planning at the organization has already begun, there was not a process in place to assess the efficacy of this work. The doctoral project included development of a toolkit to evaluate the efficacy of the Respecting Choices© SACP at increasing advance directive completion rates and increasing documentation of the advance directive in the medical record.

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Evidence-based Initiative

A literature review was conducted to identify barriers to advance care planning, assess the characteristics of successful advance care planning programs, and to determine if the Respecting Choices© model has been shown to demonstrate increases in advance care planning activities among adult patients regardless of care setting (acute care, long-term care, ambulatory care). Comprehensive searches of multiple databases including CINAHL, the Cochrane Library, PubMed, and the Medical Literature Analysis and Retrieval system (MEDLINE) and a search of the grey literature utilizing Google© were undertaken to answer the three primary questions of the literature review.

Barriers to Advance Care Planning

The literature review analyzing barriers to advance care planning was completed utilizing the previously described databases. The search terms ‘advance care planning’ or ‘advance directives,’ ‘implementation,’ ‘barriers,’ and ‘United States’ or ‘America’ or ‘USA’ or ‘U.S.A.’ were utilized. The search was limited to studies based in the United States as laws and regulations related to advance care planning and advance directives may be different in other countries. Inclusion criteria included articles in which the primary study objective was to assess barrier to implementation of advance care planning activities; articles had to be available in English. In total 20 articles were identified using the described search terms that met inclusion criteria.

Full review of these articles revealed that barriers to advance care planning implementation can be categorized in one of three ways: barriers from the perspective of the healthcare provider, barriers from the perspective of the patient and/or family, and system level barriers. Barriers identified by providers included: lack of skill and knowledge, difficulty

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identifying the “right time” to discuss advance care planning, perception that patients should initiate advance care planning conversations and fear that discussion about advance care planning may deprive patients of hope (DeVleminck et al., 2013). Barriers from the perspective of the patient include lack of understanding of the documents (Johnson et al., 2012), better patient and provider education (Ramsbottom & Kelley, 2014), lack of surrogate decision-maker or family that is unable/unwilling to discuss advance care planning (Fried et al., 2009) and patient perception that advance directives are unnecessary because their provider would “know what to do” (Ramsbottom & Kelley, 2014). Factors within the healthcare system that have been indicated as barriers to advance care planning include inadequate resources such as staff trained in assisting with advance care planning (Lovell & Yates, 2014), lack of reimbursement (Ahluwalia & Enguidanos, 2015), and absence of EMR integration via either clinical decision supports or availability of electronic documents in the medical record (Singh et al., 2015).

Characteristics of Successful Advance Care Planning Programs

The literature review assessing characteristics of successful advance care planning programs was completed utilizing the previously described databases. Search terms included: ‘advance care planning’ or ‘advance directives’ and ‘efficacy,’ studies with the terms ‘POLST’ and ‘pediatric’ were excluded. Inclusion criteria included studies in which the primary purpose was to assess characteristics of successful advance care planning projects; articles had to be available in English. In total 32 articles were identified that met inclusion criteria. All articles were reviewed in detail and three themes of successful advance care planning programs were identified: system characteristics, patient characteristics, and healthcare provider characteristics.

System level characteristics. System level characteristics that were identified as facilitators of advance care planning included electronic medical record usage (Yung et al.,

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2010), clinical decisions supports and reminders delivered to the healthcare provider via the electronic medical record (Hayek et al., 2014; Dube et al., 2015), and standardized documentation forms and/or templates (Zafirau et al., 2012; Lakin et al., 2013). In addition, reimbursement and incentives have been tied to significant increases in advance care planning activities. Lakin et al. (2013) found that documentation of advance directives increased by nearly 70% when providers were awarded a monetary incentive if questions related to advance care planning were answered on 75% or more of their patients.

Provider characteristics. A number of provider characteristics have been identified that can facilitate advance care planning. The most frequently identified provider characteristic that has been found to influence whether or not patients are engaged in advance care planning is provider education (Dube et al., 2015). While DeVleminck et al. (2013) found only medium evidence to support that provider knowledge about ACP influences whether or not the patient participates in advance care planning, there is strong evidence to support that when providers doubt their own skill in discussing ACP they will avoid it. Statistically significant increases in document completion, discussions about cardiopulmonary resuscitation preferences and decisions about future hospitalizations have been identified among patients cared for by providers that received education in training in advance care planning (DeLaGarza et al., 2001).

Another commonly identified provider characteristic of successful advance care planning programs is effective patient-provider communication. A unique aspect of advance care planning conversations is identifying the “right time” to have the conversation. Multiple researchers have found evidence to support that patients must be willing to acknowledge their life-limiting illness and ready to participate in advance care planning activities. If patients have not yet reached this point, attempting to engage them in advance care planning conversations

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may be detrimental to the provider-patient relationship and even decrease the likelihood that a successful advance care planning conversation will occur (De Vleminck et al., 2013). Tools and processes used by successful advance care planning programs to aid clinicians in identifying the “right time” to have conversations have included use of the ‘surprise question’ and clinical risk scores. Butler et al. (2015) found that advance directive documentation among heart failure patients correlates with higher clinical risk scores (risk of death) and number of hospitalizations; the sicker patients were the more likely they were to have engaged with a provider and discussed advance care planning. Billings and Bernacki (2014) found that use of the ‘surprise question,’ which helps the healthcare provider identify patients that are at an increased risk of death in the next 12 months, can be a useful tool in prioritizing which patients should have advance care planning conversations. Researchers have also found that having a conversation about advance care planning with a healthcare provider not only increases the likelihood that the patient will complete an advance directive, but also the likelihood that the patient’s wishes will be followed at end-of-life (Houben et al., 2014; Rhee et al., 2012). De Vleminck et al. (2013) found that there is strong evidence that healthcare provider that see advance care planning conversations as part of their role have a significant impact on the success of an advance care planning program. Similarly, Hare and Nelson (1991) found a statistically significant increase of advance care planning activities among patients in the intervention group that experienced multiple, provider-initiated conversations about advance care planning.

Patient characteristics. Patient characteristics have also been found to influence the success of advance care planning program uptake. One of the most important patient characteristics that have been identified is whether or not the patient has acknowledged their terminal illness. A systematic review completed by De Vleminck et al. (2013) found medium

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evidence to support that patients must recognize their life-limiting condition to facilitate successful provider-patient advance care planning discussions. Another important patient characteristic that has been identified is whether or not the patient has shared his or her end-of-life wishes with family and friends. Sharing of wishes has been found to not only decrease surrogate burden and decrease conflict among family members (McMahan et al., 2012) but also to understand the patient's values and how the patient defines quality of life (Ramsbottom & Kelley, 2014).

Efficacy of the Respecting Choices© System of Advance Care Planning

The review of the literature to determine the efficacy of the Respecting Choices© SACP was completed utilizing the previously described databases. Search terms used for this literature review included: 'Respecting choices' and 'primary care,' 'Gundersen' and 'advance care planning,' and 'Gundersen' and 'advance directive.' Inclusion criteria included studies in which the primary purpose was to assess the efficacy of the Respecting Choices© SACP, studies in which the participants were over the age of 18 years old, and articles that were available in English. In total 9 articles were found to meet inclusion criteria and were retained for full review. The identified studies were found to fall into three general categories: studies that assessed the outcomes of the Respecting Choices© SACP, studies that assessed different methods of program implementation, and studies that assessed long-term efficacy of the Respecting Choices© SACP.

Multiple randomized and non-randomized controlled trials have been conducted for the purpose of evaluating the efficacy of the Respecting Choices© SACP on increasing advance care planning activities among various patient populations. Research has demonstrated statistically significant increases in advance care planning activities among the following patient populations

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when the Respecting Choices© system of advance care planning is utilized: older adult patient (Detering et al., 2010), congestive heart failure patients (Schellinger, Sidebottom, & Briggs, 2011), and primary care patients (Forsyth & Hearn, 2013). In addition to significant increases in overall advance care planning activities, statistically significant increases in patient and family satisfaction scores have been noted among patients that receive advance care planning conversations using the Respecting Choices© SACP (Detering et al., 2010).

Three studies were identified during this literature review that evaluated the efficacy of various implementation methods of the Respecting Choices© SACP. The Respecting Choices© model was originally developed and utilized in La Crosse county Wisconsin, an area with relatively little racial and ethnic diversity. Pecanac et al. (2014) conducted an observational study to assess the efficacy of the Respecting Choices© system of advance care planning in a racially and ethnically diverse population. Researchers found statistically significant increases of advance directives for racial and ethnical minorities after implementation of the Respecting Choices© SACP, demonstrating efficacy of the program in diverse patient populations (Pecanac et al., 2014).

The Respecting Choices© SACP has also been successfully implemented telephonically by insurance plan case managers. An initial pilot of First Steps© and Last Steps© conversations implemented via telephone with case managers was so successful that a full implementation was launched and all insurance plan members that meet clinical criteria are now offered opportunities to participate in Respecting Choices© SACP (Boettcher, Turner, & Briggs, 2014).

Lastly, the spread of the Respecting Choices© SACP via social diffusion has been evaluated. Social diffusion is the spread of a phenomenon, such as advance care planning, through social connections and networks, without the individual actually receiving the

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intervention first hand. Mooreman, Carr, Kirchoff, and Hammes (2012) conducted an observational study to assess the spread of Respecting Choices© advance care planning activities via social diffusion and concluded that there was *not* statistically significant evidence to support that social diffusion is a viable implementation method.

The final category that studies assessing efficacy of the Respecting Choices© system of advance care planning fell into was those that assessed the long-term effectiveness. While the initial results from the La Crosse Advance Directive Study (LADS I) completed in 1996 were promising, ten years later researchers wanted to determine if the original results were sustained. Hammes, Rooney, and Gundrum (2010) conducted an observational study assessing long-term sustainability of the Respecting Choices© SACP. Similar to the LADS I research methods, investigators conducted a retrospective chart review of all decedents in La Cross County, Wisconsin to assess for the presence of advance care planning documents in the medical record. Researchers found that significantly more documents were available in the medical record in the LADS II study than in the LADS I study. Hammes et al. (2010) also found that among those patients with an advance directive, a significantly higher portion of patients in the LADS II study had named a power of attorney for health care (90% in LADS II versus 77% in LADS I). The LADS II study demonstrated the long-term efficacy of the Respecting Choices© system for advance care planning; not only was the program sustainable, but actually continued to increase advance care planning activities.

