

## **Advance Directives: Current Best Practices**

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DNP Project

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\_\_\_\_\_ meet all the  
requirements for the degree of Doctor of Nursing Practice at University of Saint Francis-Fort  
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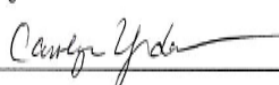
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## **Abstract**

**Problem Statement:** Advance Directive (AD) and Advanced Care Planning (ACP) are part of the healthcare process that is within the scope of practice for providers and despite evidence supporting the effectiveness of these conversations, the system still falls short (Steffan, 2019). There are reports of multiple AD related adverse events occurring in various hospitals, despite best practice recommendations by professional organizations and the states. Patient's feedback still demonstrates dissatisfaction with the standard of care they receive. Their healthcare wishes are not respected, thereby negatively impacting their confidence in the healthcare system. Many factors are implicated as contributory, and notable among them is lack of provider knowledge on current best practices for AD.

**Purpose:** To increase and update anesthesia provider's knowledge on the current best practices for AD. This will enable providers make an informed anesthesia care choices tailored to individual patient's needs and wishes. The project also aimed to create awareness and provide solutions to rising incidence of AD related adverse events in hospitals.

**Method:** A quality improvement one-group pre-and post-intervention design. The process involved a pre-intervention interview to ascertain baseline knowledge of anesthesia providers at Kosciusko Community Hospital (KCH), on current best practice for AD. An educational intervention (slideshow presentation) on AD was completed. A pre- and post-intervention survey was collected and analyzed using percent change.

**Results:** The pre- and post-intervention survey showed improvements in provider's knowledge on AD. Seven out of the eight participants had a significant percent change (50% and above) in knowledge gained on AD.

***Conclusion:*** Improved knowledge on current best practices for AD can promote practice change towards the provision of informed anesthesia care and the prevention of the occurrence of AD related adverse events in our hospitals.

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## **Advance Directives: Current Best Practices**

### **Chapter 1: Introduction**

#### **Problem**

During clinical rotation at an approved facility, an advanced directives (AD) related adverse event occurred. A patient scheduled for a diagnostic procedure had a discussion with his family and made changes to his AD the morning of his procedure. The decision and changes were communicated to a hospital employee. However, for some reason, the changes were not communicated to the appropriate care team and, unfortunately, the patient had a cardiac arrest during the procedure and all resuscitative measure were implemented, against the patient's wishes. The family was very unhappy about it. On further inquiry into the cause of the adverse event, reports indicated there had also been prior similar AD related events at the same facility. Subsequently, some anesthesia providers (CRNAs) were asked if a patient with a do not resuscitate (DNR) order presented for an elective surgical procedure, what would be the choice of anesthesia care be according to current facility procedures and policies? Out of five providers [(certified registered nurse anesthetists (CRNAs)] interviewed, only two gave consistent feedback on the current guidelines for care of a patient with a DNR in place. All five CRNAs were not aware if their facility guidelines on AD was up to date and align with the guidelines of the AANA. In addition, four out of the five CRNAs interviewed (some of whom trained out of state but are currently practicing in the State of Indiana), had no knowledge of the current practice guidelines for AD and ACP in the State of Indiana. This indicates a gap linked to a lack of knowledge on current practices guidelines, policies, and procedures for AD for those anesthesia providers at this facility. A patient survey—conducted by the project manager during the pre-anesthesia interview of patients undergoing elective surgery at Adams Memorial Hospital



in Decatur, Indiana, and data collected between the period of October–November 2020, showed that out of 24 patients, only six patients had an advanced directive in place/completed prior to surgery. Seven of these patients had no knowledge of what an advanced directive is, and some had never even heard of it. Patients presenting for surgery should be encouraged to participate in the choice of care they receive through an AD and ACP. The AD-related incident discussed above is an example of a negative outcome for patients related to providers' lack of adequate knowledge of patients' AD status or limited in their ability to make informed anesthesia care choices for surgical patients. Therefore, the need for intervention to update providers' knowledge on the current best practices and guidelines for AD.

### **Project Problem Statement**

Anesthesia providers are frequently called on to perform procedures on patients who may have advance directives; however, they receive little training as to how to identify and manage these patients (Hadler et al., 2017). There is much uncertainty and confusion regarding the proper approach to managing advance directives (Shapiro & Singer, 2019 p.1). Part of this is related to lack of knowledge on the part of anesthesia providers on current practice guidelines recommended by the professional or regulatory organization, the facility, and the state in which they practice. Many anesthesia providers take patient to surgery unaware of hospital policy to suspend or retain DNR order in the event of peri-operative adverse event. Most CRNAs still assume automatic suspension of DNR for patients presenting for surgery (Zinn, 2012), which is no longer an acceptable standard of practice. Proper implementation of advance directives and DNR orders in the operating room among anesthesia providers is lacking, and sometimes anesthesia providers find themselves in a dilemma when such circumstance presents intraoperatively. This claim is further strengthened by studies that have shown that inadequacies

in perioperative reevaluation of DNR orders exists at all stages (Waisel et al., 2009); and that there still exists a gap between institutional policy and individual practice (Hadler et al., 2017). The implication of this is that patient wishes are not honored which have legal and ethical consequences; hence, the need to intervene to breach the knowledge gap through the implementation of a formal educational workshop for anesthesia providers on current practice guidelines for AD.

### **PICOT Question**

Will the implementation of an educational presentation in a rural hospital in Indiana, improve anesthesia providers' knowledge on current guidelines for AD and increase the likelihood of providing informed anesthesia care that respects the wishes of adult patients presenting for surgery at that facility?

### **Background of the Problem**

The common law concept of informed consent and constitutional principles of privacy and liberty formed the primary platform from which advance medical directives was derived (ASPE, 2007). The federal Patient Self Determination Act (PSDA) of 1989 took effect on December 1, 1991, enhancing the opportunities for patients to participate in and control their healthcare decisions (Croke & Daguro, 2005; Steffan, 2019). According to Croke and Daguro (2005), the PSDA requires that health service organizations participating in Medicare and Medicaid give all patients written information about their rights under state law to accept or refuse treatment and to formulate advance directives. Advance Directives (AD) and Advanced Care Planning (ACP) are part of the practice guidelines of the American Association of Nurse Anesthetists (AANA). According to the AANA, an advance directive is a legally binding document recognized under state law that allows patients to provide directions to family, friends,

and healthcare professionals about the healthcare they wish to receive if they become incapacitated or unable to communicate or make decisions regarding their own care (AANA, 2015). However, survey research suggests that anesthesiologists are more likely than internists or surgeons to assume suspension of do not resuscitate (DNR) orders in the operating room and the least likely to discuss the consequences of suspension with their patients, and simulation studies have demonstrated similar findings (Hadler, et al., 2017). The reason for this is linked to the fact that anesthesia providers including CRNAs are not well-informed on the most current best practices related to AD and ACP, including DNR orders. This lack of knowledge is compounded by the problem of lack of completed AD for patients undergoing elective surgical procedures. It has also been shown that anesthesia providers are not proactive in pre-operative discussion of AD with patients during their pre-anesthetic assessment interviews, which is a missed opportunity to establish AD status and the reconsideration of AD.

### **Gap Analysis**

The AANA recommends reconsideration of AD for patients undergoing surgery. However, as previously mentioned, most CRNAs still assume automatic suspension of DNR for patients presenting for surgery (Zinn, 2012). The practice of automatic suspension of DNR orders for these patients, as was previously obtained, is no longer an acceptable evidenced-based best practice. Current practice guidelines and recommendations are towards a patient-centered, patient-specific approach, tailored to meet the healthcare needs of individual patients with AD. For this reason, anesthesia providers must be knowledgeable with up-to-date information on AD to be able to appropriately implement both AANA and facility specific guidelines that address the patient's wishes for their care.

According to the AANA recommendation on reconsideration of advance directives for facility policy and resource development considerations, healthcare facilities are required to promote reconsideration of advance directives in policy language and replace existing language that supports the automatic suspension of advance directives during anesthesia and procedure (AANA, 2015). However, review of the project implementation site facility policy on AD does not involve this provision recommendation, further revealing a gap between the recommendations of AANA and the AD policy guideline at the implementation facility. On the other hand, the facility policy on AD clearly states, “the hospital shall provide routine in-service program for employees on issues surrounding use of AD” (Kosciusko Community Hospital, 1991, p. 4). But no such program has been provided in recent years and no barrier was identified why such a program for employees is not routinely conducted per hospital policy.

### **Needs Assessment**

As previously mentioned in relation to AD, there still exists a gap between institutional policy and individual practice (Hadler et al., 2017). Patients are not satisfied with the care they receive, and this further erodes their confidence in the healthcare system. Note that patient satisfaction is linked to reimbursement for services provided. Further action on the part of the patients could also be the pursuit of legal action against the facility. The knowledge and practice gap identified, in addition to the potential resulting negative outcomes both for the patient and the facility, strongly support the need for intervention. There is also the cost or financial burden to consider. A broad knowledgebase on current guidelines and facility specific policies is needed for anesthesia providers to properly care for and implement patient-oriented anesthesia care that is individualized and best suited for a particular patient’s circumstance and/or wishes.

## **Project Overview**

### **Statement of Project Design Type**

A quality improvement design was utilized to conduct this Doctor of Nursing Practice (DNP) project to inform, update, and increase the knowledge of anesthesia providers in the surgical unit of a rural healthcare facility on the current best practices for AD. This is to promote informed anesthesia care that enable providers to successfully provide the best possible anesthesia care experience, that meet the patients' expectations and wishes for their care preference in the perioperative period. To accomplish this an intervention, in the form of a formal educational workshop, was presented to the participants (anesthesia providers), who were the population of interest in this project.

### **Scope of Project**

As a quality improvement project, this DNP project involved all the licensed anesthesia providers currently practicing at KCH (the implementation facility) as the project participants. These providers were invited and encouraged to fully participate in the intervention and complete the pre- and post-survey questions. The aim was to increase their knowledge on the current best practices for AD to promote practice change towards the provision of informed anesthesia care tailored to more specific patient's wishes. This would encourage patient's participation in their care. The proposed intervention provided evidence- based guideline recommendations to the anesthetic providers at KCH that supports the need for a change in practice and improved quality of care in the perioperative period for patient undergoing surgery. The feedback from the survey questionnaire was utilized to make recommendations for AD and ACP practice changes, which if adopted and implemented would ensures the best outcomes for both the patients and providers. Other objectives of this DNP project include the following:

- To recommend a process that ensures all newly employed anesthesia provider at the facility is provided access to the updated AD & ACP guidelines both for the facility and the State of Indiana, during the orientation process for new employee.
- To sensitize anesthesia providers for the need to be proactive in ensuring completion of an AD in the perioperative period and to consider the inclusion of an AD discussion during their preanesthetic interview/assessment of patients scheduled for surgery.

### **Stakeholders**

The primary stakeholders engaged in the DNP project are the project advisor Dr. Mueller, Dr. Cotrell, academic advisor, the project facilitator/mentor at the facility, the anesthesia leadership (CRNA and Anesthesiologist) in the surgical unit of the implementation facility (KCH). The operating room nurse manager, key physicians as well as patients, and other providers who will benefit from the improved patient outcomes related to this project implementation are also considered as contributory stakeholders. Thus, as multilevel stakeholders are engaged in this project work, it is imperative to evaluate both the process and outcomes of this work (Steffan, 2019). The reduced incidence and/or prevention of AD related adverse events, cost savings from litigations or the huge amount paid to affected patients/family as compensation and the improved public image/reputation of the facility, are some of the anticipated benefits to KCH.

### **Evidence of training in human subject protection [CITI Training Certificate]**

Please refer to Appendix A

### **Letter of Support from Project Facility**

A letter of support was received from KCH granting permission to implement this project at the facility without need for facility IRB approval. An approved letter to implement the project at the implementation facility is available in Appendix B. A letter of exempt from KCH IRB approval is available in Appendix C. The approval from KCH to implement was followed by an application for a formal IRB approval from the University of Saint Francis (USF). This approval was granted, and a copy of the project USF IRB approval letter is available in Appendix D.

### **Expected Outcomes**

This DNP project aims to increase the knowledge of anesthesia providers on the current best practices for advance directives that seeks to better care for and enhance practice standards in the provision of anesthesia care to patients with an AD who are undergoing surgery. These standards are set by the AANA, the state (Indiana) and the facility where they practice. The project also seeks to enhance AD screening during pre-anesthetic interview to enable anesthesia providers make an informed decision on anesthesia care choices that reduces the incidence of negative AD related events, respects patient's wishes and guarantees patient's satisfaction with their care.

### **Budget and Resources**

#### **Cost**

The direct and indirect cost estimate for the project was about \$2,500. The estimated salaries of participants multiplied by the number of project hours needed to perform each task was used to calculate the direct cost. The estimate for the indirect costs (\$400) was derived from costs of project supplies, transportation cost to the project implementation site, and miscellaneous cost. KCH's commitment to stake the salary dollars for the anticipated cost

savings on the long run following the implementation of this project, made it possible for this project to be financially feasible to conduct. Refer to Appendix E for budget assessment and breakdown.

### **Description of Resources**

The project intervention was held in the physician lounge at KCH. During the educational presentation, refreshments was provided from the hospital inventory. The presentation was conducted using a PowerPoint format utilizing the facility equipment. A printed paper copy of the PowerPoint presentation was provided to every participant, just in case technological or equipment failure or malfunction was encountered for any reason. A copy of the Indiana law on AD was provided to the participants. Proposals and recommendations for a change in practice was provided to the facility, for possible routine implementation of AD related educational sessions to be organized at the facility to update providers' knowledge.

### **Process and Outcomes**

#### **General Timeline**

The project was implementation at the facility (KCH) in February 2022. The University of Saint Francis IRB approval of the project was obtained in November 2021. The project implementation involved a formal teaching intervention/workshop at a physician lounge within the implementation facility (KCH). The date, location, time, and other vital information was communicated to the participants as appropriate through the project facilitator. An informed consent was obtained from the participants prior to the commencement of the intervention. A copy of the informed consent form is available in Appendix F. The estimated timeline for the intervention was a 45-minute commitment for the participants/providers. The time allocation was as follows: Demographic Questionnaire: 5 minutes



- Pre-Survey Questionnaire: 5 minutes
- PowerPoint Presentation: 20 minutes
- Post-Intervention Questions and Answers: 10 minutes
- Post Survey Questionnaire: 5 minutes

The data collected was analyzed and data analysis was completed in March 2022.

Following analysis, the project results was discussed with the project adviser, and afterwards the project results and recommendations were shared with the participants, the facility, and DNP faculty and students. More information on project activities and timelines/schedule is available in Appendix G.