Appraisal and Synthesis of Evidence

The hierarchy of evidence developed by Polit and Beck (2012) was utilized to assess the quality of evidence obtained through this literature review. Polit and Beck (2012) categorizes the systematic review of randomized and non-randomized controlled trials as the highest level of

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evidence followed by single randomized and non-randomized controlled trials, systematic reviews of observational studies, single observational studies, systematic reviews of qualitative studies, single qualitative studies, and opinions of authorities and experts. Five studies identified during the literature review were systematic reviews of randomized or non-randomized controlled trials, 14 studies were single randomized or non-randomized controlled trials and 19 studies were single observational studies. Three studies were systematic reviews of qualitative studies and four studies were single qualitative studies; only one of the identified articles was an expert opinion.

Evans' (2003) framework was used to evaluate the overall quality of the literature for each research question. Overall quality of evidence related to barriers to advance care planning was found to be 'good.' Multiple systematic reviews and randomized controlled-trials contributed to the good quality of this evidence. The identified evidence that related to characteristics of effective ACP programs was also 'good.' Most of the identified studies were randomized and non-randomized controlled trials, which contributed to the overall evidence rating. Similarly, the quality of evidence related to the efficacy of the Respecting Choices® model was also found to be 'good,' primarily because of the number of randomized and non-randomized controlled trials. Evans' (2003) states that good evidence, "provides a sound basis for clinical practice and is a low risk of error" (p. 82).

Evidence-based Practice Recommendations

Numerous studies, including several systematic reviews and multiple controlled trials, have identified provider knowledge and education as a significant predictor of the successfulness of advance care planning programs. The overall quality of evidence supporting provider education interventions to promote advance care planning is excellent. 'Excellent'

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evidence, as defined by Evans (2003), is evidence that, “provides the strongest scientific base for clinical practice” (p. 82). When implementing an advance care planning program, provider education is one important aspect that should be considered.

The literature review also revealed ‘excellent’ quality evidence to support the promotion of comprehensive advance care planning interventions, including referral services. Multiple systematic reviews as well as randomized and non-randomized controlled trials demonstrated the significant role that primary care providers fill. Studies also demonstrated the importance of access to referral specialists including palliative care providers and social workers. Research suggests that when adequate referral services are not available, primary care providers are less likely to engage patients in advance care planning conversations.

Lastly, there was ‘excellent’ quality evidence to demonstrate that organizations can effectively monitor how well their system is engaging patients in advance care planning conversations by analyzing the number of advance directives completed and available in the patient medical record. Multiple large-scale research studies, including both LADS I and LADS II, utilized medical record data about advance directive completion rates to determine the effectiveness of advance care planning interventions. ‘Good’ quality evidence supports that advance directives and information about end-of-life care preferences are best documented in an electronic medical record rather than paper charts. There is also ‘good’ quality evidence to support the use of electronic medical records and standardized documentation forms to help ensure that information is documented in timely manner and is available and followed at the time of patient death.

Conceptual Model

While there is a large body of evidence to support the utilization of the Respecting Choices© SACP as an effective advance care planning intervention, efficacy of a specific treatment does not guarantee successful implementation. Implementation of an intervention also requires consideration for a large number of contextual factors such as the beliefs and culture of patients, behaviors of providers, complexities of the healthcare system and the feasibility and sustainability of a given intervention, to name a few. With this in mind, the conceptual framework developed by Proctor et al. (2011) was utilized to evaluate the *implementation* of the Respecting Choices© SACP.

The conceptual model of implementation research developed by Proctor et al. (2009) was influenced by three other frameworks: Stage Pipeline models such as the model developed by the National Cancer Institute (2004), Shortell's (2004) multi-level model of "Change for Performance Improvement", and models of health service use such as the "Network Episode Model" developed by Pescosolido (1991). The model demonstrates the relationship between evidence-based intervention strategies, various implementation strategies, and the outcomes that can be reached. See Appendix A for a schematic of the conceptual model. These outcomes are divided into three groups: implementation outcomes, service outcomes, and client/patient outcomes. Implementation outcomes include feasibility, fidelity, penetration, acceptability, sustainability, uptake, and costs. Service outcomes include efficiency, safety, effectiveness, equity, patient-centeredness, and timeliness. Client outcomes in the model include client satisfaction, function, and symptomology. Proctor et al. (2011) highlights the importance of distinguishing *implementation* outcomes from *service* or *treatment* outcomes, so that researchers are better able to identify if the cause of intervention failure or success is related to the actual

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treatment or how it was deployed (implemented). This model was ideal for this project in which the doctoral student developed an evaluation plan to assess the success of program implementation. This evaluation plan allows hospital leaders to discriminate between treatment success and program implementation success (or failure). Each of the previously identified implementation outcomes are defined below as well as possible measurements suggested by Proctor et al. (2009).

Implementation outcomes. Implementation outcomes include: acceptability, adoption, appropriateness, costs, feasibility, fidelity, penetration and sustainability. Acceptability is defined as, “perception among implementation stakeholders that a given treatment, service, practice, or innovation is agreeable, palatable, or satisfactory” (Proctor et al., 2011, p. 67). Acceptability is different than *satisfaction*; acceptability refers to a specific treatment or intervention, while satisfaction refers to the overall service experience. Acceptability is necessary for early adoption, ongoing penetration, and sustainability. Researchers suggest several different ways that acceptability by various stakeholders may be assessed including: surveys, qualitative or semi-structured interviews, and administrative data. While these methods of assessment may be useful for efficacy research in a controlled environment, Proctor et al. (2011) recognizes that such structured and rigorous methods may be too cumbersome when evaluating real-world implementation.

Adoption. Adoption is defined by Proctor et al. as, “the intention, initial decision, or action to try or employ an innovation or evidence-based practice” (2011, p. 69). Adoption may also be thought of as ‘uptake’ (Proctor et al., 2011), and can be assessed from the level of the provider or the organization. Adoption can be measured through administrative data, observation, and qualitative or semi-structured interviews. To measure individual healthcare

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provider engagement with advance care planning, for example, referral orders could be tracked and assessed to determine who the ordering provider was. Providers that are not participating or engaged in the intervention would have lower rates of referrals.

Appropriateness. Appropriateness is the, “perceived fit, relevance, or compatibility of the innovation or evidence based practice in a given practice setting, provider, or consumer; and/or the perceived fit of the innovation to address a particular issue or problem” (Proctor et al., 2011, p. 69). Appropriateness may be questioned by healthcare providers when they feel a new program does not align with the mission of the organization or it is not consistent with the provider’s skill set, role, or job expectations. Appropriateness is an important measure early in program implementation and occurs prior to adoption. Appropriateness can be measured via surveys, qualitative or semi-structured interviews, or focus groups.

Cost. Costs vary by setting and include the cost of the intervention, the implementation strategy used, and the location of service delivery. Research has demonstrated that advance care planning and end-of-life discussion can reduce overall patient costs near the end of life. A longitudinal study conducted by Zhang et al. (2009) found that overall costs for patients that reported having an end-of-life discussion with a provider were 35% less ($p = 0.002$) than those that did not have a conversation about treatment goals at the end of life. Proctor et al. (2011) notes that while few studies report the costs associated with implementing evidence-based treatments, these measures are important when assessing alternative treatment strategies or various implementation strategies.

Feasibility. Feasibility is, “the extent to which a new treatment, or an innovation, can be successfully used or carried out within a given setting” (Proctor et al., 2011, p. 69). Feasibility is an outcome that is typically measured retrospectively when attempting to explain a program’s

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success or failure and is measured using administrative data, observation, or surveys. Feasibility and appropriateness are related, but remain to distinct concepts. Proctor et al. (2011) explains that while an intervention may be appropriate and fit with the vision and mission of an organization, it may not be feasible due to the resources or education that would be required for implementation.

Fidelity. Fidelity is described by Proctor et al. (2011) as the, “degree to which an intervention was implemented as it was prescribed in the original protocol or as it was intended by the program developers” (p. 69). Fidelity is one of the most often measured implementation outcomes. Dimensions of fidelity include: adherence, quality of delivery, program component differentiation, exposure to the intervention, and participant responsiveness or involvement. Fidelity is measured by determining if the process is being followed as it was intended.

Penetration. Implementation penetration is the, “integration of a practice within a service setting and its subsystems” (Proctor et al., 2011, p. 70). Penetration can be measured to assess service penetration (number of individuals who used a service or received an intervention divided by the total number of individuals who were *eligible* for the service or intervention) or to assess penetration in terms of providers (number of providers that deliver a treatment or service, divided by the total number of providers trained or expected to deliver a service).

Sustainability. Sustainability is defined as the, “extent to which a newly implemented treatment is maintained or institutionalized within a service setting’s ongoing, stable operations” (Proctor, 2011, p. 70). Researchers distinguish between three distinct phases of integration of a program into an organization: 1) passage, such as permanent funding or the development of a policy 2) cycle or routine, including repetitive reinforcement such as annual evaluation and 3) niche saturation in which a program has been integrated into all subsystems of an organization.

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Researchers also suggest that sustainability and penetration may be related, with higher levels of penetration contributing to sustainability.

Project and Study Design

As described by Moran, Burson, and Conrad (2014) the definition of *quality* is variable, but is defined by the Institute of Medicine as, “the extent to which health services provided to individuals and patient populations improve desired health outcomes” (2016, para. 3). The implementation of the Respecting Choices SACP is intended to improve patient care by increasing advance directive completion rates and documentation of advance directives in the medical record. Better advance care planning increases the likelihood that healthcare providers know a patient’s wishes for treatment if they are unable to communicate treatment preferences for themselves and that advance directives will be available to healthcare providers in the medical record.

The IOM (2011) report *Crossing the Quality Chasm* identifies six aims for improvement and this initiative meets several of those aims. The implementation of the Respecting Choices© SACP will meet the goal of safety. Safety is described by the IOM (2011) as providing care that is intended to benefit patients while avoiding injury. By ensuring that patients’ wishes are known and documented healthcare providers can give care that is congruent with a patient’s wishes. This intervention also meets the IOM aim of *effectiveness*; described as providing services that are evidence-based. This project is also *patient-centered*, in that each individual patient’s needs, values, beliefs, and preferences are assessed and taken into consideration when they participate in the Respecting Choices© SACP.

While the overall initiative to implement the Respecting Choices© advance care planning model within the healthcare organization is a quality improvement project, the doctoral project,

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which evaluated program efficacy, was a program evaluation project. As previously stated, simply because there is evidence that an intervention (Respecting Choices©) is effective, does not mean that successful implementation of the intervention is guaranteed. The doctoral project utilized the implementation research framework developed by Proctor et al (2009) to develop outcome measures needed to determine the success of the Respecting Choices© SACP.

Need and Feasibility Assessment

An organizational assessment of the healthcare organization was previously completed utilizing the Burke and Litwin (1992) model of organizational performance and change. Burke and Litwin (1992) differentiate transformational and transactional changes within an organization. Transformational changes are described by Burke and Litwin (1992) as those in which, “alteration is likely caused by interaction with environmental forces (both within and without) and will require entirely new behavior sets from organization members (p.529). In contrast, transactional changes are described as those that occur as the result of relatively short-term reciprocity between individuals and groups. While transformational changes require leadership, transactional changes usually fall within the scope of a manager (Burke & Litwin, 1992).

The overall implementation of the Respecting Choices© system of advance care planning will require both *transformational* and *transactional* changes within the organization. Program implementation at the system level, which will require behavioral changes of both individual healthcare providers and system leaders towards advance care planning activities, will require *transformational* changes. Transformational changes are those that are influenced by organizational leadership, culture, mission and strategy, performance and external factors (Burke & Litwin, 1992). In contrast, implementation of the Respecting Choices© SACP within a

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specific unit, department, or clinic, will require *transactional* changes; those in which short-term reciprocity accomplishes the desired goal. Transactional changes are influenced by management practices, organizational structure, system policies and procedures, work unit climate, individual needs, values and motivation, tasks and skills of the individual, and individual and organizational performance (Burke & Litwin, 1992).

System Level Assessment

The system-level assessment of the healthcare organization was completed utilizing the *transformational* dynamics identified in the organizational assessment tool developed by Burke and Litwin (1992). Each of the previously described components of transformational change will be briefly described and the potential influences that these factors could have on the implementation of the Respecting Choices© SACP and the associated doctoral project will be explored.

External. External environment, as described by Burke and Litwin (1992) is, “any outside condition or situation that influences the performance of the organization” (p. 531). One of the most noteworthy changes that recently affected healthcare organizations in the United States is the transition from traditional fee-for-service reimbursement methods to value-based spending. This change shifts payment reimbursement models away from previous fee-for-service formats to newer structures that take into consideration the *value* and *quality* of the care that is provided (The Commonwealth Fund, 2015). By 2018 an estimated 90% of healthcare reimbursement will be tied to quality indicators (Centers for Medicare & Medicaid Services, 2015). In addition to value-based purchasing, bundled payments have also been introduced as an alternate method of reimbursement. Bundled payments are single payments made to a healthcare provider or healthcare organization (or both) for all of the services necessary to treat the patient

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for a given condition. Similar to value-based care, healthcare organizations are only able to remain profitable under the bundled payment system if they are able to provide care in an efficient, cost-effective manner while preventing complications. Due to the fact that 90% of healthcare spending is related to the treatment of chronic conditions (Centers for Disease Control and Prevention, 2015), effective chronic disease management, including advance care planning conversations, will be important to aide healthcare organizations in remaining profitable while providing high quality healthcare. To assist in ensuring that advance care planning conversations occur, CMS began providing reimbursement to providers for having advance care planning discussions in 2016 (Centers for Medicare & Medicaid Services, 2015). While reimbursement for advance care planning conversations will be advantageous to healthcare organizations, the overall changes to reimbursement may be challenging for some healthcare organizations to navigate.

In addition to the reimbursement challenges that healthcare organizations face, additional external factors exist. Culture and attitude of society is another external factor that the healthcare organization will encounter as the Respecting Choices© SACP is implemented. While it is generally understood that culture does have some impact on whether or not patients will participate in advance care planning, this effect is not well understood. Researchers have identified vast differences between ethnicities. While Euro Americans typically believe that the healthcare system was put in place to serve patients and view advance directives as helpful, African Americans are generally distrustful of the healthcare system and feel that wishes should not be expressed until the patient is very ill (Perkins et al., 2007). The culture and ethnicity of patients served by the healthcare organization will need to be assessed and considered during implementation of the Respecting Choices© system of advance care planning.

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Leadership. Burke and Litwin (1992) specifically differentiate between *leaders* and *managers*. Leaders are the executives that guide the organization and serve as role models for employees; *leaders* are utilized during transformational changes. The leadership structure at a healthcare organization as large as the organization in which this project was implemented is vast and complex. During the organizational assessment only leadership of the delivery system (hospitals, long-term care facilities, and ambulatory clinics) was considered. The healthcare organization had already dedicated executive leadership resources to improving advance care planning. The Respecting Patient Choices Improvement steering committee consists of not only nursing leaders, physicians, and quality improvement specialists, but also hospital executives including the Vice President of Hospital Quality & Patient Safety and the Vice President of Clinical Health Management Services.

Mission and strategy. The mission and strategy of an organization is defined by Burke and Litwin (1992) as, “what the organization’s (a) top management believes is and has declared the organization’s mission and strategy and (b) what employees believe is the central purpose of the organization” (p. 531). The mission of this healthcare organization is to improve the health of the communities served by the organization (Spectrum Health, 2015). The organization identifies people, brand, collaboration, critical thinking, finance, information technology, innovation, nimbleness, and process improvement as strategic enablers that will help the organization achieve its mission and vision (Spectrum Health, 2015).

Organizational culture. Organizational culture is described as, “the way we do things around here” (Burke & Litwin, 1992, p.532). It is further explained as the rules, values, and principles that guide the behavior of the organization. The healthcare organization has developed a set of values which “describe the philosophy, principles and ideals of the

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organization. Values define “how” we, as employees and as an organization, behave and make decisions” (2014, p. 1). Values identified by the healthcare organization include: excellence, accountability, compassion, integrity, respect, and teamwork.

Organizational and individual performance. Organizational and individual performance is the outcome, or result, of efforts put forth by the organization or the individual (Burke & Litwin, 1992). The healthcare organization is a system that has been awarded many accolades for providing high-quality healthcare. It is the only healthcare system in the state of Michigan to be named a Truven 15 Top Health system, a ranking based on quality, patient perception of care, cost, and efficiency (Spectrum Health, 2015). The healthcare organization also received Magnet® status re-designation in 2014, which signifies nursing excellence and outstanding patient care (Spectrum Health, 2014). These awards demonstrate the dedication of the healthcare organization to provide high-quality, cost-effective, patient care. Despite the overall excellence that has been demonstrated by the organization, there is still room for improvement related to advance care planning activities. Data collected from the congestive heart failure unit at the organization indicate that only 37 – 43% of patients admitted to the acute care setting have completed an advance directive (Spectrum Health, 2015).

Department Level Assessment

The department-level assessment of the healthcare organization was completed utilizing the *transactional* dynamics of the Burke and Litwin (1992) organizational assessment tool. The previously described transactional components will be briefly described and the potential influences that each factor may have on the implementation of the Respecting Choices© SACP implementation and the associated doctoral project will be explored.

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Management practices. Management practices are described by Burke and Litwin (1992) as how managers use resources, both human and material, to carry out the organization's strategy. The healthcare organization utilizes a shared governance structure, and while no single definition exists, characteristics of shared governance include empowerment, participation and collaboration in decisions that affect patient care and the general practice environment, and group governance (Anthony, 2004). Shared governance is realized at both the unit and system level in the form of unit-based shared leadership and central-based shared leadership. These committees may help make decisions on anything from strategic planning for the organization to unit-based social activities. When implementing changes in departments that affect the nursing staff it is important to not only have the support of the unit manager, but also of the unit-based shared leadership committee.

Structure. Burke and Litwin (1992) describe structure as the, "arrangement of functions and people into specific areas and levels of responsibility, decision-making authority, communication, and relationships to assure effective implementation of the organization's missions and strategy" (p.532). The shared governance model of leadership utilized by the organization is one example of a structure that is in place to facilitate implementation of the organization's strategic plan and achieving goals.

Additional structures that have been put into place include "service lines." The organization groups similar nursing units or patient care departments together, such as all of the adult critical care units, under one director. Utilizing this type of model can expedite decision-making across entire care areas and ensure more rapid communication as all managers receive consistent messaging from one leader. Similarly, all providers (physicians, physician assistants and nurse practitioners) that work in a specialty, such as cardiology, all report to one medical

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director or department head. A typical leadership team for a service-line includes the nursing director of the service-line, nurse manager, nursing supervisor and nurse educator for each inpatient unit or department and a physician medical director for each unit or specialty.

Many leadership teams within the organization meet on a monthly basis to discuss current issues, upcoming changes and progress made towards the strategic plan of the organization. During these meetings the nursing and/or medical directors can effectively communicate important information to all of the leadership of a service-line at once. In addition to service-line meetings there are separate monthly meetings in which all of the Nursing Directors and Nurse Managers meet to discuss organizational changes and progress towards goals set for in the strategic plan. These meetings provide a forum by which changes can be approved and information can be rapidly and effectively disseminated to all leaders within the organization. During implementation of the Respecting Choices© SACP having structures such as these already in place as a means to effectively communicate information will be important.