### **Project Setting**

This DNP project implementation setting was an approved healthcare facility with well-trained and board-certified anesthesia care providers (CRNAs and physician anesthesiologist). As part of the Lutheran Health Network (LHN), Kosciusko Community Hospital (KCH) is a community healthcare provider, located in Warsaw County, in the northern part of Indiana. The hospital sits on a 30-acre medical campus, with a structure that houses a 72-bed space, all-private rooms, and believes in the power of its health care professionals to deliver exceptional care (LNH, 2021). KCH offers a wide variety of services including an urgent care center, surgical services, intensive care unit, maternal and childcare, occupational health, heart and stroke care, health, and wellness, rehabilitation services, sleep center, wound care center, outpatient services, and cancer care center which provides chemotherapy and radiation therapy. KCH delivers standard and nationally recognized healthcare services to its patients. Investing in their members/personnel through the promotion of staff professional growth and development and creating an enabling work environment. KCH has built an organizational cultural worthy of

commendation. The hospital is highly invested in and committed to the community they serve through various programs and community-oriented initiatives.

This DNP project implementation involved the surgical unit of Kosciusko Community Hospital. The surgical suite at KCH comprises 17 prep/recovery bays, six operating rooms, two minor procedure (endoscopy rooms), and seven recovery bays. The surgical suit is managed by a nurse manager. The surgical department at KCH comprise the surgical team, divided into 3 groups/teams: (1) Preoperative Care Team (2) Operative Care Team (3) Post-operative Care Team. The operative team consists of the surgeon, surgical assistant, surgical technician, physician anesthesiologist, nurse anesthetist, anesthesia technician, and surgical nurse. Both the pre-and post-operative care teams consist of registered nurses and their team heads/managers and the nurse assistants in some cases. The surgical team offers a broad range of surgical services, ranging from simple surgical and diagnostic procedures, which can be minimally invasive to traditional procedures which are invasive.

### **Participant Inclusion/Exclusion Criteria**

The population of interest for this DNP project were to be 8-10 adults (ages 20 years and above), who are certified anesthesia providers (including CRNAs +/- physician anesthesiologist) currently employed and practicing in the surgical unit at KCH. Inclusion required full participation/time commitment for the entire length of the intervention. Excluded from this study/survey are other healthcare providers that were not part of the anesthesia group practicing at KCH or within the Lutheran hospital network. No group assignment was necessary due to the nature and type of quality improvement project.

**Participant Expectations**

Full participation is expected from participants, in addition to the completion of a demographic, pre- and post-intervention questionnaire. Sample survey questionnaires are available in Appendices F, G and H. These questionnaires included general biodata information and more specific questions that test participants' knowledge on the AANA, the State of Indiana law and facility guidelines on AD and ACP. Participants were notified in advance of the implementation date, the venue, and time commitment. The time commitment for these participants was less than 45 minutes (as shown in the general timeline above). See Appendices H, I, and J for survey questionnaires. Participants were assigned unique identification number, and the questionnaire survey was conducted in paper and utilizing a QR code system.

**Risk Analysis****Risk Analysis**

Participation in the project was voluntary. No personal identifiers were collected. There were no immediate or long-term risks to the participants. Prior to the planned intervention, an informed consent form (paper copy) was provided to the participants. The consent form explained the terms of participation, the project's intended purpose, and other pertinent information about the project. Any potential risks or benefits to the participants for participating in the project was disclosed in the consent form (Appendix F).

## **Chapter 2: Synthesis of Supporting Literature and Project Framework**

### **Relevant Theory and Concepts**

#### **Frameworks/Models/Concepts/Theories: Knowledge to Action**

To provide an evidence-based standard of care to patients undergoing surgery, anesthesia providers must be grounded and fully knowledgeable on current best practices for advanced directives (AD) that is in line with the State of Indiana, the American Association of Nurse Anesthetists (AANA) and facility guidelines. For this reason, the Knowledge to Action (KTA) model is the framework most suited for this DNP project. The KTA is a conceptual framework widely used by many especially involving the utilization of research knowledge, where such knowledge is mainly conceptualized as empirically derived (research-based) knowledge (White et al., 2021). It also involves experiential knowledge. White et al. (2021) describes the KTA conceptual framework process as comprised of two major components: knowledge creation and action. Each of these components is comprised of several phases, making the KTA process complex and dynamic, with no definite boundaries between the two major components and among their various phases. A notable characteristic is the inter-relationship between the components, in that the phases of the action component can occur simultaneously or occur in sequence, and the knowledge-creation-component phases can also influence the action phases.

The knowledge creation component consists of three phases: Knowledge Inquiry, Knowledge Synthesis, and Knowledge Tools/Products. The knowledge creation as can be seen in the cycle diagram (Appendix K) as an inverted funnel, beginning with the knowledge inquiry process advancing through knowledge syntheses, and then to knowledge implementation. Here, clinicians and knowledge users can tailor the research questions to address the problems identified by the users. In the knowledge phase, the project manager intends to conduct a pretest,

which will be utilized to assess the knowledge base of participants on AD and identify knowledge deficits and possible barriers to practice change. It will also assist in identifying the problem and practice gap, providing ample information on how to tailor the project intervention to appropriately target the problem. Note also, that the knowledge phase allows for better outreach to users/consumers by making it possible to customize dissemination methods.

On the other hand, Graham et al. (2006) noted that the action component represents the activities needed for knowledge application. This project aimed to achieve this through a formal educational intervention which was implemented at the facility of interest (KCH). This was followed by a post-test to assess how successful the intervention was in addressing the problem and the potential of it breaching the knowledge gap. It also highlighted the need for further teaching/intervention or a source of future study/research, the need for reassessment of clinical practice and for modifications where necessary. The knowledge creation also involves a cycle of events from identification of problem/issues at hand, to the validity of the problem and the further assessment of the barriers and facilitators. Finally, the information is then used to develop, plan, and execute various strategies that promote awareness and ensure successful implementation of the knowledge. The process goes further to ensure follow up monitoring and evaluation of the impact of implemented strategies to determine if the desired outcome is achieved. The KTA framework ensures collaboration between the knowledge producers and knowledge users throughout the entire KTA process; it is described as a comprehensive framework that begins to incorporate the full cycle of knowledge translation from knowledge creation through implementation and impact (White et al., 2021).

## **Review of Literature**

An extensive literature review was completed regarding AD in the adult patient population. Multiple databases were searched including CINAHL, EBSCOhost, DARE, TRIP, OVID, ProQuest, EMCARE, and Google Scholar. The review of the literature related to advanced directives (AD), advanced care planning (ACP) and do not resuscitate (DNR) order. These yielded several themes, including a consensus on suboptimal patient satisfaction on the care they receive that fully meets their healthcare needs and respect for their healthcare preferences and wishes. Therefore, there is a need for re-assessment related to AD, ACP and DNR order. Some reviews focused on the need to update and enhance training and knowledge of anesthesia providers on practice guidelines related to AD, while others discussed the need for improved completion of AD and the importance of reconsideration of AD status, especially in the pre-operative period before providing anesthesia care to patients undergoing surgery.

## ***Legal/Regulatory Implications***

Healthcare delivery facility and care providers are mandated to comply with federal and state requirements regarding advance directives. The common law concept of informed consent, buttressed by constitutional principles of privacy and liberty have formed the primary platform from which advance medical directives initiate (ASPE, 2007). According to the Assistant Secretary for Planning and Evaluation (ASPE) of U.S. Department of Health and Human Services, the Patient Self-Determination Act, all Medicare, and Medicaid provider organizations are required to not only maintain written policies and procedures with respect to advance directives, but also provide (individually or with others) for education for staff and the community on issues concerning advance directives (ASPE, 2007; Croke & Daguro, 2005; Stefan, 2019). Furthermore, to promote the dissemination of more accurate and consistent

information, the act mandated states to develop written descriptions of the law of the state concerning advance directives that would be distributed by providers or organizations (ASPE, 2007). A similar provision of the PSDA is also found in the US Code §1395cc, subsection f, requiring institutions to have written policies related to patient's right to refuse treatment and formulate AD (Coopmans & Gries, 2000). Therefore, there are statutory requirements for AD that have legal/regulatory implications (ASPE, 2007; Alan, 2013; Willmott, 2016).

Noncompliance with the provisions of the PSDA have legal implications. There are also provisions for DNR by Joint Commission on Accreditation of Healthcare Organizations' (JACHO) standards requiring health institutions to provide means for patients to be involved in all aspects of their care, including withholding care or DNR (Coopmans & Gries, 2000). Despite these statutory requirements, the system still falls short of adequately meeting these and other obligations of honoring patient wishes regarding their care. It is important to mention that components of the Medicare part B incentivize Medicare and Medicaid provider healthcare facility through reimbursement for compliance with AD and ACP provisions (CMS, 2016; Steffan, 2019). Therefore, provider training and improved knowledge on AD and ACP remains a viable option to breach the practice gap and improve standards of informed care that is tailored to meet patient's specific needs and/or wishes.

### ***Perception of Advanced Directives by the Healthcare Team***

Multiple factors are implicated in the perception of healthcare providers towards AD and ACP. The review of the findings from a study conducted by Coleman (2013) explores possibilities in explaining the differences in the attitude of physicians toward AD and their compliance, which raises the issue of consideration of other ethical paradigms/theories in the clinical context (Coleman, 2013). This implicates possible issues of ethics and ethical

consideration related to AD, ACP, and DNR orders for the care team. Studies have demonstrated CRNAs to be more likely to assume automatic suspension of DNR orders in the perioperative period (Zinn, 2012; Coopmans & Gries, 2000). Lack of knowledge is contributory to this assumption, requiring provider teaching. This is further supported by the recommendation by Coopmans and Gries (2000) for a need for further education and discussion regarding perioperative DNR orders based on the findings of their study.

### ***Patient Perception***

Several reasons are documented in the literature by patients for not having AD, including patients believing that the AD is too binding and, therefore, not wanting anyone but their family deciding their fate in the event of unexpected peri-operative outcomes (Steffan, 2019). Various myths exist that patients associate with obtaining an AD or a living will prior to surgery. They influence their decision to refuse to obtain or complete an AD. Pre-operative anesthesia interview provides an avenue and opportunity to discuss, educate, and provide patients with the right information related to AD. Failure to inquire about patients' AD status is a missed opportunity to start a conversation on AD, educating patients in a manner that motivates them to participate in their care. The goal is to improve perioperative care delivery through informed anesthesia care.

### ***Cost-Benefit***

Advance directives and ACP ensure that patient's wishes for the care they receive are discussed and documented. Studies have shown that there are cost savings for facilities compliant with AD and ACP provision either through reimbursement or directly from cost of equipment and supplies utilized during life-saving intervention in cases where an AD or DNR would have been in place if the opportunity or option was provided to those patients or family. In



a study of the association of outpatient ACP with advanced directives documentation, utilization, and costs of care, Bond et al. (2018), matched 325 cases and 325 controls (51.1% female and 48.9% male, mean age 81), and discovered that adjusted costs were \$9,500 lower in the ACP group (95% CI -\$16,207 to -\$2,793). Bond et al. (2018), therefore concluded that ACP not only increased documentation but was also associated with a reduction in overall costs driven primarily by a reduction in inpatient utilization. This indicates a significant healthcare cost savings for facilities invested in ACP for patients presenting at their facility. Furthermore, AD & ACP promotes the documentation of patient wishes and increases awareness of palliative care options (Bond et al., 2018), which can be a potential cost saving option and improves standard of care option beneficial to the patient and hospital. Litigation and settlement cost for negative AD related events/outcome is another focus of huge financial cost for both healthcare personnel and hospitals.

### ***Current Recommendations***

Current recommendations for AD are not towards automatic suspension of AD for patients undergoing surgery, but to a more specific anesthesia care tailored to meet the unique needs and choices of the patient in the care they wish to receive in the peri-operative period. This is a patient right protected under the law with legal provisions both at the local, state, and federal levels. It is also considered a standard of care in clinical practice. The right of patients to choose is vital and should be promoted at all levels of contact between patients and healthcare personnel/providers.

### **Significance of Problem**

Anesthesia providers do not routinely include discussions or reconsideration of AD or DNR as part of their pre-anesthetic interview of patients undergoing surgery. Immediately prior

to surgery a patient may decide to obtain an AD or make changes to an existing one, which may not be properly communicated to other healthcare team. Therefore, the most current or recently updated patient's wishes for their care are missed. The implication of this is that the anesthesia provider's perioperative care plan is not informed on current wishes of patients for their perioperative care.

The potential resulting negative outcome of these can have legal and ethical implications of not honoring patient wishes, in addition to cost/financial implication related to reimbursement (tied to patient's satisfaction) and in the event of litigations.

### **Summary of Supportive Evidence**

An extensive review of various literature demonstrated patient's right to participate in making decisions pertaining to their health and the care they receive. This is supported by various legal and legislative provisions from the federal, state, facility and health professional organization related to AD and ACP. The legal framework for AD was explored both for healthcare facilities and providers. However, despite these provision multiple factors still mitigated against optimal attainment of healthcare services that meets patient's expectation and satisfaction. Factors implicated in the established practice gap include limited providers knowledge on current best practice guidelines, poor completion for AD for patients, barriers to obtaining an AD (including perception of both patients and providers related to AD, ACP and DNR orders) among others. The consequences of these shortcomings as regards AD were highlighted and discussed. Patients are negatively impacted through disregard of their care choices, waste of resources and cost burden. Dissatisfaction in the care they receive that further negatively impact their ability and willingness to participate in their care. Therefore, this DNP project focuses on the need for providers to reassess AD and make the needed practice changes

for improved and informed care delivery through the utilization of knowledge and evidenced based findings, guidelines, and recommendations. This project intervention provides a knowledge-based framework to anesthesia providers for improved patient-centered, patient-inclusive care model through informed care, that ensures better outcomes for both patients and providers.

## **Chapter 3: Project Design/ Methodology**

### **Methodology**

#### **Project Design**

A quality improvement design was utilized to conduct this DNP project. The design was appropriate to achieve the objectives to update, inform and enhance the knowledge of anesthesia providers at the implementation site, on the current best practices for AD. This was accomplished through the provision of a formal teaching exercise to the CRNAs in the surgical unit, who were the population of interest. The aim was to enhance practice change toward an informed anesthesia care delivery especially for patients with an AD. To enable anesthesia providers successfully provide the best possible anesthesia care experience that meets patients' expectations and respect for their wishes. The improved patient's satisfaction was expected to motivate patients towards a more active participation in their care. A pre and post survey was utilized to collect data, and to determine the increase in knowledge and confidence level of providers in the provision of informed anesthesia care to patients presenting for surgery with an AD in place. Data analysis involved a comparison of the pre and post survey using percent change to show the usefulness of the intervention, enhanced knowledge of participants on AD, and their willingness to include AD screening as part of their pre-surgical anesthesia assessment. This was geared towards a model of improved healthcare delivery standards through informed care.

#### **Ethical Considerations**

According to the Code of Medical Ethics Opinion 5.2 of the American Medical Association (AMA), respect for autonomy and fidelity to the patient are widely acknowledged as core values in the professional ethics of medicine (AMA, 2021). Healthcare providers are bound

by ethics to grant patients their wishes for the choice of care they prefer in the perioperative period in the form of an AD. However, it is important to remember that an advanced directives never takes precedence over the contemporaneous wishes of a patient who has decision-making capacity (AMA, 2010), which supports the importance of AD screening during preanesthetic assessment. Healthcare providers routinely encounter challenging ethical situations where treatment decisions must be made in medically complex cases, involving a variety of factors for both the provider and the patient (Wong et al. 2014). Personal, religious, familial, moral, and philosophical principles are some of the factors implicated by Wong et al, this is in addition to maintaining that providers responses are also conditioned by prior training, experience in similar situations, and role modeling. End of life care, AD and ACP can present difficult and challenging experience for both the patient and healthcare personnel, who in some cases are presented with ethical dilemma. These circumstances call for careful decision making to create a balance between the patient's wishes and the provider's comfort level in honoring those wishes in a way that does not conflict with the provider's professional and core values/principles.