Systems. Systems are described by Burke and Litwin (1992) as the policies and procedures that organizations have in place to facilitate work. Due to the size of the organization and the number of facilities (hospitals, long-term care facilities, ambulatory care sites) that it is comprised of, the organization uses a web-based program to store thousands of policies and procedures. Policy Tech is an application that can be accessed by any employee from any site to rapidly locate and retrieve policies and procedures that are applicable for their work. When policies or procedures are changed or updated, these adjustments occur simultaneously across the entire system. This system ensures that policies and procedures are readily available to staff and that changes are synchronized. Having this system in place is important during the

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implementation of programs, such as Respecting Choices© because it helps assure that staff have the resources and information readily available to perform their job.

Another system that the organization has in place that may be important during implementation of the Respecting Choices© SACP is an online learning institute. The online learning institute is a web-based program through which educational modules can be assigned to staff. While some education may occur during face-to-face meetings and in-person classes, the online learning institute can utilize other formats such as videos and interactive simulations. This program can be utilized to assign educational materials to staff in various roles including nursing, medical and health information management staff. Through utilization of this system information can be built and rapidly disseminated to multiple staff members at various locations. The online learning institute automatically tracks completion of assigned learning modules and will notify managers of staff that fail to complete required training.

Work unit climate. Work climate, according to Burke and Litwin (1992), is the feelings, expectations, and impressions that employees have of their unit or department. These feelings affect the relationships that employees in the unit have with each other as well as the relationship that the department may have with other units or departments within the organization. One factor that significantly influences the work climate within the department is the professional model that is utilized. The healthcare organization uses Relationship Based Care (RBC) as its professional practice model. Relationship-Based Care is a model that focuses on improving relationships within the organization as a means to improve safety, quality, and patient and staff satisfaction (Creative Health Care Management, 2015). The organization has identified key relationships including: relationships with colleagues and interdisciplinary team members, relationships with patients and families, the relationship with the larger community

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and the relationship with self, including self-awareness and health behaviors (Spectrum Health, 2013). RBC constitutions are developed and revised by the Unit-Based Shared Leadership committees, this process ensures that staff have input into the work climate of their unit or department. When implementing changes to current practice, it is important to discuss the changes with the Unit-Based Shared Leadership committee and discuss how the changes may affect current RBC practices. During the implementation of a program that will affect the entire system, the organizations' Central Shared Leadership Committee can also be utilized. This leadership body is comprised of nursing staff from all departments and clinical units throughout the organization. While implementation of the Respecting Choices© program may vary slightly for each department and unit, general information about the project may be shared through this organizational structure.

Individual needs and values. Needs and values are the factors that provide meaning and worth to actions (Burke & Litwin, 1992). When implementing new initiatives, it is important to assess the needs and values of the individuals to determine how motivated they will be to enact the change. Multiple staff members that work at the acute care hospitals in the organization have communicated the value that they place on respecting patients' decisions about advance care planning and care received at end-of-life. Staff members that work on in-patient clinical nursing units within the organization were invited to attend a 'summit' to discuss how to improve advance care planning and end-of-life care (Spectrum Health, 2015).

Tasks and individual skills. Task requirements and individual skills are described by Burke and Litwin (1992) as the specific skills or knowledge that an individual will require to accomplish their work. When new initiatives, such as the Respecting Choices© SACP, are being implemented the learning needs of various staff members must be assessed. The educational

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needs of nursing staff are assessed by the Nursing Practice & Development department; a Request for Education is submitted and a Nurse Educator consultant is assigned to the project to help determine what educational needs may exist and how to address those needs. Educational needs of non-nursing staff are evaluated through similar processes. Once potential knowledge deficits have been identified appropriate educators develop a plan that may include in-person education or the development of an online self-learning module that can be assigned to staff.

Motivation. Motivation is a multifactorial component that is comprised of behaviors to complete goals and to persist until the goal is achieved (Burke & Litwin, 1992). The MITRE corporation (2013) recommends assessing which of the other factors seem to most impact staffs motivation when assessing how driven they may be to take the actions necessary to achieve a specific action. Motivation to improve advance care planning and overall end-of-life care at the healthcare organization appears high when evaluating the actions that have already taken to achieve this goal: the organization has devoted time and resources to the project as well as developed a steering committee comprised of key stakeholders and executive leadership. On in-patient pilot units, staff has already volunteered to become early adopters and champions of the new process, further highlighting the motivation of some staff to improve advance care planning within the organization.

Individual and organizational performance. Individual and organizational performance is addressed in both the transactional and the transformational components of the Burke and Litwin (1992) model. As already stated, the healthcare organization that has received multiple awards recognizing excellent nursing care and dedication to safe, high-quality, cost effective healthcare.

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Organizational Assessment Synthesis

Despite being a healthcare organization with a multitude of accolades for safety, quality, and patient satisfaction, advance care planning and end-of-life care is an opportunity for improvement for the healthcare organization. Assessment of internal data revealed that only 37-43% of patients admitted to one in-patient unit report having an advance directive and there are no data available to identify what percentage of these documents are collected and available in the medical record.

While structures for program implementation appeared strong, as identified through utilization of the Burke Litwin (1992) model, there were no procedures in place for the routine collection of data related to measuring program outcomes. The healthcare organization would have been unable to demonstrate the efficacy of the Respecting Choices© SACP without an effective evaluation plan in place. As stated by the Agency for Healthcare Research and Quality (2015) measuring outcomes is important to identify progress that has been made towards goals as well as identifying areas in which the intervention still requires improvement. When undertaking a quality improvement project, such as the Respecting Choices© SACP, the AHRQ (2015) recommends three steps: 1) identifying opportunities for improvement 2) selecting appropriate measures and 3) after obtaining baseline data of current practices, re-measure to assess the efficacy of improvement efforts. The healthcare organization had only completed two of the necessary steps. Step one had been completed and the organization had identified low completion rates of advance directives and lack of services to aide patients in participating in advance care planning as an opportunity for improvement. The healthcare organization had also begun the initial phase of step three: collecting baseline data. However, the organization had

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failed to identify what appropriate outcomes measures were for the selected quality improvement project.

Project Plan

Project Purpose & Objectives

The purpose of the doctoral project was to develop a process to evaluate the Respecting Choices© SACP implementation within the identified healthcare organization. Goals of the project included development of measurable implementation outcomes as well as determining how data to measure these outcomes would be collected. The doctoral project also established a process for continued evaluation of the efficacy of the Respecting Choices© system for advance care planning. The previously described implementation research framework developed by Proctor et al. (2009) was utilized to identify outcomes and methods of measurement.

Type of Project

As previously described, the overall implementation of the Respecting Choices© advance care planning program is a quality improvement initiative. The doctoral project was a program evaluation project to measure the efficacy of the Respecting Choices SACP *implementation*. This project is categorized as a program evaluation project. As stated by the World Health Organization (2007), “monitoring and evaluation of any programme or intervention is vital to determine whether it works, to help refine programme delivery, and to provide evidence for continuing support of the programme” (p. 121). Through the work of this doctoral project a process to evaluate program implementation of an evidence-based intervention (Respecting Choices© SACP) into practice within a specific setting (patient’s admitted to the congestive heart failure unit of an acute care hospital) was developed.

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Setting and Needed Resources

The doctoral project was conducted at a large, not-for-profit healthcare organization located in West Michigan. As previously described, the organization encompasses a vast network of acute, ambulatory, and long-term care centers in addition to an insurance provider. The scope of the doctoral project was limited to an in-patient pilot unit and the associated out-patient dyad clinic. The acute care center in which this project was conducted is a level I trauma center located in an urban West Michigan city. The hospital is comprised of more than 1,000 inpatient beds and nearly 300,000 total patient days (American Hospital Directory, 2016). The in-patient pilot unit is a 38 bed acute care cardiovascular unit that specializes in caring for patients with congestive heart failure (CHF). Average length of stay for patients admitted to the CHF unit is between 4.5 and 5 days. The associated out-patient dyad clinic is an advanced heart failure clinic. The processes and tools developed through the completion of this project have been provided to the healthcare organization to utilize as the Respecting Choices© system of advance care planning is implemented across the organization.

A number of resources were necessary to complete this project. The doctoral student collaborated with both data analysts and quality improvement specialists at the organization to determine the availability of data and develop a process for data dissemination. The quality improvement specialist also aided in the development of the quality dashboard that will now be used to track and disseminate Respecting Choices© outcomes. The doctoral student also required access to the Electronic Medical Record (EMR) to determine the availability of data. In addition to these individuals the doctoral student also worked with the Respecting Patient Choices Improvement steering committee which includes nursing leaders, physicians, Respecting Choices© faculty, and hospital executives.

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Design for Evidence-based Initiative

The doctoral project followed the implementation research framework developed by Proctor et al. (2009). This framework divides implementation outcomes into implementation, service, and client outcomes. Implementation outcomes are defined as the, “effects of deliberate and purposive actions to implement new treatments, practices, and services” (Proctor et al., 2011, p. 65). Implementation outcomes can be viewed as the necessary conditions that must be met before intervention or treatment outcomes can be realized; if a program is not implemented effectively the desired changes to practice will not occur. Implementation outcomes identified by Proctor et al. (2011) include: acceptability, adoption, appropriateness, costs, feasibility, fidelity, penetration and sustainability. See Appendix A for a diagram of the theoretical model.

Participants

As previously described, the scope of the doctoral project was limited to one in-patient unit within the acute care setting, the congestive heart failure unit, and the associated out-patient dyad clinic, the Advanced Heart Failure clinic. The congestive heart failure unit and the associated dyad clinic, the Advanced Heart Failure clinic, were utilized for this project as they were the pilot unit and clinic that were selected by the healthcare organization. This in-patient unit, and associated clinic, were selected as pilot areas by the healthcare organization because the heart failure clinic already had facilitators trained in the Respecting Choices© SACP. As other outpatient clinics train providers to become Respecting Choices© facilitators, associated in-patient units will implement the process of referring patients to those outpatient clinic for advance care planning. The goal of the healthcare organization is to implement a process by which any patient admitted to the acute care setting can be referred to an outpatient clinic after hospital discharge for an advance care planning conversation.

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Collection of medical record data to evaluate the Respecting Choices© SACP implementation was limited to patients that received care at the Advanced Heart Failure clinic and/or were admitted to the congestive heart failure in-patient unit.

Measurement: Sources of Data and Tools

A process to measure each of the previously identified implementation outcomes was developed to determine the overall success of Respecting Choices© SACP implementation. Suggestions for implementation measures, as provided by Proctor et al. (2009) and Proctor et al. (2011) were considered and the doctoral student proposed these possible outcome measures to the steering committee of the healthcare organization. The healthcare organization steering committee discussed the value of each measure, time and work involved in collecting the proposed measures and, in coordination with the doctoral student, developed a list of desired outcome measures. The doctoral student then collaborated with a quality improvement specialist from the healthcare organization's quality department as well as a data analyst from the healthcare organization's data analytics department to determine the feasibility of data collection for each of the desired outcome measures. At the request of the steering committee, electronic rather than manual data collection, was the preferred method due to the time and work involved in manual data mining. Detailed below is each implementation outcome, the data necessary to measure the outcome, and the process utilized by the doctoral student and the steering committee of the healthcare organization to select the individual indicators for each measurement.

Acceptability. As previously stated, acceptability is defined by Proctor et al. (2011) as, "perception among implementation stakeholders that a given treatment, service, practice, or innovation is agreeable, palatable, or satisfactory" (p. 67). Overall acceptability of advance care planning, and specifically the Respecting Choices© SACP had been previously demonstrated in

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multiple ways within the healthcare system. First, the United States Congress demonstrated the acceptability of advance care planning by implementing the Patient Self-Determination Act in 1991, requiring healthcare organizations to assess patients for the presence of advance directives. Second, the Institute of Medicine (2015) has identified advance care planning as “critically important” (p. 4) to providing high quality health care. The IOM has also specifically cited the Respecting Choices© model as an effective program to increase advance care planning activities.

Healthcare leadership within this healthcare organization have also demonstrated acceptability of the Respecting Choices© SACP by contracting with the Gundersen Health System to implement Respecting Choices©. It was further determined by the steering committee and the doctoral student that acceptability within the organization had been demonstrated by the number of staff that attended an advance care planning and end-of-life improvement summit at the healthcare organization. Further evidence of initial acceptability for this intervention was also demonstrated by the number of staff that volunteered to become early adopters on the congestive heart failure unit.

Within the scope of this doctoral project further measures of acceptability were not developed. It was the consensus of the doctoral student and members of the steering committee that acceptability had already been demonstrated by the healthcare organization as well as individuals and further measures were not necessary.

Adoption. As previously described, adoption is the, “intention, initial decision, or action to try or employ an innovation or evidence-based practice” (Proctor et al., 2011, p. 69).

Literature indicates that healthcare organizations can effectively evaluate how well they are engaging patients in advance care planning by assessing the number of patients that have an advance directive and availability of the document in the medical record (Hammes et al., 2010).

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It was determined by the doctoral student in coordination with the steering committee of the organization that an effective measure to determine adoption, or uptake, for the Respecting Choices© program was to assess the overall percentage of patients with advance directives that are treated at the advanced heart failure clinic or admitted to the congestive heart failure unit.

This data was collected by the healthcare organization's data analytics department by evaluating the overall number of patients cared for on the congestive heart failure unit and at the advanced heart failure clinic that have an advance care planning document available in the medical record. Baseline data was collected and is presented in Appendix C, baseline data will then be compared to the percentage of patients with an advance directive 3, 6, 9, 12, and 18-months post-implementation. The Respecting Patient Choices Improvement steering committee will evaluate post-implementation data to determine if the program is demonstrating improved outcomes. As additional in-patient units and departments implement the Respecting Choices© SACP baseline adoption measures will also be collected for these units and then monitored by the steering committee to determine program efficacy.

The previously described, adoption measure captures the overall adoption of the program within the healthcare organization. Adoption could also be measured at the provider level. One way in which the healthcare organization could measure adoption at the provider level would be to track referral orders for advance care planning by ordering provider. Low volumes of referral orders by a specific provider or service could indicate a lack of adoption or uptake.

Unfortunately, the healthcare organization does not currently have a process in place by which a provider can place an order in the electronic medical record to refer a patient for advance care planning services at the outpatient clinic. The current process at this organization involves verbal communication between the provider and the outpatient clinic. After the outpatient clinic

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receives notification from the provider that the patient needs an advance care planning appointment, the clinic contacts the patient to setup an advance care planning appointment at the clinic after the patient is discharged from the hospital.

The doctoral student and healthcare organization steering committee discussed the possibility of creating an orderable in the electronic medical record (EMR) by which a provider in the acute care setting could place a referral order to the outpatient clinic. Currently the healthcare organization lacks this ability as the in-patient setting and the outpatient setting are utilizing different electronic medical records that are not integrated. The healthcare organization plans to update the in-patient EMR in 2017 at which time the in-patient and outpatient settings will start using an integrated medical record. The doctoral student made a recommendation to the steering committee of the healthcare organization that at the time of medical record integration measures of individual provider adoption should be monitored by assessing the overall number of advance care planning referrals that a provider is ordering.

Appropriateness. As previously stated, appropriateness is the, “perceived fit, relevance, or compatibility of the innovation or evidence based practice for a given practice setting, provider, or consumer” (Proctor et al., 2011, p. 69). The proposed measure for appropriateness was to develop either a survey or focus groups. It was anticipated that this survey or focus group could be conducted with staff working on the pilot unit that were familiar with the process that would be utilized to refer patients to the outpatient clinic for advance care planning appointments. Within the scope of the doctoral project this outcome was unable to be measured.

During the time that measures were being proposed it was anticipated that the Respecting Choices© SACP would be implemented on a pilot unit by March 1st. Due to issues with

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implementation, the Respecting Choices© SACP has not yet been implemented on the pilot unit. Staff have not yet received education on the new advance care planning process and are not yet aware of what their roles and responsibilities related to this new process will be. For this reason it was determined that it would be impossible to survey or facilitate focus groups asking staff to evaluate the appropriateness of the intervention within their work environment. The Respecting Patient Choices Improvement steering committee would like to continue to pursue measuring appropriateness. The steering committee is in the process of developing a survey tool that could be administered to nurses on the pilot unit during and after implementation of the Respecting Choices© SACP. Appropriateness will not be measured at the out-patient clinic as the staff and providers at that clinic have already demonstrated that the program is appropriate by actively participating for several years.

Costs. As previously stated, the costs for an intervention can vary greatly and are affected by the implementation strategy used as well as the location of service delivery. Implementation of the Respecting Choices© SACP has been on-going for several years, which would make it difficult to determine the overall costs associated with program implementation. For this reason, overall program costs were considered outside the scope of this project. Some approximate costs were able to be calculated for the development of the quality dashboard and associated toolkit to evaluate program implementation.

The majority of the work of this project was completed by the doctoral student with assistance from quality improvement specialists and data analysts. The doctoral student spent an average of 6 hours per week on the project during the two semesters in which this project was completed for a total of approximately 200 hours. This work was completed at no cost to the organization as the doctoral student was not compensated for time spent on the project. Average

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salary for a nurse researcher is approximately \$72,000 per year (graduatenuisingedu.org, 2016).

If the organization had paid a nurse researcher to conduct this project it is estimated that approximately \$7,500 of the researcher's annual salary would have been paid for time working on this project.

Average salary for a quality improvement specialist (QIS) is \$60,000 per year (glassdoor.com, 2016), with an additional \$16,000 in benefits, or an average hourly salary of approximately \$39.50. The QIS that works with the Respecting Patient Choices Improvement steering committee has on-going duties with the implementation of the Respecting Choices© SACP that were outside of the scope of the doctoral project. However, estimations have been made for the amount of time, and associated costs, that the QIS spent working directly with the doctoral student on this project. It is estimated that the quality improvement specialist spent approximately 15 hours during the two semesters that this project was completed working directly with the doctoral student. This results in approximately \$600 of the quality improvement specialist's salary being paid to work directly on this project. The average annual salary for a data analyst is also approximately \$60,000 (glassdoor.com, 2015), plus an additional \$16,000 in benefits, for an average hourly salary of \$39.50. It is estimated that the data analyst spent approximately 20 hours working directly on this project, at an estimated cost of \$790. It is also estimated that the data analyst will spend approximately 4 hours every three months maintaining the quality dashboard which will account for an additional \$475 in costs to the organization per year.

Feasibility. Feasibility was previously defined as, ‘the extent to which a new treatment, or an innovation, can be successfully used or carried out within a given agency or setting’ (Proctor et al., 2011, p. 69). Respecting Choices© program feasibility was measured in several

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ways. First, the amount of time that it took a nurse to implement the new process was measured to determine feasibility on a larger scale. A single registered nurse (RN), on restricted duty, on an inpatient unit at the organization completed the proposed nursing workflow with 52 patients. Of the 52 patients that the RN interacted with, 14 *had* an advance directive document; average time that it took the RN to validate with the patient that the document was complete and accurate ranged from 1 to 7 minutes. Thirty-eight of the patients the RN interacted with did *not* have an advance directive; average time to provide the patient with basic information about advance care planning and answer questions ranged from 2 to 9 minutes. Average time the RN spent discussing advance directives and advance care planning during the in-patient admission process was 3.75 minutes. The Respecting Patient Choices Improvement steering committee will continue to collect and monitor data related to the time it takes RNs to complete the new inpatient admission process when the program is implemented on the pilot unit. This data will be collected manually on a paper form and tracked by the Respecting Patient Choices Improvement steering committee. This data will be reviewed by the steering committee as well as hospital leadership (nursing unit managers and directors) to assess for continued feasibility of the process.