In conducting research studies, consideration of human subject protection is an ethical obligation and requirement. The researcher or project manager is ethically bound to obtain informed consent and initiate measure that protect the participant's personal information and ensure confidentiality. A sample of the informed consent form for this project is available in Appendix F. Part of the ethical obligation also involves obtaining approval both at the project implementation facility and from the academic institution. This involved a formal application to the proposed implementation facility for permission to implement after meeting all requirements including facility IRB approval (if IRB approval is required). This was followed by the institution faculty review and then a formal application for institutional IRB review and

approval. This ensured that all requirements are met for the execution of the project and that all ethical requirements, and standards were upheld. Evidence of CITI training completion is available in Appendix A. A copy of the facility letter of approval to implement can be found in Appendix B.

### **Project Schedule**

General Timeline: Initial project planning began with meeting with project advisor in 2020 to choose a topic. After the project topic was decided, an assessment survey related to project topic was conducted by the project manager. The survey was conducted from October to November 2020 and involved patients presenting for surgery at Adams Memorial Hospital, Decatur Indiana. The aim was to establish a problem existed. Anesthesia providers at KCH were interviewed and it was established a problem existed at that facility. Initial literature review began in February 2021. Project approval was achieved through University of Saint Francis and the project implementation site at KCH. The University of Saint Francis IRB approval of the project was obtained in November 2021.

The project implementation at the facility was scheduled for and completed at KCH in February 2022. The project implementation involved a formal teaching intervention/workshop at a pre-determined designated location within the implementation facility (KCH). The date, location, time, and other vital information were communicated to the participants as appropriate. An informed consent was obtained from the participants prior to the intervention (a copy of the informed consent form is available in Appendix F). The estimated timeline for the intervention was a 45-minutes commitment for the participants.

The time allocation for the intervention workshop is as follows:

Demographic Questionnaire: 5 minutes

Pre-survey Questionnaire: 5 minutes

PowerPoint Presentation: 20 minutes

Postintervention Questions and Answers: 10 minutes

Post Survey Questionnaire: 5 minutes

The data collected was analyzed and data analysis was completed by May 2022.

Following analysis, the project results was discussed with the project adviser, and afterwards the project findings and recommendations were shared with the participants, the facility, and DNP faculty and students. More information on project activities and timelines is available in Appendix G.

### **Implementation Methods**

The project intervention took place at KCH, in February 2022. The workshop involved a scheduled meeting between the project manager and the participants, during which a PowerPoint presentation on AD was implemented by the project manager. The presentation involved evidenced based and current best practices, guidelines, and recommendations for AD. A pre-and post-survey questionnaires was presented to the participants and following their completion, the data was collected and analyzed.

### **Measures/Tools/Instruments**

A self-designed pre-and post-intervention survey questionnaire was utilized for this project. The questionnaire was submitted for the process of face validity in consultation with three doctoral prepared experts (context experts) from the University of Saint Francis. Ensuring data security was a priority in this project, therefore, participants were randomly assigned a unique number, and security measures were implemented to maintain anonymity and to avoid breach of confidentiality.

## Measures and Aims

To achieve the objectives for this project, the aims and outcomes listed below were utilized for this project.

Aim 1: Increase the knowledge anesthesia providers have on the current best practices for advanced directives (AD) according to the AANA (American Association of Nurse Anesthetists), the State of Indiana, and the facility guidelines.

Outcome 1a: Following the project intervention there will be a 70% increase in knowledge of anesthesia providers at KCH on current best practices for AD according to the AANA, the State of Indiana, and the facility guidelines.

Measure 1a: Survey. The pre- and post – questionnaire surveys before and after the intervention examined and measured the knowledge of anesthesia providers on AD guidelines for AANA, State of Indiana, and facility.

Calculation of Measure 1a: Percent Change. The pre-and post-survey responses was compared. Significant improvement was found to be evident post-education training. All participants were expected to show knowledge gained from the intervention.

Aim 2: Assess anesthesia providers' satisfaction with the educational intervention as means to decrease instituting resuscitative measures for a patient with a do not resuscitate (DNR) order in place.

Outcome 2a: Anesthesia providers will score/rate an 80% usefulness of having prior knowledge of patient's AD status in the provision of an informed and patient-specific anesthesia care.

Measure 2a: Percent Change. The pre-and post-survey responses was compared. Significant increase in knowledge was expected following the education intervention. All participants were expected to show knowledge gained from the intervention.



Calculation of measure 2a: Usefulness of anesthesia providers' prior knowledge of patient's AD status.

Outcome 2b: Anesthesia providers will rate an 80% increase in confidence level when making anesthesia care choices for surgical patients with an AD.

Measure 2b: Percent Change. The pre-and post-survey responses was compared. Significantly increased confidence was evident post-education training.

Calculation of measure 2b: Anesthesia providers' level of confidence in providing care to patients with AD.

Aim 3a: Assess anesthesia providers' willingness to include patient AD status screening or discussion during pre-anesthetic assessment interview.

Outcome 3a: Anesthesia providers will rate an 60% increase in willingness to include AD screening as part of pre-anesthetic assessment interview.

Measure 3a: Percent Change. The pre-and post-survey responses was compared. Significantly increased willingness to include AD screening in pre-anesthetic assessment was expected to be evident post-intervention.

### **Evaluation Plan**

Data was collected during the scheduled in-person formal education workshop. A pretest was administered for all participants before the teaching workshop to determine the baseline knowledge of participants on current best practices for AD. A posttest was administered at the end of the teaching workshop to assess the level of knowledge gained. An increase in knowledge was anticipated. The pre- and post-questionnaire QR code/links was provided to the participants during the project educational intervention at KCH. The participants were encouraged to use their personal electronic devices (phones) to capture the code using their device camera function.

Instructions were provided to the participants at the commencement of the intervention, on when and how to complete each part of the questionnaire. The pre-survey questionnaire was completed before the PowerPoint presentation, while the post-survey questionnaire was completed at the end of the educational presentation. Minimal and very relevant demographic information was collected to ensure participant confidentiality. No identifiers were included, and the responses were totally anonymous. As discussed above, the project manager assigned participants a unique and randomly generated identification numbers. All correspondences with the participants were through the onsite project facilitator at the facility and there was no direct link of participants personal information with the project.

A one-group pre- and post-survey questionnaire design was utilized for this project intervention. The source of all data used for the data analysis was primarily from the intervention workshop. The pre-survey questionnaire provided a baseline test/data of the anesthesia providers' knowledge on current guidelines for AD. The information obtained was then used to compare or calculate knowledge gained from the educational PowerPoint presentation by analyzing the percent change/score between the pre- and post-survey questionnaire. The responses were collected, stored, cleaned, and subsequently uploaded into the project manager's Google Drive. The data was then download to an Excel spreadsheet and SPSS for the complete data analysis. The data was subsequently stored on the project manager's private, password-protected computer and on the USF One Drive for easy and protected access by only the project manager. As previously mentioned, the data was cleaned to ensure the survey questions were exhaustively answered. This project is non-experimental and for that reason, there was no planned manipulation of the data.

## **Methods for Collection of Data**

The project intervention involved a PowerPoint presentation on the current best practices for AD, during which the participants were provided a pre- and post-intervention questionnaire and were encouraged to complete them immediately before and after the intervention, respectively. The pre- and post-questionnaire was constructed with a QR coding system. The QR code system (two QR codes) was developed and provided to the participants who can use their cell phone picture function to capture the image. The first QR code provided them a link to the pre-survey questionnaire and the second code provided them a link to post-survey questionnaire at the end of the presentation. Paper copies of the questionnaire were also provided at the workshop as an alternative. The responses were anonymous. Thereafter, the responses were automatically uploaded into the Google Drive of the project manager, then download to an Excel spreadsheet and also transferred into SPSS for data analysis. The collected data was stored on the private and protected USF One Drive easy access. As previously mentioned, a one-group pre- and post-survey questionnaire design was used for the intervention and the survey questionnaire was the primary source of data for the project.

## **Data Analysis Plan**

The data collected from the intervention pre & post survey questionnaire was entered into Excel spreadsheet and IBM SPSS for analysis. Data cleansing was done, and using excel, percentage change was used to analyze the data. The output showed statistically significant increase in participants knowledge on AD.

## **Dissemination Plan**

Following the implementation of this project and collection of data as described above, adequate time was provided for data entry, processing, and analysis. This occurred in the months

of February and March 2022. Final dissemination of DNP project occurred in June 2022, to the DNP faculty, the implementation facility, and key stakeholders. As part of the dissemination plan, the DNP project outcomes following final analysis and review by the project advisor (or project team), was shared during a formal presentation at the University of Saint Francis, to faculty and students. This involved a power point presentation of the project findings and the discussion of its implication for practice. Faculty feedback was provided. The findings were shared via email with the participants, stakeholders, and the implementation facility.

## **Chapter 4: Results and Outcome Analysis**

### **Data Collection Techniques**

The pre- and post-questionnaire was constructed with a QR coding system. Both the QR code and paper copies of the pre- and post-questionnaire were made available at the educational workshop. The pretest was administered to all the participants before the teaching workshop to determine their baseline knowledge on current policies and guidelines for AD. Posttest was administered at the end of the teaching workshop to assess the level of knowledge gained. The pretest data was collected during the scheduled in-person formal education workshop and participants had the option to fill out the posttest at the end of the workshop or take it home and return the completed posttest later. Alternatively, participants can submit it directly online if using the QR code. The responses remained anonymous as previously stated. The data obtained was uploaded to an Excel Spreadsheet and SPSS for data analysis.

### **Measures/Indicators**

A total of eight anesthesia providers practicing at KCH participated in the educational intervention. Having uploaded the data obtained at the workshop into Excel Spreadsheet and SPP, the data were then grouped with their correlating project aims and outcome measures for easy reporting.

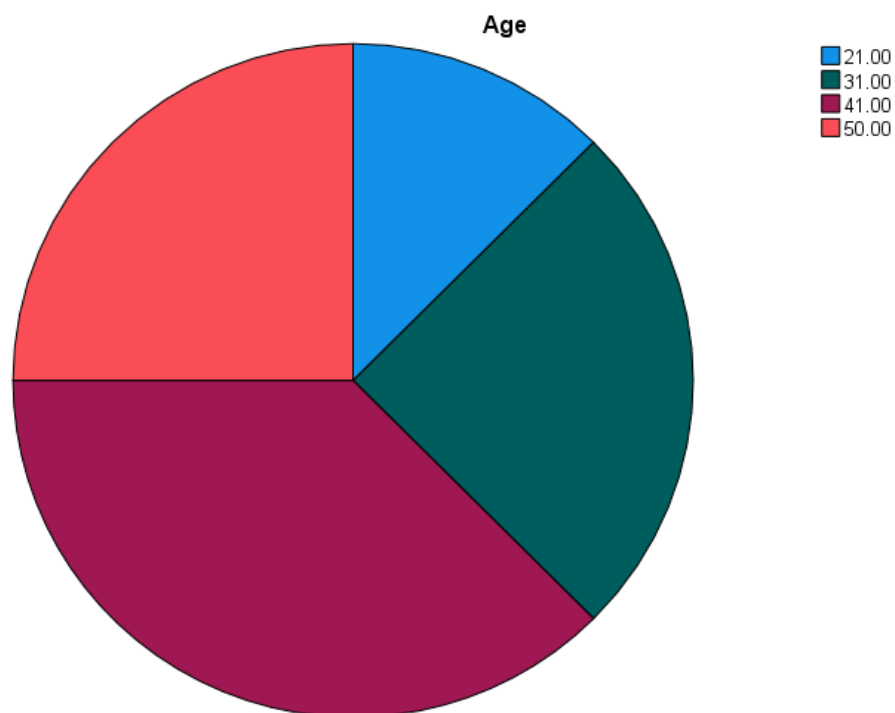


Figure 1: Pie chart showing age distribution of participants

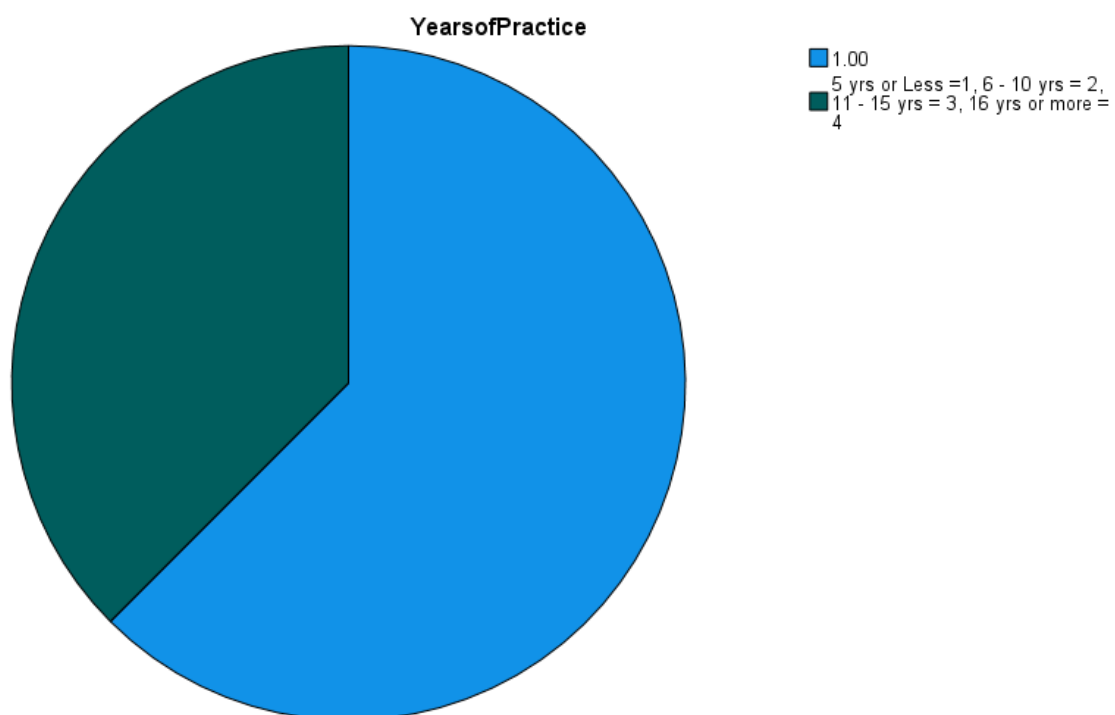


Figure 2: Pie chart showing the distribution of years of practice of participants

The Demographics of the participants was obtained as part of the pre-intervention survey. In the figures above, the data obtained showed most participants were between the age range of 21-30 years (figure 1), with about five years or less of practice experience in the field of anesthesia (figure 2). Only one of the participants was a part time employee at KCH while the rest were full time. All but one participant also worked at another facility other than KCH. More information related to this statistical output is available in Appendices N and O.