Another measure of feasibility that was measured was the overall percentage of patients that had an advance directive documented in the medical record, prior to implementation. A 12-month period from July 2014 through June 2015 was assessed. The percentage of patients admitted to the congestive heart failure unit during this 12-month period that reported *having* an advance directive ranged from 37 – 43%, with an average of 39.9%. This baseline information will be compared by the Respecting Patient Choices Improvement steering committee to the

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overall percentage of patients that have an advance directive at 3, 6, 9, 12, and 18 months post-implementation.

Fidelity. As previously described, fidelity is defined by Proctor et al. (2011) as, “the degree to which an intervention was implemented as it was prescribed in the original protocol or as it was intended” (p. 69). As part of the Respecting Choices© SACP, registered nurses will validate that advance care planning documents are complete and appropriate before incorporating them into the Electronic Medical Record. This process will include validating that documents are signed, dated, and witnessed and that treatment preferences are up-to-date and ensuring that it is the appropriate document (for example, power of attorney for *healthcare* versus power of attorney for *finance*).

Fidelity was measured by reviewing documents that were labeled ‘advance directives’ and incorporated into the EMR to determine if they were complete and appropriate. Baseline fidelity measures for the pilot unit were obtained via manual review of documents that were uploaded into the electronic medical record of the patient either by nursing staff or health information management (HIM) staff. All documents that were uploaded into the ‘advance directives’ tab of the electronic medical record for patients on the in-patient pilot unit between January 4th, 2016 and March 10th, 2016 were reviewed. In total, 89 documents were uploaded into the electronic medical record and all documents were reviewed. This revealed that only 22% of the documents uploaded into the EMR were complete, accurate documents. Of the documents uploaded into the EMR, 43% of the time the wrong documents were uploaded. In this situation a document may have been titled as ‘advance directive,’ but an out-of-hospital *Do Not Resuscitate* order or *Statement of Treatment Preferences* for example, was uploaded into the patient’s electronic medical record. Review of the documents also demonstrated that 17% of the

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time advance directives were uploaded and incorrectly titled as other documents, such as designation of power of attorney for healthcare. These advance directives were complete documents, but incorrectly titled as another type of ACP document. Advance directives were correctly titled and uploaded into the EMR were still missing information 13% of the time. The most commonly identified missing information was the signature of acceptance of the patient advocates, followed by missing dates. Lastly, 5% of the documents that were uploaded into the 'advance directive' tab of the EMR were actually designations for *financial* power of attorney. Baseline fidelity data is located in Appendix C.

Health Information Management (HIM) staff uploaded nearly 80% of the documents, with the other 20% uploaded by nursing staff on the inpatient unit. As staff receives education related to advance care planning documents, the percentage of complete and accurate documents that are uploaded into the electronic medical record is expected to increase. If the percentage of complete and accurate documents uploaded into the EMR does not increase, this may point to a gap in knowledge on the part of either nursing staff or HIM staff. The Respecting Patient Choices Improvement steering committee will continue to monitor data related to the percentage of complete and accurate documents that are uploaded into the electronic medical record and compare this to baseline data that has been obtained.

An additional measure of fidelity was assessed during the completion of this project. The doctoral student compared patient's advance care planning documents to their inpatient resuscitation orders in an attempt to determine concordance. The student conducted a manual review of the medical records of patients that were admitted to the hospital with a *Do Not Resuscitate* (DNR) order from outside of the acute care setting to determine if providers were discussing goals of care with the patient and writing appropriate resuscitation orders for the acute

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care setting. The records of all patients admitted to the congestive heart failure unit between January 4th, 2016 and March 10th, 2016 that had a documented DNR order from an outside facilitate were reviewed. In total, 13 patients were identified that were admitted to the acute care hospital with a DNR order; there was 100% concordance in DNR orders across care settings. This review demonstrated that providers are reviewing patient's advance care planning documents and writing resuscitation orders in the acute care setting that are in concordance with the patient's wishes. This concordance data will be provided to the Respecting Patient Choices Improvement steering committee.

Penetration. Penetration has been defined by Proctor et al. (2011) as, "integration of a practice within a service setting and its subsystems" (p.70). For this project penetration could have been assessed in several ways. First, overall service penetration could be assessed by determining the number of patients cared for at the advanced heart failure clinic and the inpatient unit that received an advance care planning referral to a Respecting Choices© facilitator, that number could then be divided by the total number of individuals cared for in those areas that are eligible for an advance care planning referrals. Provider penetration could be assessed by determining the total number of providers that order advance care planning referrals and dividing that by the total number of providers that have been trained on the process and are able to order referrals. Finally, the number of patients that created advance care planning documents with a facilitator could be divided by the total number of patients that were referred to an advance care planning facilitator and attended at least one appointment.

Unfortunately, there was not a process within the healthcare organization for providers to place a referral order into the EMR in the inpatient setting and have the order available in the outpatient clinic. Currently the acute care hospitals and ambulatory care centers utilize different

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electronic medical record programs. Lack of integration between the EMRs has resulted in a process that relies on verbal communication between the provider and the outpatient clinic, with little or no information in the EMR to indicate that the patient was referred for advance care planning. As this healthcare organization transitions to an EMR that will be integrated across care settings, it has been recommended that a process for advance care planning referrals should be developed. An orderable placed into the EMR would allow for a variety of valuable outcome measures to be efficiently mined from the EMR and tracked to evaluate program efficacy.

Due to the fact that many of the proposed penetration outcomes were unable to be measured, the doctoral student completed manual chart reviews of patient records in an attempt to determine if providers are currently placing any documentation related to advance care planning in the electronic medical record. A manual chart review of all patients admitted to the inpatient pilot unit with a diagnosis of congestive heart failure that were treated by the advanced heart failure team was completed. Ten individual patients were identified during this time and their medical records were reviewed to determine if there was any documentation of advance care planning discussion or referral. In six of the ten charts there was no documentation of any discussion of advance care planning, goals of care, or code status with the patient. One patient was referred to palliative care to discuss goals of care. In one situation the provider documented in the patient's admitting history and physical that the patient had an advance directive, but no documents were uploaded into the EMR. In contrast, two other patients *had* advance care planning documents in the EMR and the providers did not document any acknowledgement of these documents. This manual chart review demonstrated that only a very small portion of providers are documenting discussions about advance care planning or referring patients for advance care planning or palliative care services.

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Sustainability. As previously stated, sustainability is defined by Proctor et al. (2011) as, “the extent to which a newly implemented treatment is maintained or institutionalized within a service setting’s ongoing, stable operations” (p. 70). The doctoral student worked in conjunction with the quality improvement specialist and data analyst to develop a quality dashboard, comprised of the outcome measures previously discussed. This quality dashboard will be utilized by the Respecting Patient Choices Improvement steering committee to routinely monitor the ongoing efficacy of the Respecting Choices© implementation. Although the doctoral student will not be able to measure long-term sustainability of the Respecting Choices© SACP within the scope of this project, the doctoral student has worked with the steering committee to develop a process by which the overall efficacy of the Respecting Choices© implementation can be measured. The Respecting Patient Choices Improvement steering committee will utilize the program evaluation tools and dashboard developed through the work of this doctoral project to measure the long-term outcomes of the Respecting Choices© SACP implementation.

Steps for Implementation and Timeline

The following describes the steps that were taken for implementation of the project as well as the timeline that was followed. The first step was to work in conjunction with the hospital steering committee to identify a clinical unit or department that was planning to implement the Respecting Choices© system of advance care planning within the next 6 – 12 months. Once a target unit or department was identified the next step of the project was to utilize the previously described outcome measures and determine what baseline data related to advance care planning needed to be obtained. This determination was made in conjunction with the steering committee of the healthcare organization. Baseline data were collected prior to the implementation of any advance care planning interventions in the acute care setting.

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Once the desired baseline data measures were identified, a process by which these measures could be collected was developed. For the current project the doctoral student worked with a quality improvement specialist from the quality department of the healthcare organization as well as a data analyst from the data analytics department to determine how to collect baseline data from the electronic medical record for patients on the pilot unit. For this project, specific permission from the organization was not necessary for the student to utilize the assistance and services of the quality or data analytics department. It was necessary for the doctoral student to complete a detailed request for information which was then submitted to the data analytics department. This request was then evaluated and approved by the appropriate department, all of which had to be taken into consideration when developing a timeline for project completion.

During the process of identifying and obtaining baseline data, it became apparent that data would not be available for all of the proposed measures. This required the doctoral student to work in conjunction with the steering committee to determine alternate methods of data collection, if at all possible. For this project many of the proposed penetration measures were unable to be collected. The doctoral student worked with representatives from the hospital steering committee to determine what other methods could be used to assess intervention penetration.

To ensure sustainability of this project the doctoral student worked with the quality department and the data analytics department to establish a process by which the identified outcome measures could be collected on a routine basis. The frequency by which these measures will be collected was determined in conjunction with the steering committee of the healthcare organization. For this project a timeframe of three months was established. This timeframe was determined by the doctoral student, steering committee representatives, and the data analyst as a

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timeframe which would allow for close monitoring of outcomes yet not place undue burden on the data analytics department.

As post-implementation data become available the information will be incorporated into a quality dashboard that has been developed for the specific inpatient unit or outpatient dyad clinic. For this project the quality dashboard was developed by the data analytics department with input from the doctoral student and the hospital steering committee. It was necessary for the doctoral student attempting to implement this project to determine what tools and resources were available for developing a quality dashboard. The doctoral student began planning and discussions with the quality and data analytics departments as soon as possible as quality dashboard development can take a significant amount of time.

To ensure sustainability of this project the doctoral student worked with the hospital steering committee to ensure that the data being collected would be reviewed and evaluated. For this project the doctoral student worked in conjunction with the Respecting Patient Choices Improvement steering committee to ensure that the data that was collected would be useful to the steering committee in their overall evaluation of the program. To further ensure sustainability, the doctoral student provided the organization with the program evaluation 'toolkit' that was developed during this project. This program evaluation toolkit will then be utilized by the organization to collect baseline data and develop quality dashboards for additional in-patient units and outpatient dyad clinics as the Respecting Choices© SACP is implemented throughout the organization.

The final step of this project was to complete a final report that will be presented to the steering committee and/or hospital leaders. This final report describes the process by which the outcome measures were identified and collected, provides recommendations or alternative

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methods of data collection for proposed measures that were unable to be collected, and includes a program evaluation ‘toolkit’ with instructions for how the organization will initiate data collection when the intervention is implemented within other units or departments.

Budget

The majority of expenses for implementation of the Respecting Choice© program within the healthcare organization were related to putting the model into practice, not program evaluation. It is estimated that approximately \$1400 of costs were incurred during the completion of this project. These costs were related to time that the doctoral student spent in collaboration with data analysts (\$800) and quality improvement specialists (\$600). It is further estimated that the healthcare organization will spend approximately \$500 for the data analyst to continue to collect data and maintain the quality dashboard. These costs were paid for by the healthcare organization and no budget reconciliation was necessary. The majority of the labor for this project was provided by the doctoral student at no cost to the organization.

Ethics and Human Subjects Protection

Ethics and Human Subjects Protection was not applicable to this doctoral project. The project was an evaluation of a quality improvement initiative that did not involve research related to human subjects. Letters of ‘not research’ determination were obtained from the Internal Review Boards of both Grand Valley State University and the healthcare organization.

Project Outcomes

The outcome of this doctoral project was the development of a quality dashboard and a process for mining data from the EHR by which the Respecting Patient Choices Improvement steering committee can measure the overall efficacy of the Respecting Choices© SACP implementation within the healthcare organization. At the completion of this doctoral project the

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identified outcome measures and location of where the information is taken from the EHR was provided to the Respecting Patient Choices Improvement steering committee in the form of the Program Evaluation 'Toolkit'. Baseline measurements are located in Appendix C. The Program Evaluation Toolkit is located in Appendix B. The process developed through the completion of this project will be used by the Respecting Patient Choices Improvement steering committee to evaluate program outcomes as additional inpatient units and dyad clinics implement the Respecting Choices© system of advance care planning across the organization.

In conjunction with the quality improvement specialist and data analyst a quality dashboard was developed during the completion of this doctoral project. This quality dashboard is a tool that will be used by the Respecting Patient Choices Improvement steering committee to assess implementation of the Respecting Choices© SACP. The dashboard will be accessible to the Respecting Patient Choices Improvement steering committee, as well as hospital leaders, via the organization's intranet site. As the Respecting Choices© system of advance care planning is implemented across the organization data for additional inpatient units and outpatient dyad clinics can be incorporated into the dashboard.

Implications for Practice

Summary of Adversities

During the completion of this doctoral project a number of achievements and adversities were recognized. The largest adversity that was faced during the completion of this project was the limitation of the EHR being used in the inpatient setting. The healthcare organization is transitioning to a new EHR platform in 2017 and as such no further changes are being integrated into the current EHR. This limited data mining to fields that already existed within the current electronic health record. Another challenge that was encountered during this project was that the

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inpatient setting utilizes a different EHR platform than the outpatient dyad clinic. This added a layer of complexity to collecting data as referrals and orders from one EHR did not integrate with the other EHR. This lack of integration has resulted in many work-arounds in both the inpatient and outpatient setting and resulted in data that could not be extracted from a discrete field within the electronic health record.

An achievement of this project was the acceptance received by the Respecting Patient Choices Improvement steering committee to utilize the process and tools developed during this project to continue to measure efficacy of the Respecting Choices© SACP as it is implemented throughout the organization. Data will continue to be gathered and evaluated after the completion of the doctoral students work, contributing to the sustainability of this project.

Project Strengths and Weaknesses

This project has several strengths and weaknesses. As previously stated, one strength of this project is the sustainability. The Respecting Patient Choices Improvement steering committee has fully adopted and approved this project and already has plans to utilize the quality dashboard and the process for data collection as other inpatient units and outpatient dyad clinics implement the Respecting Choices© SACP. In addition to the acceptance of the steering committee, nursing directors within the hospital are also interested in the data that will be collected and how the outcomes of the Respecting Choices© SACP will be measured.

A weakness of this project is that the Respecting Choices© SACP has not yet been implemented on an inpatient unit and the doctoral student will not have the opportunity within the scope of this project to determine if post-implementation data is able to be collected and utilized as intended. Another weakness of this project is that a measure of healthcare provider culture change was not integrated into this project. Gaining knowledge, skill, and comfort with

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advance care planning discussions has been correlated with higher patient completion rates of advance directives (Dube et al., 2015; De Vleminck et al., 2013; DeLaGarza et al., 2001).

Despite the importance of assessing health care providers' skill and comfort with these topics, a direct measure was not incorporated into this project. The comfort and skill of healthcare providers with advance care planning was not measured within the scope of this project, in part because many of the staff and providers had not yet received education related to advance care planning. Without providing information about advance care planning, and what the role and responsibilities of the individual staff member or provider would be, it would have been difficult for staff to assess their comfort level or skill.

If measures of adoption and penetration demonstrate that some providers have lower rates of referrals for advance care planning, this *may* be an indicator of provider comfort and knowledge with the topic. If measure of adoption and penetration are low for specific providers, or even groups or providers, it may be appropriate for the Respecting Patient Choices Improvement steering committee to consider if providers need additional education or training related to advance care planning.

Another weakness of this project was that some of the outcome measures were not able to be collected. Through the work of this project the doctoral student noted many work-arounds that had been developed in both the inpatient and outpatient setting because of the lack of integration between the two EMRs. Many of the proposed penetration measures, including volume of referrals by provider and percentage of eligible patients referred for services are currently not able to be measured for the inpatient setting. Penetration measures were also unable to be collected for the outpatient dyad clinic. In the outpatient setting providers utilize standardized documents and templates in the EMR which cue the provider to discuss advance

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care planning. The outpatient heart failure clinic currently does not monitor or track if or when referrals for advance care planning are made. Providers in the outpatient clinic do not place a referral order for advance care planning.

Recommendations for how penetration outcomes may be measured in the future have been suggested by the doctoral student and are located in the Program Evaluation Toolkit located in Appendix B.

Relation to Healthcare Trends

Increasing emphasis in healthcare has been placed on improving populational health and the patient experience (quality and satisfaction) while reducing the cost per capita of healthcare, known as the ‘triple aim’ (Institute for Healthcare Improvement, 2014). The United States spends 17% of the country’s gross domestic product on healthcare (Institute for Healthcare Improvement, 2016) with nearly 90% of that money going towards the management of chronic conditions (Centers for Disease Control and Prevention, 2015). Utilization of evidence-based interventions, such as the Respecting Choices© system of advance care planning, is one way for healthcare organizations to not only increase patient satisfaction and deliver higher quality healthcare but also reduce cost.

Another trend in healthcare is the importance of outcomes. Despite the fact that numerous interventions are being implemented across various healthcare settings every day, little research has been done to evaluate the efficacy of these implementations. As stated by Proctor et al., “established evidence for a ‘proven’ treatment does not ensure successful implementation” (2011, p. 73). Implementation of an intervention requires not only enacting the treatment, but also taking into consideration the large number of contextual factors, both within and outside of the organization, that can affect the implementation of a project. This doctoral project not only

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contributed to the substantial evidence that exists about the efficacy of the Respecting Choice© SACP as a proven intervention to increase advance care planning activities, but also contributed to the small but growing body of knowledge related to program evaluation. This knowledge can be used in future endeavors to help improve the process of program implementation.

Reflection on the DNP Essentials

The completion of this doctoral project was intended to aid in the realization and fulfillment of the Doctor of Nursing Practice Essentials. These Essentials include: (I) Scientific Underpinnings for Practice (II) Organizational and Systems Leadership for Quality Improvement and Systems Thinking (III) Clinical Scholarship and Analytic Methods for Evidence-Based Practice (IV) Information Systems/Technology and Patient Care Technology for the Improvement and Transformation of Health Care (V) Health Care Policy for Advocacy in Health Care (VI) Interprofessional Collaboration for Improving Patient and Population Health Outcomes (VII) Clinical Prevention and Population Health for Improving the Nation's Health and (VIII) Advanced Nursing practice (American Association of Colleges of Nursing, 2006). The completion of this doctoral project fostered growth and increased knowledge in all of the DNP Essentials, Essentials that were especially significant for this project included: Organizational and Systems Leadership and Systems Thinking, Clinical Scholarship and Analytic Methods for Evidence-Based Practice, Information Systems and Technology for Improvement and Transformation of Health Care, and Interprofessional Collaboration. This project required a significant amount of coordination and collaboration with other members of the interdisciplinary team including physicians, nurse case managers, social workers, and nursing support staff as well as non-clinical staff including quality improvement specialists and data analysts.

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This project also significantly impacted the doctoral students' knowledge and understanding of Informatics and how to effectively mine data from an electronic health record. As healthcare organizations become more aware of measuring outcomes, the need for health care leaders that assist with the development of innovative electronic medical records will grow. Future electronic health records need to be created for the purpose of effectively managing populational health and these EHRs need to be equipped with the ability to efficiently obtain data and measure outcomes.

Organizational and Systems Leadership was another Essential that was significantly impacted through the completion of this doctoral project. The scope of this project, and attempting to measure outcomes of an evidence-based intervention across care settings, required the DNP student to evaluate the entire healthcare delivery system. This project required evaluation and consideration for multiple care settings, various teams of professionals, both clinical and non-clinical, and an understanding of the healthcare system at large.

Plans for Dissemination of Outcomes

The outcomes from this doctoral project will be presented to the healthcare organization's Respecting Patient Choices Improvement steering committee. This final project will also be submitted to Grand Valley State University for ScholarWorks© publication. The doctoral student is also pursuing other dissemination opportunities including submitting a poster for inclusion into the annual Nursing Research Fair that is sponsored by the healthcare organization in which this project was completed.