Aim 1: Increase the knowledge anesthesia providers have on the current best practices for advanced directives (AD) according to the AANA (American Association of Nurse Anesthetists), the State of Indiana, and the facility guidelines.

Outcome 1a: Following the project intervention there will be a 70% increase in knowledge of anesthesia providers at KCH on current best practices for AD according to the AANA, the State of Indiana, and the facility guidelines.

Measure 1a: Survey. The pre- and post – questionnaire surveys before and after the intervention examined and measured the knowledge of anesthesia providers according to AD guidelines for AANA, State of Indiana, and facility.

Calculation of Measure 1a: Percent Change. The pre-and post-survey responses was compared. Significant improvement was found to be evident post-education training. All participants are expected to show knowledge gained from the intervention.

Measure 1a was met but did not achieve the projected 70% increase. Measure 1a compared pre- & post intervention items. The results showed that six out of the eight participants had a 50% change increase in knowledge following the education workshop. Another (seventh) participants showed a 200% change in knowledge gained. However, only one participant did not have any knowledge gain or percent change in knowledge. This is a significant result indicating

effective educational intervention since the results showed that seven out of the eight participants had a percent change (50% and above) in knowledge gained on AD (refer to the excel sheet output of percent change in appendix P for more data analysis information).

Aim 2: Assess anesthesia provider's satisfaction with the educational intervention as means to decrease instituting resuscitative measures for a patient with a do not resuscitate (DNR) order in place.

Outcome 2a: Anesthesia providers will score/rate an 80% usefulness of having prior knowledge of patient's AD status in the provision of an informed and patient-specific anesthesia care.

Measure 2a: Percent Change. The pre-and post-survey responses was compared. Significant increase in knowledge was expected following the education intervention. All participants were expected to show knowledge gained from the intervention.

Calculation of Measure 2a: Usefulness of anesthesia providers' prior knowledge of patient's AD status.

Majority of the providers (six out of eight) strongly agreed (both in the pre- and post-survey) that a prior knowledge of patient's AD status will help them make informed anesthesia care choices for patients with an AD. However, from the result above (A2a), there was a 25% change/increase for one of the providers and a 67% change for the other remaining providers. The participants unanimously agreed on the importance of a prior knowledge on AD in the provision of informed care. This is also indicative of provider's confidence level in providing anesthesia care to surgical patients with an AD in place, which is attributable to knowledge acquisition.

Outcome 2b: Anesthesia providers will rate an 80% increase in confidence level when making anesthesia care choices for surgical patients with an AD.



Measure 2b: Percent Change. The pre-and post-survey responses was compared. Significantly increased confidence was evident post-education training.

Calculation of measure 2b: Anesthesia providers' level of confidence in providing care to patients with AD.

Measure 2b was met. 100% (all participants) of the providers who participated in the project indicated they were now more confident in providing anesthesia care to patients with an AD, having gained knowledge from the educational workshop. Another 100% satisfaction feedback was obtained from participants, most of whom indicated they were highly satisfied with the educational workshop.

Aim 3a: Assess anesthesia provider's willingness to include the screening or discussion of patient's AD status during pre-anesthetic assessment interview.

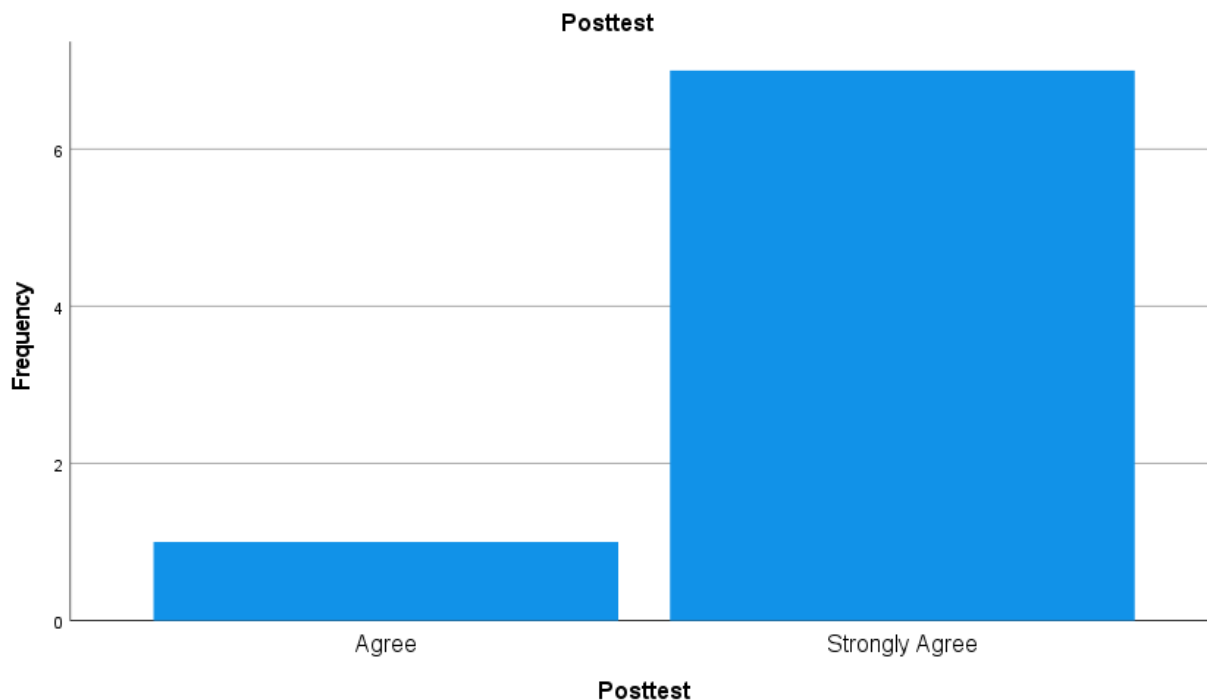
Outcome 3a: Anesthesia providers will rate an 60% increase in willingness to include AD screening as part of pre-anesthetic assessment interview.

Measure 3a: Percent Change. The pre-and post-survey responses was compared. Significantly increased willingness to include AD screening in pre-anesthetic assessment was evident post-intervention.

It has been shown that the best method to ascertain a patient's AD status especially the most current information is to directly from the patient (or family). This is best obtained during pre-anesthetic interview. The project result showed that six out of the eight participants indicated willingness to include AD screening as part of their pre-anesthetic assessment interview. Among the providers who are willing to make the practice change towards inclusion of AD screening during pre-anesthetic interview, the result showed a 400% change increase for one of the

providers and a 300% change increase for another provider. A 25% change increase for the remaining four providers was obtained.

In conclusion, the findings showed participants gained significant knowledge following the educational workshop. These anesthesia providers were highly impressed and verbalized their satisfaction with the educational intervention. All of them verbalized it created more awareness of the negative consequences of an AD adverse event at the facility. Most agreed on the need to take action to prevent the occurrence of such event in the future through a change in practice. Others verbalized increased knowledgeable of the facility policy on AD and what to do or where to find the resources to safely care for patients who presented for surgery with an AD. They also expressed they were impressed with the contents of the presentation especially the inclusion of facility policy on different AD related circumstances and controversies that the participants may encounter in practice. The participants satisfaction level with the educational intervention is represented on the bar chart below (more statistical information for this output is available in Appendix Q).



Bar chart of posttest output for satisfaction survey

As shown above in the post test output for satisfaction survey, 87% (seven out of eight) of the participants were strongly satisfied with the educational presentation while 12.5% (one out of eight) of the participants was satisfied.

### Data Analysis Inferences

Analysis of the pre-intervention data showed knowledge deficit on the part of the providers on current best practice guidelines for AD. This lack of knowledge was related to AD guidelines from the state of Indiana and their practice facility and practice recommendations from the AANA. Most of the providers did not know the best place in KCH to obtain a patient's AD information or the best resources available to obtain such information. Some lacked knowledge on the best action to take according to facility policy, if a patient presented for surgery with a DNR. Findings also showed providers do not assess for patients AD status during their pre-anesthetic assessment on the day of surgery. As a result, these providers cannot be said to be providing informed anesthesia care to these patients as regards AD.

Post-intervention findings showed significant knowledge gain on AD, willingness for practice change and increased confidence level for these providers in caring for patients with a DNR or an AD. The findings showed participant's willingness for practice change towards enhanced safety and the provision of informed anesthesia care through the inclusion of pre-anesthetic AD screening during the immediate preoperative assessment of patients undergoing surgery. This is because a prior knowledge of patients AD status informs the anesthesia provider of the patient's wishes in the event of unexpected outcomes. It also ensures anesthesia care plan tailored to meet each unique patient's needs and circumstances.

Other findings noted, included, one hundred percent (100%) of the providers who participated in the project agreed that having participated in the educational workshop, they reported being more confident in providing informed anesthesia care to patients with an AD. One hundred percent satisfaction feedback from participants, most of whom indicated they were very satisfied with the educational workshop. These significant findings indicated effective educational intervention at KCH

### **Gaps**

All eight anesthesia providers at KCH attended and participated in the project educational intervention. However, this was a small sample size of participants. The significant findings from the data obtained from this small sample size of participants, and the fact that KCH is a small hospital, makes it difficult to generalize and widely apply the findings of this project work. Due to limitation of time factor, a follow up study to assess providers compliance with the project recommendations in their practice, would have been beneficial. This follow-up study can also explore any new reported or occurrence of AD related event at KCH following the project implementation.

**Unanticipated Consequences**

No adverse or harmful event to participants was noted during this project. Meticulous precautions were taken by the project manager to ensure confidentiality and protection of participants. Therefore, no future risk is anticipated for participation in the project. The project was conducted with strict adherence to ethical provisions on protection of human subjects. The high participant turnout and level of participation was not anticipated but was encouraging and appreciated.

**Expenditures**

A total of \$120 was spent by the project manager for materials and supplies for designing and printing of the survey questionnaires. Included in this cost was the printing of copies of KCH guidelines and policy on AD, which was given to each participant. Additional indirect expenses of \$80 was spent on transportation to the implementation site for multiple presentations and for other ancillary supplies. Cost savings on food and refreshment was made possible by the daily food provided by the facility in their physician's lounge, which conveniently was the venue of the educational workshop. The implementation facility did not incur any additional cost from overtime or interruption in workflow because the presentation was done during the break times of the providers or at the end of their work shift (for the additional presentations).

## **Chapter 5: Leadership and Management**

### **Organizational Culture**

The assessment of organizational culture is an important concept and exercise needed for change in the process of translation of evidence to clinical practice and to ensure successful implementation of the doctoral project. An understanding of culture, and the structure of an organization as separate entities would provide a foundational framework to the concept of organizational culture and how it relates to research project implementation. Culture is the shared learning of a group (or organization) as they evolve. It is those beliefs, values, and patterns of behavior and way of life among other things, shared together by a group of people that identifies them and binds them together. An organization, on the other hand, can be a single unit or multiple entities working together with a commonly shared ideal (culture) towards achieving the organization's goal.

With organizational culture, there is synergy and multiple systems interacting to influence the mission of the organization which typically involve 3 key concepts: Relationships, Leadership style, and Context (Joseph, 2015). To succeed, an organization should be able to uphold its values among its members and foster an environment of efficiency and productivity in meeting the organizational goals. To achieve this an organization should create a work climate, which according to Joseph (2015), is one where workers not only identify with the organization but have similar organizational values, engage in workplace relationships, with perceived organizational support. It is also where the model of leadership is relational leadership. This will create a culture of innovation, as organizations are constantly seeking to excel through growth, improved standards, and productivity.

As part of the Lutheran Health Network (LHN), Kosciusko Community Hospital (KCH) is a community healthcare provider, located in Warsaw County, in the northern part of Indiana. The hospital sits on a 30-acre medical campus, with a structure that houses a 72-bed space, all-private rooms, and believes in the power of its health care professionals to deliver exceptional care (LNH, 2021). KCH offers a wide variety of services including an urgent care center, surgical services, intensive care unit, maternal and childcare, occupational health, heart and stroke care, health, and wellness, rehabilitation services, sleep center, wound care center, outpatient services, and cancer care center which provides chemotherapy and radiation therapy. KCH delivers standard and nationally recognized healthcare services to its patients. This has earned them a good reputation in the county and surrounding areas. A milestone achievement as the only emergency department in the county that is an accredited chest pain center and certified stroke center. Investing in their members/personnel through promoting staff professional growth and development and creating an enabling work environment, KCH has built an organizational cultural worthy of commendation. The hospital is highly invested and committed to the community they serve through various programs and community-oriented initiatives. The network has a material impact of more than \$3.2 million each day to the communities and is committed to their mission to work hard every day to be a place of healing, caring, and connection for patients and families in the community (LNH, 2021). These organizational characteristics are depicted in the force field analysis (Appendix L).

### **Change Strategy**

#### ***Burke and Litwin Model or A Causal Model of Organizational Performance and Change.***

Viewed as a conceptual framework the Causal Model of Organizational Performance and Change, also referred to as the Burke & Litwin Model, describes the relationships between

different features of an organization, as well as its context and effectiveness, providing a means to diagnose, plan, and manage change (Robinson, 2019). Change is inevitable. To meet the challenges of technological advancement, globalization, changes in economic and market dynamics, organizations must continuously seek to innovate and be competitive. Making the Burke & Litwin Model ideal. The model also distinguishes between transformational and transactional dynamics as relate to organizational leadership. It also helps to determine how and to what degree the cultural variables influence management practices and in turn the work climate in the organization (Robinson, 2019). The model is resourceful in situations where it is necessary to establish a cause-and-effect relationship and can also show how performance is affected by internal and external factors, linking knowledge from practice to sound theory and research (Burke & Litwin, 1992). The Causal Model utilizes 12 dimensions that drive organizational change, and the interrelationship between the different dimensions is discussed below.

- |                             |   |
|-----------------------------|---|
| 1. External Environment     | 2. Mission and Strategy                     |
| 3. Leadership               | 4. Organizational Culture                   |
| 5. Structure                | 6. Management Practices                     |
| 7. Systems                  | 8. Work Unit Climate                        |
| 9. Task & Individual Skills | 10. Individual Needs & Values               |
| 11. Motivation              | 12. Individual & Organizational Performance |

As an anesthesia provider in training, the focus of this DNP project and its implementation is in the surgical unit of Kosciusko Community Hospital. The surgical suite comprises 17 prep/recovery bays, six operating rooms, two minor procedure/endoscopy rooms, and seven recovery bays. The surgical suit is managed by a nurse manager. The surgical



department at KCH comprise the surgical team. To make it easier to understand and from a functional standpoint, the surgical team can be divided into 3 groups/teams: (1) Preoperative Care Team (2) Operative Care Team (3) Post-operative Care Team. The operative team consists of the surgeon, surgical assistant, surgical technician, physician anesthesiologist, nurse anesthetist, anesthesia technician, and surgical nurse. Both the pre-and post-operative care teams consist of registered nurses and their team heads/managers and the nurse assistants in some cases. The surgical team offers a broad range of surgical services, ranging from simple surgical and diagnostic procedures which can be minimally invasive to traditional procedures which are invasive. In the provision of surgical services, KCH offers advanced procedures utilizing advanced technologies like robotics, laparoscopy, ultrasound-guided, radiology, laser, endoscopy, and many more.

As a healthcare service provider, KCH is dedicated to the provision of a safe environment for its workers, and patients, improving the standard of care, and ensuring good outcomes and patient satisfaction. This is achievable through the provision of an ideal organizational culture and work environment that promotes good team dynamics, change, innovation, and a relational leadership style. Establishing mutual trust, open communication between organizational leadership and staff members, supporting one another and working together to uphold the set standards.

The Burke-Litwin change model diagram shows the interrelation between the 12 critical drivers (rectangular boxes) and how one can affect the other or how a change in one can affect another (Appendix M). These 12 drivers are listed to the right of the diagram as shown in Appendix K and are numbered from 1-12. Utilizing the three major drivers of the Burke- Litwin

model, a standard and unbiased assessment and discussion of the KCH organization can be done as discussed below.

#### A). External Environment

The economy, customer (patient) behavior, competition, politics, and legislation, are external influences important for organizational changes (Robinson, 2019). In today's healthcare system, reimbursement for healthcare services by insurance companies is tied to patient feedback and satisfaction with services received. This can influence organizational change towards individualized and patient-centered care that is tailored to meet the needs of the individual patients to improve care standards and ensure satisfaction. Healthcare services delivery at KCH are within the scope of legislation authorized by the State of Indiana for such service delivery to the public. Legislation, policies, or guidelines at the facility, state, and federal levels as regards the type and quality of care provided, are important determinants. Therefore, members of the care team must have up-to-date knowledge of these policies and must practice within set policies and guidelines. That is why this DNP project aimed to ensure that providers possess up-to-date knowledge on current best practices to help them make informed decisions on care choices that ensures the best possible outcome for patients.

#### B). Transformational Factors (mission and strategies, leadership, and organizational culture)

KCH is part of the Lutheran Health Network (LHN). The leadership at KCH works to create an organizational culture that upholds the Lutheran network mission of dedication to providing excellent care for patients and to creating a safe work environment for practitioners and staff members (LHN, 2020). This they strive to achieve by working together and openly sharing important information with their employees, patients, and the community (LHN, 2021).

According to LHN, 2021, the hospital is one of the largest employers in the region with over 7,000 employees, offering a non-discriminate opportunity for employment to the general population. In addition to partnering with the community, KCH utilizes various programs and initiatives to encourage career opportunities and promote professional development. The management is continuously seeking ways to reduce cost, provide needed resources, elevating the quality and standard of patient care. These have earned KCH a place in the community and hence, a fully integrated part of the community, ensuring good outcomes for patients.

C). Transactional Factors (focusing on the task and individual skills component)

The good managerial skill of the leadership at KCH is evident by the positive organizational culture, and job satisfaction for staff members. Patients interviewed during this project reported satisfaction with the quality of services offered at the hospital. By observing the interaction between staff members with one another and with the patients, one can sense a pleasant communal type of relationship, that is admirable. This is probably the reason why staff members commonly refer to KCH as their home. In interacting with the staff members at KCH, it is apparent they are passionate about their jobs, displaying good understanding of both the individual and collective roles to work together to maintain a high standard of care.

KCH expects its staff members especially the medical personnel/care team to possess the knowledge and skill needed to properly execute their job, including knowledge of current policies and evidence-based best practices and guidelines that ensure standardized care and patient safety. These policies should be as provided by the facility, state, federal, and professional organizations. This DNP project can be related to the task and individual skills component of the transactional drivers of the Burke-Litwin change model. The project focused on providing anesthesia providers the knowledge on current best practices, aiding them in

maintaining practice standards towards the provision of informed anesthesia care to patients.

Note however, that translation of research study to clinical practice would involve a change in practice for innovation in care and service delivery to patients. This project aimed to achieve this through the intervention exercise conducted in the surgical unit at KCH.

### **Style of Leadership**

Organizational leadership and the leadership style are important and crucial in determining organizational culture, work climate, team dynamic, workflow and coordination, and the overall productivity and successful operation of an organization. Leadership involves motivating, inspiring, strengthening, and guiding followers towards achieving set goals (Grossman, & Valiga, 2013). The leadership style at KCH can be referred to as a relational type of leadership that has been shown to be goal-oriented and successful. This has propelled KCH to greater height. KCH has an effective leadership structure that is maintained by the hospital management team, working closely with the various designated managers/department (or unit) heads at the different departmental/unit levels within the hospital. This successful leadership structure guarantees the provision of appropriate numbers of a well-trained workforce. It also provides a flexible and well-balanced work schedule and workload, and good interprofessional coordination and networking to ensure smooth operation of the workplace. Team members are assigned, or delegated tasks based on individual skills and qualifications and according to facility policy. According to reports from KCH management staff, work compensation and other employment-related benefits like health insurance and retirement savings are competitive to both local and state rates. All these can be attributable to the structure at KCH that promotes a low staff burnout, thereby reducing the potential for overall work-related errors, and the good job

satisfaction that is synonymous with the KCH organization. Different policies are in place at KCH for the job description, expectations, the scope of practice.

At KCH, the management team are invested in staff welfare, promoting a safe work environment and a culture of good team spirit, mutual respect across the different professional spectrum. Staff members are encouraged to demonstrate accountability, ownership, commitment to duty, and dedication to the welfare and satisfaction of the patient they care for. The leadership at KCH provides opportunities for major stakeholders including physicians, unit managers, and departmental heads, in addition to other practitioners, to sit at the table and discuss ways to improve both worker's welfare and patient care (LHN, 2021). The management at KCH practice an open-door policy that value and encourage employee input and feedback to improve organizational performance.

The leadership at KCH was cooperative and supportive of this DNP project. The DNP project proposal was reviewed with the operating room manager, who not only accepted but also welcomed the implementation of the project at the facility, noting its positive impact on the healthcare personnel and the hospital in general. The facility was forthcoming with response to questions or in the provision of some requested documents or data that would aid the successful completion and implementation of the project at their facility. Some stakeholders including the operating room manager in charge of the perioperative care area, were involved in the project team. The project manager met with various stakeholders at the facility at various times discussing, planning, and making adequate provisions for the successful implementation of the project educational intervention at the facility. The project manager was proactive in the identification of practice gaps at the facility and took steps towards breaching those gaps by advocating for evidence-based practices that would improve care standards and patient

outcomes. Having successfully implemented this DNP project at KCH, it was a pleasure working with the staff and management at this facility towards the successful execution of this project at the facility. In addition, KCH was encouraged to live up to its commitment as provided in its policy, to organize and sustain routine educational workshops or provide opportunities to inform and update the knowledge of their healthcare personnel on current best practices, including but not limited to advanced directives.

### **Interprofessional Collaboration**

Interdisciplinary collaboration is part of the healthcare process and remains a foundational piece of public health and public healthcare practices all over the world. In healthcare, the interprofessional collaboration aims to improve care standards, and patient health outcomes, ensuring satisfaction and confidence in the healthcare system. According to Suter et al. (2009), role understanding, and effective communication are core competencies for collaborative practice. At every level, anesthesia providers collaborate with other internal professional units or team members at the various units/department of the hospital including pharmacy, emergency room (ER), intensive care unit, medical-surgical unit, obstetrics (labor & delivery), and many more. The interprofessional collaboration between the anesthesia provider across the spectrum can involve working with surgeons plus or minus radiology, for provision of simple diagnostic or curative bedside procedures for patients admitted in the hospital intensive care unit. This can also involve coordinating with emergency room (ER) personnel for difficult emergency intubation to secure the airway or for other invasive monitoring techniques. Notably, providing peripheral or regional nerve block procedure for pain relief, providing neuraxial or epidural blocks to relieve pain for obstetrics patients in labor and other interventions for the new-born are patient services that required collaboration across various departments/specialties.

During COVID, anesthesia providers were particularly resourceful in the intensive care unit helping with endotracheal intubation, respiratory care, and ventilator management of patients infected with the deadly respiratory virus. Anesthesia providers also collaborated with others in the perioperative clinic to screen and identify patients with a high risk for surgery complications or those with advance directives and then plan accordingly. The anesthesia provider collaborates with nurses and surgeons/physicians to identify, plan and tailor anesthesia care to patients with an AD, that meets and respects their choice of care in the perioperative period. These patients were evaluated preoperatively prior to or on the day of surgery to modify care based on updated patient's status and plan to manage potential abnormalities before proceeding with surgery. The professional collaboration at KCH is both locally within the hospital and externally with other specialists within the Lutheran health network. This is unique because it provides a coordinated, and comprehensive care of patients in the same or different locations, to ensure cost effective treatment and speedy recovery.

### **Conflict Management**

According to Currie et al. (2017), workplace conflict is defined as “grievances and disputes between individual employees and their employers, among individuals and between groups of employees, whether unionized or not, and their employers.” Conflict is inevitable in the workplace. It is an undesirable but common and constant feature of the work environment. Therefore, it becomes desirable that every organization should have or put in place an effective system of conflict management. It is the responsibility of the organization leadership to not only establish a system or process of managing conflict but also continue to routinely review and modify the process to ensure appropriate resolution of any, and all conflicts that occur at the workplace. The leadership style is an important determinant of an effective conflict resolution

process requiring coordinated and skillful intervention that conveys an unbiased strategy that is fair to both parties involved. Choosing of a quiet environment for resolution, active listening, de-escalation strategies, providing opportunities for both parties to speak or be heard among others, are recommended strategies for conflict resolution. Carefully and tactfully exploring the origin or source of conflict is an added strategy for full resolution and prevention of future occurrence or reoccurrence. However, some literature argues that preventing workplace conflict from emerging in the first place is the most effective way to address it (Currie et al., 2017). Competition and promoting a culture of workplace competitiveness are encouraged but with caution as this could be a source of constant conflict. Leadership style should also be one that values collective achievement instead of focusing on individual achievement, as this would enhance value for teamwork approach and improve team dynamics thus reducing conflict at the workplace.

At KCH, as previously mentioned, the culture is one where members are encouraged to demonstrate accountability, ownership, commitment to duty, and dedication to the service of their patient population. Trust and mutual respect are notable and exist among staff members but when conflict or grievance exists, there are protocols and policies in place for reporting, managing, and resolving grievances and/or conflict between staff members. There is a hierarchy and chain of command at the unit level from the unit managers all the way to management team in the conflict resolution process. Also, other channels exist for those who wish to remain anonymous.

Project implementation limitation at this site existed and involved work pressure, short staffing issues and job expectation that may affect the turnout of health personnel for the educational workshop. Obtaining approval for the implementation of the project at the facility was a major setback. The approval process was particularly difficult, unnecessarily prolonged



and involved multi-level personnel approval, that delayed or significantly extended the project timeframe. It was so frustrating that at some point the project manager considered and initiated plans for an alternative implementation site. However, at the end the approval came through and the project was implemented at KCH. Also, the mindset of some providers in believing they are knowledgeable on current practice guidelines and therefore do not believe the educational intervention to be beneficial to them affected initial turnout or participation in the project educational intervention exercise. These and other factors like inclement in weather necessitated a change in the date of the scheduled intervention workshop. The intervention workshop was then conducted earlier than planned due to the anticipated winter storm. Afterwards, multiple educational intervention sessions were conducted for participants, who were unable to attend the first session due to work or personal commitment resulting from the last-minute change in date due to the storm. However, this did not significantly impact the overall project work and findings or skew the data in any way.

## **Chapter 6: Discussion**

### **Impact of Project**

This quality improvement project on the current best practice for AD was successfully implemented at KCH. Feedback from participants during the educational workshop were unanimous and centered mainly on the need for practice change towards the inclusion of advanced directive screening during pre-anesthetic interviews. The participants all agreed to make this practice change, since studies have shown it does not significantly increase pre-anesthetic interview time nor delay the start time for surgery. Rather, it improves safety and ensures the provision of informed anesthesia care. Most of the participants verbalized that judging from anticipated positive impact if such change in practice was fully implemented, it is imperative that anesthesia providers adopt the project recommendations especially in the areas of informed care. This would ensure honoring patient's wishes, enhance patient's participation and satisfaction in their care. It would prevent AD related adverse events. No present or potential barrier to implementing this practice change was identified.

In addition to positively impacting providers towards practice change, all project measurable goals were met as shown in the project results. The implementation of these measures should enhance safety, improve practice standards, and prevent reoccurrence of AD related adverse events at KCH and beyond. Judging that most of the providers also practice at other locations, they can utilize, implement, and share and/or disseminate the knowledge gained from this project to those other hospitals.

### **Decisions and Recommendations**

The current best practices for AD showed the need for practice change towards informed anesthesia care by improving knowledge of participants on current best practices for AD through

supplemental education. It also showed the need to reduce or prevent peri-operative AD related adverse events. Participants were encouraged to stay updated on the current best practices, policies and guidelines for AD, as provided by their facility and recommended by the state of Indiana and the AANA. Dissemination of findings and recommendations were made to KCH to ensure the implementation of routine educational workshop on AD & ACP, as provided in the hospital's policy on AD. Furthermore, recommendation was made for a copy of the current facility policy and guidelines for AD, be included in the information packet provided to newly employed healthcare providers at KCH during the orientation process. This can also be extended to the entire Lutheran Health Network.

### **Limitations of Project**

Due to medico-legal and public relation concerns, the project manager was not able to obtain the number or incidence of reported peri-operative AD related adverse events at KCH. Due to time limitation, there was no follow up study to assess providers compliance with the inclusion of AD screening during their daily pre-anesthetic assessment and to assess for any newly reported AD related adverse event at KCH following project implementation. Therefore, the direct impact of the project on patients, and the incidence (old or new) of AD related adverse event at KCH were not measured. Time constraint also limited the inclusion of surgical patients with an AD in the project.

### **Application to Other Settings**

Current evidenced based practice is towards standardized care and safe practices through informed care, encouraging patient participation and honoring their right to care choices. Even though KCH is a small hospital in a rural community with a small anesthesia care team, the project findings can be generalized to some extent, since the problem exists in other hospitals as

shown. The findings are applicable to other health facilities, since informed anesthesia (through current knowledge on AD and AD screening during pre-anesthetic assessment) have been shown to reduce or prevent AD related adverse events in the peri-operative period. This will further promote patient satisfaction and confidence in healthcare system particularly in the field of anesthesia care. This project seeks to further sensitized care providers to the occurrence, consequences and negative consequences of an AD related adverse event to the patients, the providers, and the hospital involved. These consequences include but not limited to emotional, cost, negative publicity, litigation, waste of resources and stress, all of which can further erodes patient's confidence in the system. The project also encourages providers across various healthcare settings to seek out and get to know their facility guidelines and policies on AD & ACP. This will reduce or prevent future occurrence of such adverse events related to AD for surgical patients.