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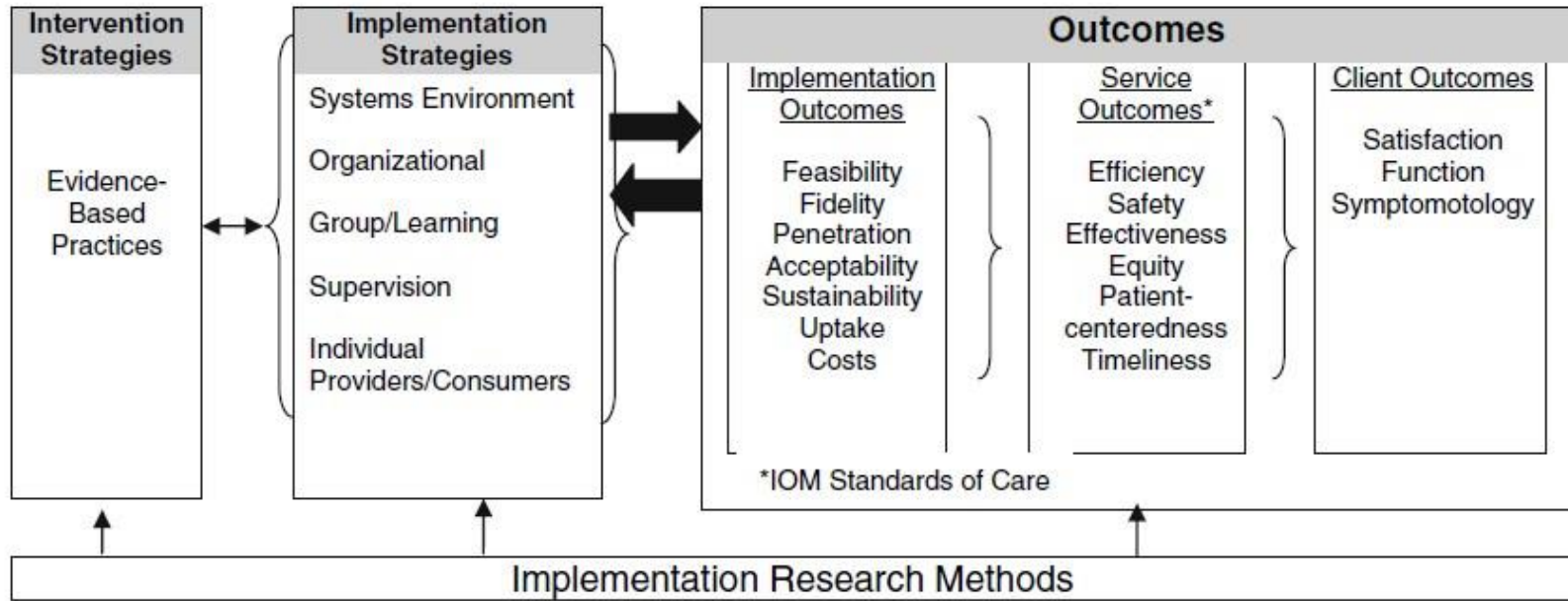
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Appendix A: Conceptual Model of Implementation Research



From “Implementation Research in Mental Health Services: an Emerging Science with Conceptual, Methodological, and Training Challenges,” by E. K. Proctor et al, 2009, *Administration and Policy in Mental Health and Mental Health Services Research*, 36, 29.

Appendix B: Program Evaluation ‘Toolkit’

Respecting Choices© System of Advance Care Planning Program Evaluation ‘Toolkit’

Nicole M. Harpold

Grand Valley State University

Introduction

This program evaluation ‘toolkit’ was developed to assist healthcare organizations in evaluating the efficacy of the Respecting Choices© system of advance care planning (SACP). A large body of evidence supports that the Respecting Choices© SACP is an effective advance care planning intervention. Unfortunately, efficacy of an intervention does not guarantee that it can be effectively implemented into a given setting.

This toolkit utilizes the implementation outcomes developed by Proctor et al. (2009) and Proctor et al. (2011). These implementation outcomes include: acceptability, adoption, appropriateness, costs, feasibility, fidelity, penetration, and sustainability. For outcomes that were not able to be measured, recommendations for possible future measures have been made.

These outcome measures were collected with the approval and assistance of the healthcare organization steering committee. The doctoral student worked in close collaboration with both quality improvement specialists from the quality department and data analysts from the data analytics department of the healthcare organization to develop this toolkit and collect baseline measurements. The baseline measures detailed in this toolkit were collected from a single inpatient pilot unit and the associated outpatient dyad clinic.

Definition of Terms

The following explains and defines terms that are used within the Program Evaluation Toolkit. *Implementation Outcome* refers to the outcomes measures identified by Proctor et al. (2009) and Proctor et al. (2011). *Measurement* refers to the actual information that was collected to assess the identified outcome. *Data Location* refers to where the information was located, or mined, from the electronic medical record (EMR). These locations are specific to the utilization of Cerner© in the inpatient setting and Epic© in the outpatient setting. If this toolkit is being utilized to locate data within other electronic medical records these locations may be different.

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Collection Method identifies if the data were able to be collected via an electronic or manual method; whenever possible electronic methods were utilized. *Data Review Frequency* refers to how often the collected data will be reviewed and analyzed by the steering committee. Lastly, *Data Collector* refers to the individual, department, or group that is responsible for collecting the identified data.

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Program Evaluation Toolkit

Implementation Outcome	Measurement	Data Location	Collection Method	Data Review Frequency	Data Collector
Adoption	% of patients treated at the dyad clinic with an advance directive	Presence of a document in the 'advance directives' tab of the EMR	Electronic	Quarterly	Data Analyst
	% of patients admitted to the inpatient unit with an advance directive	Presence of a document in the 'advance directives' tab of the EMR	Electronic	Quarterly	Data Analyst
*Appropriateness	Staff/Provider Survey		Manual	Pre- and post-implementation	Steering Committee
	Staff/Provider Focus		Manual	Pre- and post-implementation	Steering Committee
Costs	Estimated hourly wage of QIS multiplied by hours spent on project	Salary estimate from Human Resources	Manual calculation	Pre-implementation	Steering Committee
	Estimated hourly wage of Data Analyst multiplied by hours spent on project	Salary estimate from Human Resources	Manual calculation	Pre-implementation	Steering Committee
Feasibility	RN time completing inpatient admission process	Paper worksheet completed by RN	Manual	Pre-implementation	Steering Committee
	% of patients admitted to the inpatient unit with an advance directive	Presence of a document in the 'advance directives' tab of the EMR	Electronic	Quarterly	Data Analyst
	% of patients treated at the dyad clinic with an advance directive	Presence of a document in the 'advance directives' tab of the EMR	Electronic	Quarterly	Data Analyst

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Fidelity	% of documents uploaded into the EMR that are complete & accurate	Review of documents uploaded into the 'advance directives' tab of the EMR	Manual	Quarterly	HIM Data Analyst
	DNR order concordance	Review of inpatient resuscitation orders and comparison to outpatient resuscitation orders/documents	Manual	Pre-implementation	Steering Committee
Penetration	Provider documentation of advance care planning discussion	Review of history & physical and physician progress notes	Manual	Pre-implementation	Steering Committee
*Penetration	% of patients treated at the dyad clinic that are referred for ACP	Presence of an ACP referral order in the EMR	Electronic	Pre-implementation Post-implementation	Data Analyst
	% of patients admitted to the inpatient unit that are referred for ACP	Presence of an ACP referral order in the EMR	Electronic	Pre-implementation Post-implementation	Data Analyst
	# of ACP referrals by provider	Stratification of ACP referral orders by ordering provider	Electronic	Post-implementation	Data Analyst
	# of patients that complete an advance directive divided by the total number of patients that attend at least 1 ACP appointment	Stratification by ACP referral order and presence of a document in the 'advance directives' tab in the EMR	Electronic	Post-implementation	Data Analyst
Stratification by ACP referral order and presence of encounter/visit for ACP					

*Identifies outcomes measures that were unable to be collected during the completion of the doctoral project and provides recommendations for how these measures may be collected in the future.

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Appendix C: Baseline Measurements

Implementation Outcome	Measurement	Data Location	Collection Method	Data Collector	Baseline Data
Adoption	% of patients treated at the dyad clinic with an advance directive	Presence of a document in the 'advance directives' tab of the EMR	Electronic	Data Analyst	
	% of patients admitted to the inpatient unit with an advance directive	Presence of a document in the 'advance directives' tab of the EMR	Electronic	Data Analyst	39.9%
Costs	Estimated hourly wage of QIS multiplied by hours spent on project	Salary estimate from Human Resources	Manual calculation	Doctoral Student	\$600
	Estimated hourly wage of Data Analyst multiplied by hours spent on project	Salary estimate from Human Resources	Manual calculation	Doctoral Student	\$800
Feasibility	RN time completing inpatient admission process	Paper worksheet completed by RN	Manual	Steering Committee	Average 3.75 minutes
	% of patients admitted to the inpatient unit with an advance directive	Presence of a document in the 'advance directives' tab of the EMR	Electronic	Data Analyst	39.9%
	% of patients treated at the dyad clinic with an advance directive	Presence of a document in the 'advance directives' tab of the EMR	Electronic	Data Analyst	

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Fidelity	% of documents uploaded into the EMR that are complete & accurate	Review of documents uploaded into the 'advance directives' tab of the EMR	Manual	HIM Data Analyst	- Complete & Accurate 22% - Wrong Documents 43% - Wrong Title 17% - Missing Information 13% - Financial POA 5%
	DNR order concordance	Review of inpatient resuscitation orders and comparison to outpatient resuscitation orders/documents	Manual	Doctoral Student	100%
Penetration	Provider documentation of advance care planning discussion	Review of history & physical and physician progress notes	Manual	Doctoral Student	20%