### **Strategies for Maintaining and Sustaining**

The project manager took steps to promote and ensure participants stay updated on current best practices for AD. Participants were provided with copies of the educational presentation making it accessible for future reference. When needed, they can access and utilize it to review key learning objectives, policy provisions and recommendations related to AD & ACP. The participants were also provided copies of KCH/facility guidelines and policies on AD. This will help to further increase their knowledge on facility specific policies on AD, and as a resource when making care choices to ensure compliance with facility guidelines. As stated previously, recommendations were made to KCH leadership to ensure routine provision of educational workshop on AD & ACP, and to include a copy of the facility policy on AD as part of information packet provided to newly employed healthcare providers.

## **Lessons Learned**

Life is dynamic and therefore, there is the need to plan, anticipate and be prepared to tackle unforeseen circumstances as they present. The project manager was opportune to learn the importance of this concept during this project. The project manager encountered such circumstances on multiple occasions during this project. Notable among them were the difficulties and challenges mentioned earlier relating to obtaining facility approval to implement the project at KCH. An inclement in weather disrupted the planned implementation date at KCH and the project manager had to develop a backup plan for an alternative date. In addition, due to the work demand, it was difficult for all the providers at KCH to attend the educational presentation at the same time necessitating the project manager to conducting multiple educational presentations. The data collection process was smooth because the project manager made provision for multiple methods of filling out the questionnaires (Q-codes and paper). Extra paper copies of the survey questionnaire were made available, just in case. Some of the participants who opted to take their questionnaires home to fill and lost or misplace it were provided with new copies. Nonetheless, it was possible to overcome these challenges by having a back-up plan and being flexible. The input and guidance from the project team during these difficult times is highly appreciated.

During times of difficulty, challenges, stress, and situations where the project manager felt overwhelmed, the project team had provided the needed support, advise and encouragement. The project team input and strategies yielded immense positive results. These has brought the project manager to a better appreciation of the importance of teamwork, especially in conducting

out a quality improvement project as this. The project manager is indebted and thankful to the amazing project team and their selfless contributions to the success of this project.

Other lessons learned throughout the project was related to the DNP Essentials. The early stages of the project involved the formation of a PICO question and conducting a literature review which were related to DNP Essential I. Subsequent processes and lessons learned included the project implementation, which required performing an organizational assessment and identifying key stakeholders (DNP Essential II) at the implementation facility, utilizing the Burke & Litwin Causal Model of Organizational Performance and Change. The project manager also assessed current practices at the facility and related it to current best practices and standards of care, to establish a practice gap (DNP Essential VII). In addition, obtaining an IRB approval, conducting an educational intervention (DNP Essential IV), and collecting data for analysis (DNP Essential III) were among other lessons learned. Following the analysis of the data collected, the project findings were subsequently disseminated by the project manager to other healthcare providers in fulfilment of DNP Essential VIII.

## **Chapter 7: Conclusion/Summary**

### **Potential Project Impact on Health Outcomes Beyond Implementation Site**

Kosciusko Community Hospital is part of Lutheran Health. As a quality improvement project, the findings and recommendations of this work can be applied to other healthcare facilities across the Lutheran Health Network especially in those hospitals that have recorded or continue to record AD related events. Hospitals that have not recorded any AD related adverse event, can also utilize, and implement the findings of this project work as part of their safety and quality improvement guidelines to prevent the occurrence of such event at their facility. The Lutheran Health Network can include AD & ACP learning modules as part of their routine continued educational program for health employee. This can be extended to other health facilities beyond Lutheran Health.

### **Health Policy Implications of Project**

The federal patient self-determination act of 1989 provided patients the opportunities to participate in and control their healthcare. Current evidenced-based practice guidelines are towards the provision of informed care. This would require healthcare providers to be knowledgeable on current best practices, and guideline provisions, in addition to be being informed of patient specific wishes for their healthcare needs. This would promote safety in healthcare delivery services, ensuring good patient outcomes. Note however, this project has discussed the consequences and negative impact of AD related adverse effect on the patients and the healthcare system. It has also drawn attention to the existence of such problem and urgent need to develop measures to address it. This project aimed to make its contribution to improved patient safety through the reduction in the incidence of or total eradication of AD related adverse events in our healthcare facilities. In addition to promoting patient's participation and

satisfaction in the care they receive, promoting standardized care towards informed care delivery is part of the key objectives of this project work.

### **Proposed Future Direction for Practice**

Further and extensive study can be carried out to include patients presenting for surgery with an AD in place. The study can be extended to include multiple hospitals to increase the potential for broad application of its findings. Further effort can be made to obtain the incidence or number of reported AD related adverse events or poor outcomes at those facilities

Informed consent, advanced directive and informed care are all standard of care. Practice change should be towards standardized practice through enhanced knowledge acquisition to better equip anesthesia providers in the provision of informed anesthesia care that meets current practice guidelines. Change in legislation and facility policy towards providing avenues and mandating care providers to stay updated on current best practices for AD should be encouraged. Furthermore, this project has joined the campaign in the recommendation for the development of a more comprehensive preanesthetic assessment checklist or updating of existing checklists to include AD screening in the immediate pre-operative period (morning of procedure) to reflect last minute changes patient may have made to their existing AD.



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## Appendix A

### Evidence of CITI Training

#### Evidence of Training in Human Subject Protection [CITI Training Certificate]







## Appendix B

### Facility Letter of Approval to Implement Project

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Lutheran

Health Network

Kosciusko Community Hospital

10/14/2021

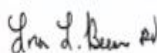
To the University of Saint Francis Institutional Review Board:

This letter is being written in support of University of Saint Francis NAP/DNP Charles Iluba's Doctor of Nursing Practice Scholarly Project "Advanced Directives: Current Best Practices". Kosciusko Community Hospital (KCH) understands that the aims of the DNP Scholarly Project are to increase the knowledge of anesthesia providers, through an educational intervention/workshop on the current best practices for advanced directives (AD) according to the American Association of Nurse Anesthetists (AANA), the State of Indiana and facility guidelines. This project will serve to update facility anesthesia providers on current trends, rules, and regulations regarding Advanced Directives. This will also help prevent or reduce the occurrence of AD related adverse events in the peri-operative period.

KCH is supportive of the aims of the project. For a successful completion of this project, KCH is committed to providing the needed assistance by allowing the distribution of surveys to staff, granting permission for the educational intervention/workshop to be conducted at designated hospital location, providing time for employee attendance, and allowing limited access to electronic medical records per hospital policy. If the institution does not require the project to go through its Institutional IRB, please note this here.

Kosciusko Community Hospital and its leadership is fully committed to the safe and successful completion of Charles Iluba's DNP Scholarly Project on Advanced Directives: Current Best Practices.

Sincerely,



Lora L. Beeson RN, BS, MSA

Director of Surgery and Outpatient Clinics

574-372-7827

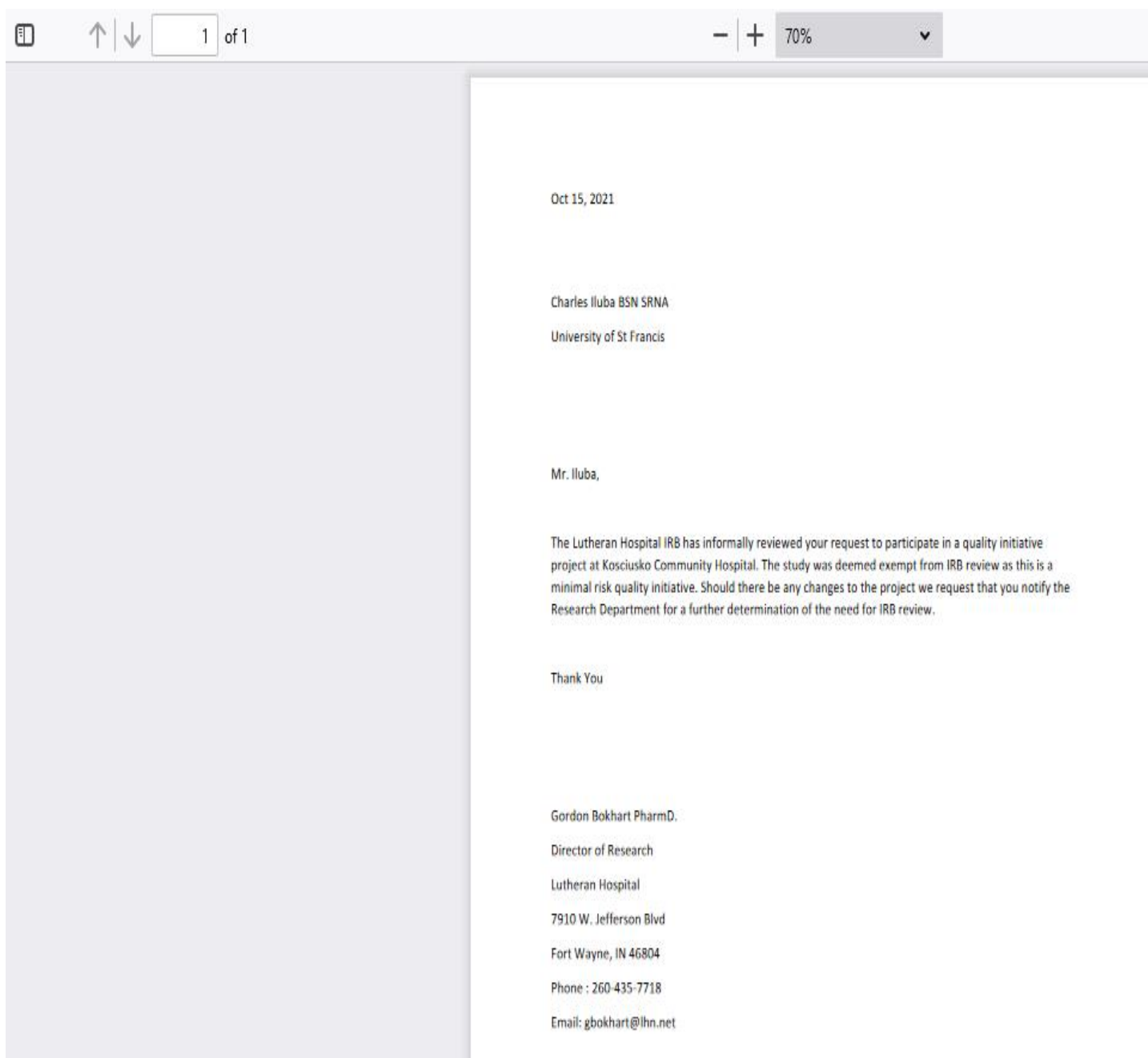
lbeeson@kch.com

2101 E. DUBOIS DRIVE | WARSAW, IN 46580

P: (574) 267-3200 | F: (574) 372-7698 | [kch.com](http://kch.com)

## Appendix C

## Letter of IRB Exempt from KCH/Lutheran Health



## Appendix D

## Human Subject IRB Approval

1 of 1 Page Fit

**University of Saint Francis  
Institutional Review Board  
Human Subjects Review Committee/ACUC/IBC  
Institutional Review Board Approval Form**

Protocol Number: 16346896129  
 Reviewed by (underline one): HSRC ACUC IBC  
 Date Reviewed: Monday, November 8, 2021  
 Principal Investigator: Charles Iluba  
 Faculty Advisor: Dr. Carla Mueller  
 Protocol Title: Advanced Directives: Current Best Practices  
 Study Site(s): University of Saint Francis, Main Campus

Type of Proposal:  
☐ Original research  
☐ Replication or extension of previous research  
☒ Quality Improvement/Evidence-Based Practice Project

Items submitted for review:  
☒ CITI Certificate  
☒ Initial protocol  
☒ Abstract  
☒ Informed Consent Form (if applicable)  
☒ Approval letter from outside institution  
☐ Other - explain: Email request was made for waiver

Type of Review:  
☒ Full Review  
☐ Expedited Review  
☐ Exempt Review

Approval:  
☒ Approval granted on Monday, November 8, 2021 for a period of one year.  
☐ Conditional approval\* granted on \_\_\_\_\_ for a period of one year.  
☐ Not approved\*  
☐ IRB approval is not required:  
☐ Other

\*Comments:  
 The committee performing this review is duly constituted and operates in accordance and compliance with local and federal regulations and guidelines.
 

- Edit suggestion - student include reference to other experts that reviewed survey questions and vetted for validity purposes.
- No further concerns or points of discussion on this proposal

Michael P. Bechill, IRB Chair  
 Printed Name (Chair or designee) Michael P. Bechill 2021-11-08  
 Signature Date

IRB Committee Approval Form mgb 01/01/2021

## Appendix E

### NURS 658 DNP Project Budget Template

Legend

Direct Costs

Indirect Costs

In-Kind Costs

Project Expenses				
Salaries and Wages	Description	Year 1	Year 2	Total
DNP Project Manager- 8 CRNA at project site	\$150 X 2 hours for intervention	0	1,600	1,600
food and drinks	from staff lounge	0	0	0
1 physician anesthesiology	\$200 x 2 hours for intervention	0	400	400
OR manager and head of surgical department	\$100 x 2 hours intervention	0	200	200
DNP student - project developer	320 hours			0
Total Salary Costs		0	2200	2,200
Startup Costs	Description	Year 1	Year 2	Total
Marketing- Transportation to Project site			\$100	100
Focus Groups	0	0	0	0
Project Training	0	0	0	0
Indiana Advanced Directive policy Sheet	\$20 each for 5 copies		100	100
Total Start Up Costs		0	200	200
Supplies and Materials	Description	Year 1	Year 2	Total
Handouts, paper, Pen & Other Supplies			100	100
				0
				0
Total Supplies and Materials		0	100	100
Capital Costs (costs >2,000)	Description	Year 1	Year 2	Total
3 Laptop Computers	Data gathering, assemble project information	0	0	0
	communication			0
Total Capital Costs		0	0	0
Total Expenses		0	2500	2,500
Project Revenue	Description	Year 1	Year 2	Total
				0

				0
				0
				0
Total Project Revenue				0
Project Benefit/Loss				
Total Revenue		0	0	0
Less Expenses		0	2500	2,500
Total Project Benefit/Loss		0	-2500	2,500

## **Appendix F**

### **Draft of Informed Consent**

#### **Introduction**

Hello, I am Charles Iluba, a registered nurse in training to become a certified registered nurse anesthetist (CRNA) at the University of Saint Francis, Fort Wayne, Indiana. I am conducting a project for my Doctor of Nurse Practice (DNP) degree, and I am seeking your participation in this study. I will be receiving guidance and support from my Doctoral project advisor Dr. Mueller, Karla.

My motivation to carry out this project is related to an advanced directive (AD) related adverse event at this rural healthcare facility in Indiana. An adult patient scheduled for a diagnostic surgical procedure at this health facility, had a conversation with family members prior to the procedure and update his AD to a do not resuscitate (DNR) order. This decision was communicated to the facility through its personnel. Unfortunately, this patient had an adverse outcome and the healthcare team unaware of the new order, implemented all resuscitative measures which was contrary to the patient's wishes. The patient's family were unhappy at the turnout of events. This is not acceptable and indicates a breakdown in the chain of the facility AD protocol and therefore a practice gap. Furthermore, survey conducted at this facility indicates lack of knowledge for anesthesia providers on current practice guidelines for AD as recommended by the State of Indiana and the facility. For the above reasons, an intervention is required and of utmost importance at this time. An informed consent is a requirement for participants of this project. According to Sil & Das. (2017), some elements that need to be included in the informed consent form for this project are discussed below.

### **Purpose of The Project**

The purpose of this project is to educate the anesthesia providers in the surgical unit of a rural health facility on the current best practices for advance directive for adult patients undergoing surgery. This is to enable anesthesia providers make an informed decision on anesthesia care choices that meets both the AANA (American Association of Nurse Anesthetists) and the facility practice standards thereby respecting the wishes of patients and reducing (or eliminating) the occurrence of advanced directive related adverse events within this health facility. Furthermore, this project's purpose is to retain a leadership focus on the need for an evidence-based standardized anesthesia care that respects the wishes of the patients and meets their expectations in the event of perioperative adverse or unexpected event.

### **Explanation of Procedures**

1. The project participants will be sent an initial online anonymous relevant demographic survey. Each participant will be randomly assigned a private ID number for them to remember at this time to protect their anonymity and data. They are to retain this number and would be required to not share this ID number with anyone. This should take about 4-5 minutes to complete.
2. Following the demographic survey, a pre assessment/survey/ quiz, will be provided to the participants for completion, with instructions on how to complete them. This will take about 5 minutes. I plan to do both these surveys online, through Microsoft Forms to be carried out in December 2021.
3. The preassessment survey would be followed by a notification and formal invitation to all anesthesia providers to a formal in-person teaching/educational workshop/session at the facility.



4. Tentatively between December 4<sup>th</sup> -20<sup>th</sup> 2021, a formal in-person teaching/educational workshop/session would be implemented at the physician lounge of the health facility. The time would be around noon (between 11am to 1pm) to increase the chances of providers attending the presentation since this time correlates with the lunch break for these providers. This presentation would be a traditional power-point presentation style with a question, and answer format at the end of the presentation. An attendance register would be provided to providers to sign in, signifying attendance and participation in the workshop. Food/snack and drinks would be provided.
5. A pre- & post-educational/teaching survey/ quiz would be completed by the providers at beginning and the end of the workshop respectively, either in print or online through a QR code system or Microsoft Forms (immediately or within 24 hours post teaching).
6. The total amount of participation time required should be 1 hour or less, including time for the pre survey, the workshop, and the post survey.
7. The duration of intermittent subject participant involvement will be less than 6 weeks.
8. The number of participants anticipated for this presentation should be between 8- 11 anesthesia providers (CRNAs +/- physician anesthesiologist).
9. Participants would be provided a copy of the power-point presentation after the presentation for future reference.

#### **Alternative Procedures.**

An alternative procedure would be the implementation of this workshop at another facility and its attendant unique requirements for implementation logistics. Since we are in the middle of a pandemic, and depending on the circumstance, a virtual presentation method via Microsoft Teams or skype is an alternative format to execute the teaching session if

required. Anesthesia providers remain the most viable participants best suited to obtain the information needed for this project.

### **Explanation of The Risks and Benefits of The Research.**

1. Presently, no potential risk or discomfort is anticipated for the human subject/providers participation in this project as relates to project time requirements, costs, or sensitive questions. Social distancing protocol would be observed in the sitting arrangement and facemasks if mandated within the hospital.
2. Participants are encouraged to attend but there will be no punitive action against participants should they fail to attend. The participants will benefit/gain knowledge from the presentation of data, and educational workshop however, this is not considered a form of compensation.

### **Protocols to Safeguard Identity of Participants**

To safeguard the identity of participants, some measures that would be taken to mitigate against this are as follows:

1. Measures would be implemented to ensure participants are unlikely to be identified directly or indirectly through information linked to this project. The initial survey will assign an anonymous ID individual identifier, all the following surveys will also be completed anonymous by using this ID. Microsoft Forms will only have access to this ID, and participants will use this ID for the remaining data collection for this project.
2. As the project manager, I will receive the anonymous data assigned via anonymous ID. The anonymous data will be kept locked in my residence, then deleted or shredded within two weeks from the date of collection.
3. No identifying participant data will be included in the project.

4. The result and data from this project will be made public before August 2022.
5. As previously stated, due to COVID-19 pandemic, social distancing guidelines will be maintained and strictly adhered to, chairs and tables would be wiped with disinfectant wipes and alcohol gel would be provided and placed at strategic positions for easy access. Masks are mandated within the hospital and information would be disseminated that masks are mandatory during the workshop. The venue (physicians lounge) for the presentation comes with an inbuilt sink and soap area for hand washing. These strict guidelines would be implemented to help mitigate against possible risks of COVID-19 transmission.

#### **Freedom to Withdraw.**

1. Emphasis will be made that participation in the study is entirely voluntary. Participants at any time of their choosing and for any reason whatsoever, may choose to withdraw from the project without any consequences or penalty.
2. All possibility of re-identification would be eliminated, and participants identity will be kept anonymous by not including their name in the project or including any trail that would link them to the project when published.
3. The choice to participate, not participate, or withdraw will not change treatment (if any), cause consequences, or loss of benefits that the subject is already entitled to. Withdrawal by participants will have no impact on their job or their relationship/affiliation with the anesthesia program of the University of St. Francis. Participants withdrawing from the project, have the option to choose not to have their data used in the project and such request would be honored by removing their data from the project. If fully participating, their permission would be sought for the continued use of their data for the project.

4. Discovery of false data, sharing of individual private ID identifier, or dishonest practices may result in inaccurate data. If appropriate, this may result in the subject's removal from the project, without the subject's need to consent.

### **Offer to Answer Inquiries**

Following the completion of this project, results obtained can be shared with the participants.

If you have any questions, please contact us at:

Charles Iluba (project manager)

2701 Spring Street

Fort Wayne, IN 46808

U.S.A.

As a participant in this project, please call or write to the following contact with any opinion, observations, or complaints about your treatment.

IRB Chairperson,

University of Saint Francis,

Fort Wayne, IN 46808,

USA

irb@sf.edu

**I have received an explanation of this project and agree to participate. I understand that my participation in this project is strictly voluntary.**

**Name** (*Print and Sign*): \_\_\_\_\_ **Date:** \_\_\_\_\_

**This DNP project has been approved by the University of Saint Francis' Institutional Review Board for the Protection of Human Subjects for a one-year period**

Project Start:	Fri, 10/23/2020	
Display week:	20	

Project Start: Display week:					20				Mar 1, 2021							Mar 8, 2021							Mar 15, 2021							Mar 22, 2021							Mar 29, 2021							Apr 5, 2021						
					1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11				
Task	Assigned To	Progress	Start	End	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S				
Planning phase																																																		
Task 1	Meeting Academic Advisor for approval	100%	10/23/20	2/4/21	complete																																													
Task 2	Exit Assessment Survey and Data Collection		10/28/20	11/20/20	Complete																																													
Task 2	Stakeholder Identification	100%	1/15/21	1/30/21	complete																																													
Task 3	DNP Project topic	100%	10/23/20	2/4/21																																														
Task 4	Literature Review for DNP Project	100%	2/4/21	3/20/22	On going																																													
Task 5	Organizational Assessment	100%	5/15/21	5/30/21	complete																																													
Task 6	CITI Training	100%	2/10/21	4/22/21	complete																																													
Task 7	Force Field Analysis	100%	5/20/21	6/6/21																																														
Task 8	Refine existing checklist	30%	4/5/21	9/1/21	Ongoing																																													
Task 9	Meet Statistician	10%	2/4/21	1/30/22	Ongoing																																													
Approval phase																																																		
Task 1	Consent form	70%	4/27/21	7/20/21																																														
Task 2	Careteam survey	20%	4/29/21	11/20/21	In progress																																													
Task 3	data tool development	10%	5/30/21	11/30/21																																														
Task 4	IRB approval		8/10/21	9/30/21																																														
Task 5	Meeting with IT expert		8/5/21	8/15/21																																														
Task 6	DNP faculty approval		8/10/21	9/30/21																																														
Implementation phase																																																		
Task 1	Meeting with Mike Zier		8/5/21	9/30/21																																														
Task 2	Meeting with Perioperative managers		8/9/21	9/30/21																																														
Task 3	Review refined preop checklist		7/30/21	8/10/21																																														
Task 4	Meet with Facilitator/Leads		8/10/21	9/30/21																																														
Task 5	Education Presentation		10/1/21	10/13/21																																														
Task 6	Determine Supply and Equipment		10/4/21	10/13/21																																														
Task 6	DNP project implementation		11/8/21	1/20/22																																														
Data collection and analysis																																																		
Task 1	Data collection		1/1/22	1/5/22																																														
Task 2	Data analysis		1/10/22	1/20/22																																														
Task 3																																																		
Task 4																																																		

## DNP Project Timeline

## Appendix H

### Demographic Questionnaire

#### Goggle Forms

#### Demographic Questionnaire

Please answer the following questions and select the appropriate option most applicable to you.

1. How old are you?

- ☐ 21-30
- ☐ 31-40
- ☐ 41-50
- ☐ Above 50

2. What is your role as an anesthesia provider?

- ☐ CRNA
- ☐ Physician Anesthesiologist

3. What is your employment status at KCH?

- ☐ Full time
- ☐ Part time
- ☐ Locums
- ☐ As needed (PRN)

4. Do you currently work at other facilities other than KCH?

- ☐ Yes
- ☐ No

5. How many years have you been practicing as an anesthesia provider?

- ☐ 5 years or less
- ☐ 6-10 years
- ☐ 11-15 years
- ☐ 16 years or more



## Appendix I

### Pre-Intervention Questionnaire

#### Goggle Forms

#### Pre-Intervention Questionnaire

Please answer the following questions and select the most appropriate option.

1. I believe that advance care planning (ACP) and patients' obtaining an advanced directives (AD) before surgery, are both important.

- ☐ Strongly agree
- ☐ Agree
- ☐ Neutral
- ☐ Disagree
- ☐ Strongly disagree

2. Prior knowledge of patients' Advanced Directives status will help me make informed anesthesia care choices.

- ☐ Strongly agree
- ☐ Agree
- ☐ Neutral
- ☐ Disagree
- ☐ Strongly disagree

3. At KCH, what is the best way to ascertain a patient's Advanced Directives status?

- ☐ Electronic Medical Record

- ☐ Patient's chart or folder
- ☐ During pre-anesthetic review directly from patient or family

4. How likely are you to include Advanced Directives screening as part of your pre-anesthetic assessment?

- ☐ Very likely
- ☐ Somewhat likely
- ☐ Neither likely nor unlikely
- ☐ Somewhat unlikely
- ☐ Very unlikely

5. What is the AANA recommendation for a patient presenting for surgery with a Do Not Resuscitate (DNR) order in place?

- ☐ Automatic suspension
- ☐ Follow State guidelines
- ☐ Follow facility guidelines
- ☐ Resend the order

6. What is the State of Indiana Law for a patient presenting for surgery with an Advanced Directive or Do Not Resuscitate (DNR) order in place?

- ☐ Automatic suspension
- ☐ Follow facility guideline
- ☐ Resend order

- ☐ Follow patient or family directives

7. What is your facility (KCH) recommendation for a patient presenting for surgery with a Do Not Resuscitate (DNR) order in place?

- ☐ Automatic suspension
- ☐ Resend order
- ☐ Follow the State of Indiana Law
- ☐ Follow patient or family directives

8. I am confident in providing anesthesia care to patients with an Advanced Directives or Do Not Resuscitate order, according to current best practice guidelines.

- ☐ Strongly agree
- ☐ Agree
- ☐ Neutral
- ☐ Disagree
- ☐ Strongly disagree

9. I am knowledgeable about the AANA, State of Indiana & facility guidelines on Advanced Directive.

- ☐ Strongly agree
- ☐ Agree
- ☐ Neutral
- ☐ Disagree

☐ Strongly disagree

## Appendix J

### Post Intervention Questionnaire

#### Goggle Forms

##### Post-Intervention Questionnaire

Please answer the following questions and select the most appropriate option considering the information presented.

1. I believe that advance care planning (ACP) and patients' obtaining an advanced directives (AD) before surgery, are both important.

- ☐ Strongly agree
- ☐ Agree
- ☐ Neutral
- ☐ Disagree
- ☐ Strongly Disagree

2. Prior knowledge of patients' AD status will help me make informed anesthesia care choices.

- ☐ Strongly agree
- ☐ Agree
- ☐ Neutral
- ☐ Disagree
- ☐ Strongly disagree

3. At KCH, what is the best way to ascertain a patient's Advanced Directives status?

- ☐ Electronic medical record

- ☐ Directly from patient or family during pre-anesthetic review
- ☐ Patient's chart or folder

4. How likely are you to include Advanced Directives screening as part of your pre-anesthetic assessment?

- ☐ Very likely
- ☐ Somewhat likely
- ☐ Neither likely nor unlikely
- ☐ Somewhat unlikely
- ☐ Very unlikely

5. What is the AANA recommendation for patients presenting for surgery with a Do Not Resuscitate (DNR) order in place?

- ☐ Automatic suspension
- ☐ Resend order
- ☐ Follow the State guidelines
- ☐ Follow facility guidelines

6. What is State of Indiana Law for patients presenting for surgery with an Advanced Directives or Do Not Resuscitate (DNR) order in place?

- ☐ Automatic suspension
- ☐ Resend order
- ☐ Follow facility guidelines

- ☐ Follow patient or family directives

7. What is your facility (KCH) recommendation for patients presenting for surgery with a Do Not Resuscitate (DNR) order in place?

- ☐ Resend order
- ☐ Automatic suspension
- ☐ Follow the State of Indiana Law
- ☐ Follow patient or family directives
- ☐

8. How likely are you to include Advanced Directives screening as part of your pre-anesthetic assessment?

- ☐ Very likely
- ☐ Somewhat likely
- ☐ Neither likely nor unlikely
- ☐ Somewhat unlikely
- ☐ Very unlikely

9. I am more knowledgeable about the AANA, State of Indiana & facility guidelines on Advanced Directives.

- ☐ Strongly agree
- ☐ Agree
- ☐ Neutral

- ☐ Disagree
- ☐ Strongly disagree

10. I am satisfied with the teaching intervention/workshop

- ☐ Strongly agree
- ☐ Agree
- ☐ Neutral
- ☐ Disagree
- ☐ Strongly disagree

11. Teaching/intervention was helpful.

- ☐ Strongly agree
- ☐ Agree
- ☐ Neutral
- ☐ Disagree
- ☐ Strongly disagree

12. I am more confident in providing anesthesia care to patients with an Advanced Directives or Do Not Resuscitate order, according to current best practice guidelines.

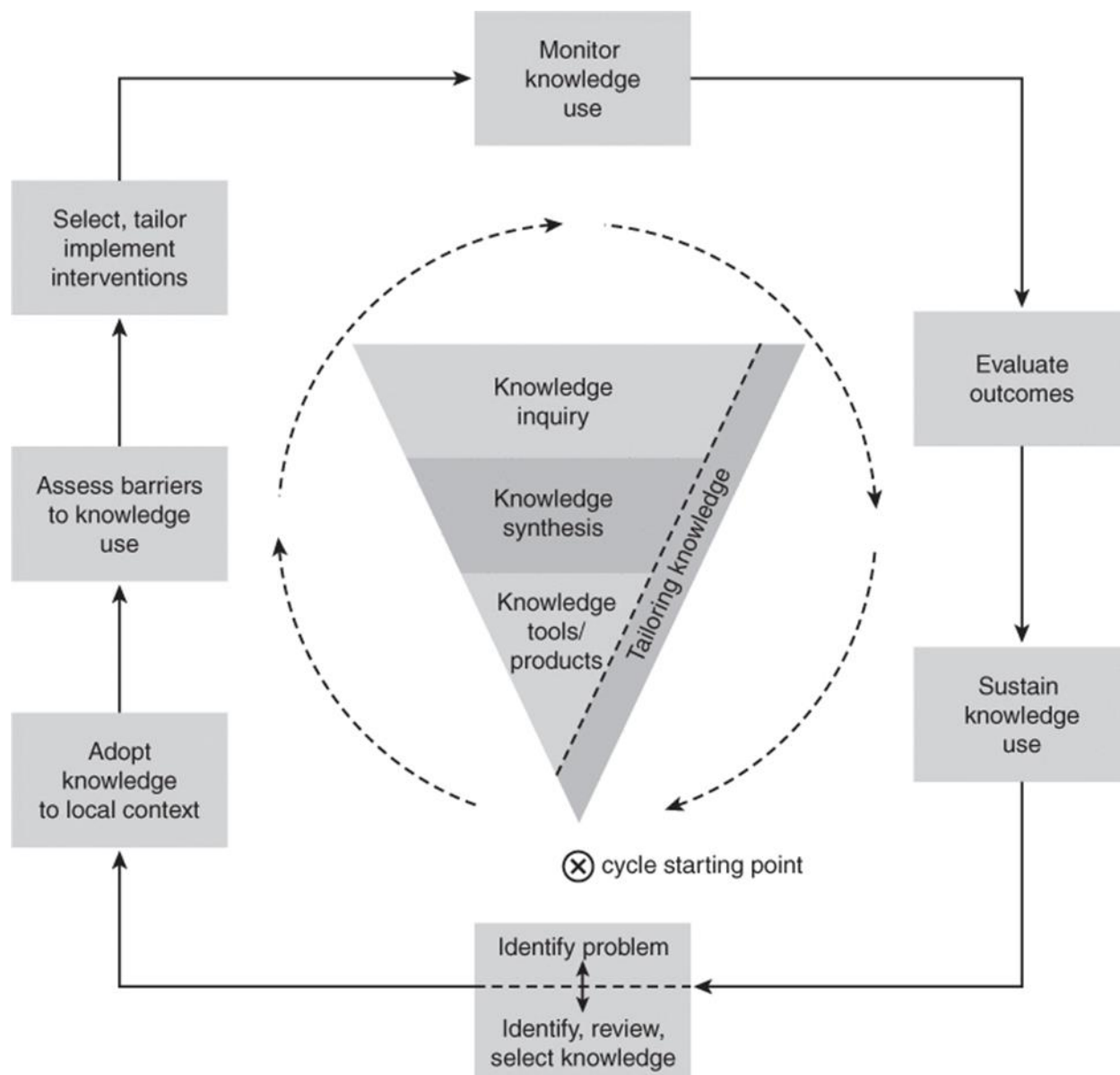
- ☐ Strongly agree
- ☐ Agree
- ☐ Neutral
- ☐ Disagree



☐ Strongly disagree

## Appendix K

### Knowledge to Action Framework/Model (KTA)



Source: White et al. (2021)

## **Appendix L**

### **Force Field Analysis**

Forces		
Driving Forces (For)	Restraining Forces (Against)	Actions to be taken
Existing policies that support learning and innovation [this is clearly stated in KCH policy on Advanced Directives (AD)].	Implementation logistics such as time factors, getting leadership on board, operating room (OR) production pressure and possible resistance from staff which typically comes with a change in practice.	Get the leadership actively involved especially those members that are enthusiastic about the project (OR manager, Dr. Spiritoso). They would be the driving force and would spearhead the project implementation.
The desire to reduce or eliminate AD-related adverse events at the facility and improve patient's satisfaction through staff education on current best practices thereby creating support for the project.	Reluctancy to actively participate in the project due to implementation logistics, providers may assume they do not lack knowledge on AD or cannot take out time from work to participate.	Systematic and purposeful encouragement of the care team that practice change would ensure the best outcome for both patients and the care team, it is also in line with facility policy and upholds values, mission, and goals of the organization
Creating an opportunity for the DNP student to make a contribution that would benefit the facility, the nursing profession, and healthcare in general, through the implementation of evidence-based project and translation of evidence to practice.	The perioperative care team may not be enthusiastic about new ideas from a student. Staff misconception of the project goals and fear of possible change in the workplace may result in some form of resistance. Access to the facility if the student is not rotating through the implementation site	Seek out strategies that have been utilized successfully by others in previous project implementation at this facility. Discuss with stakeholders on other strategies, and resources to utilize for a successful implementation of the project.
Relational Leadership/Shared governance style/Shared decision-making style. Knowledge is key, as the project aims to improve patient outcomes through knowledge.	Previous experiences with leadership may conjure mistrust of the leadership style. Poor interprofessional collaboration and power tussle.	Establish and maintain continuous communication and exchange of ideas with major stakeholders and between stakeholders like the project manager and a trusted liaison (Mike Zier). Ensure questions and concerns are addressed as needed.

<p>A culture of safety at the facility will facilitate the implementation of the DNP project. Improved patient satisfaction with their care.</p>	<p>Any change in practice tend to come some form of resistance. The care team may perceive the project as a change from the routine or just another added work-related educational requirement for staff.</p>	<p>Work with stakeholders to plans to educate staff on evidence -based current practice guidelines as relates to AD and its importance. Utilizing various media, the leadership can disseminate the education to staff members.</p>
<p>Project is not a source of extra work burden or significant change in workflow.</p>	<p>Staff or care team perception or misconception that project implementation may bring change to existing work schedule or workflow.</p>	<p>Project manager will provide education during daily briefings or rounds to demonstrate that the project and recommendations do not significantly alter daily work routine.</p>
<p>The cost burden of litigation and settlement for cases related to AD adverse events and the associated negative publicity for the organization</p>	<p>Leadership may underestimate the cost-benefit of project implementation. The facility may not be willing to share their data on adverse AD-related events and the cost to the facility due to the risk of negative publicity if made public.</p>	<p>Provide leadership and staff estimated cost savings for the facility on prevention of AD-related adverse events through the implementation of the project and sustaining project recommendation.</p>

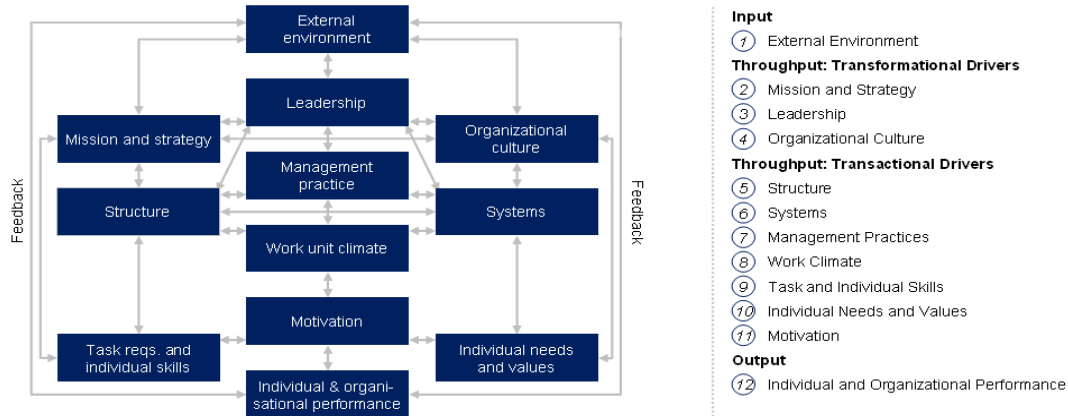
## Appendix M

### Burke and Litwin Model

**The Burke-Litwin Change Model is a guide for identifying and linking factors critical to a successful Change initiative**

#### *Burke-Litwin Change Model 12 Drivers – Overview*

The Burke-Litwin Model has 12 critical drivers.



*The Burke-Litwin Change Model is a complex but useful tool.*

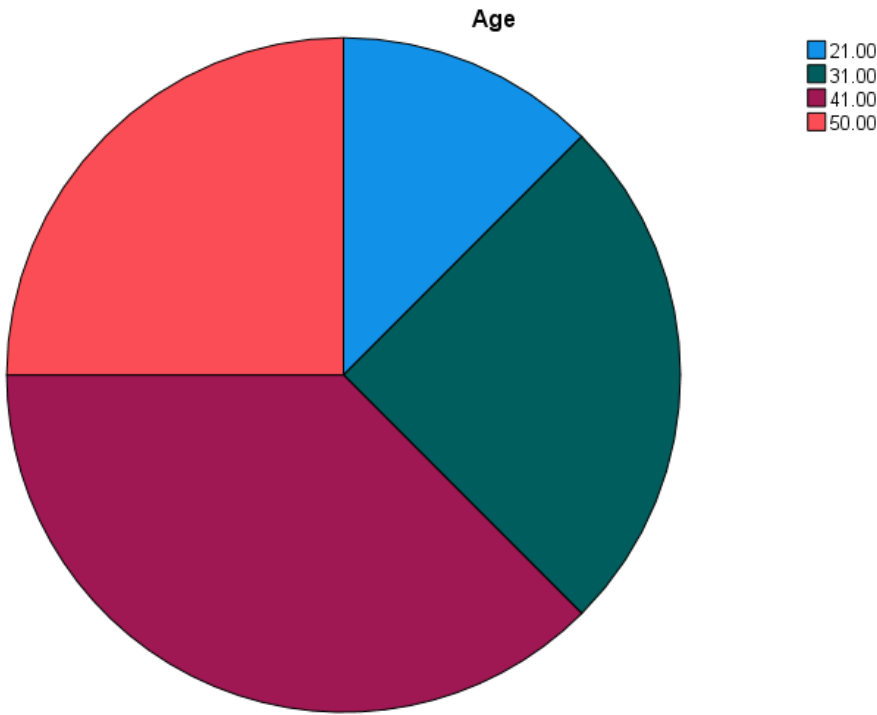
Appendix N

SPSS Output Showing the Age Distribution of the Project Participants

Frequencies

Statistics		
Age		
N	Valid	8
	Missing	0

Age					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	21.00	1	12.5	12.5	12.5
	31.00	2	25.0	25.0	37.5
	41.00	3	37.5	37.5	75.0
	50.00	2	25.0	25.0	100.0
	Total	8	100.0	100.0	



## Appendix O

### SPSS Output Showing the Distribution Years of Practice of the Project Participants

#### Frequencies

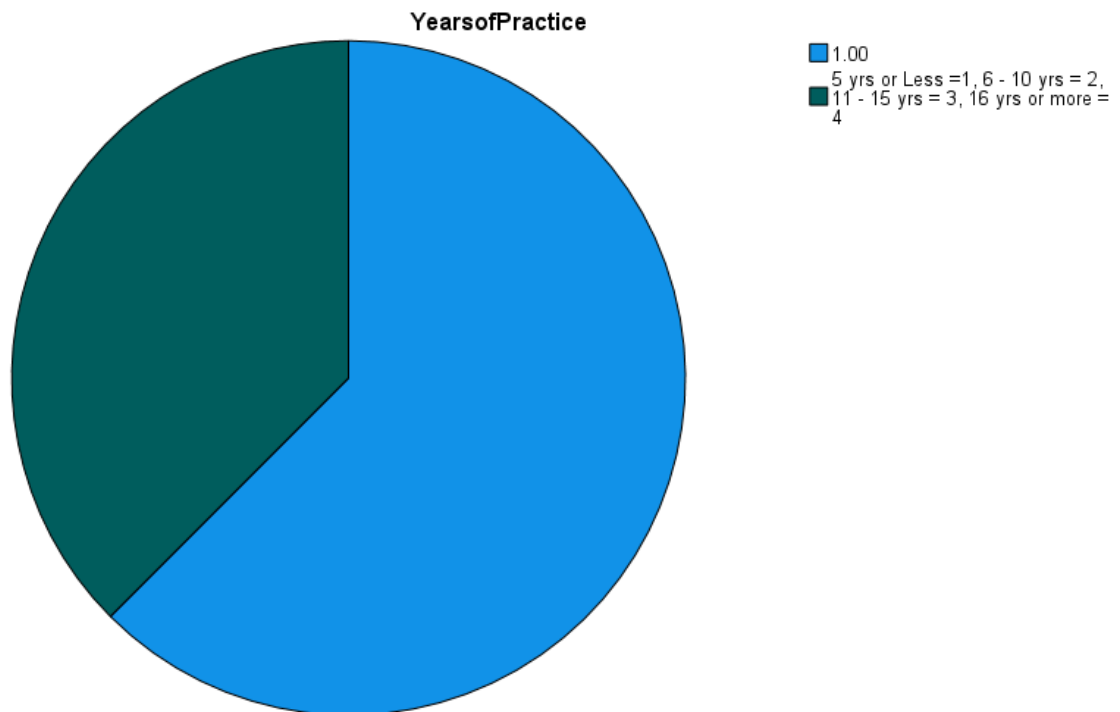
##### Statistics

YearsofPractice

N	Valid	8
	Missing	0

##### YearsofPractice

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00	5	62.5	62.5	62.5
	5 yrs or Less =1, 6 - 10 yrs = 2, 11 - 15 yrs = 3, 16 yrs or more = 4	3	37.5	37.5	100.0
	Total	8	100.0	100.0	





## Appendix P

### Excel Spreadsheet Output of Percent Change for the Pre-& Post Survey Data

ID #	PreQ	PostQ	PERCENT CHANGE
A1			
207202201	2	3	50%
207202202	1	3	200%
207202203	2	2	0%
207202204	2	3	50%
207202205	2	3	50%
207202206	2	3	50%
207202207	2	3	50%
207202208	2	3	50%
A2a			
207202201	5	5	0%
207202202	4	5	25%
207202203	5	5	0%
207202204	5	5	0%
207202205	5	5	0%
207202206	5	5	0%
207202207	5	5	0%
207202208	3	5	67%
A2b			
207202201	5	5	0%
207202202	4	5	25%
207202203	5	5	0%
207202204	5	5	0%
207202205	5	5	0%
207202206	5	5	0%
207202207	5	5	0%
207202208	3	5	67%
A3			
207202201	4	5	25%
207202202	4	5	25%
207202203	1	5	400%
207202204	3	4	33%
207202205	5	5	0%
207202206	5	5	0%
207202207	4	5	25%
207202208	1	4	300%

## Appendix Q

### Output of the Level of Satisfaction of Participant with the Educational Intervention

#### Frequencies

#### Statistics

Posttest

N	Valid	8
	Missing	0

		Posttest			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	1	12.5	12.5	12.5
	Strongly Agree	7	87.5	87.5	100.0
	Total	8	100.0	100.0	

