

Running head: DEVELOPING AN EVIDENCE-BASED

Developing an Evidence-Based Charge Nurse

Leadership Program

Tamara D. Schwing

Touro University, Nevada

In partial fulfillment of the requirements for the Doctor of Nursing

Practice DNP Project Chair: Terry Bartmus

DNP Project Member(s): Jessica Grimm

Date of Submission: June 2020

Table of Contents

Abstract .....4

Background ..... 5

Problem Statement .....5

Purpose Statement ..... 7

Project Question... .....7

Project Objectives .....8

Review of Literature..... 10

Theoretical Model ..... 18

Project and Study Design... ..... 24

Implementation ..... 32

Analysis of Results.....38

Limitations/Dissemination.....41

References .....44

Appendix.....53

### Abstract

Leadership in nursing can no longer be a focus of only top nursing management. With the rapidly demanding and changing field of health care, organizations need to have effective leadership at all levels of nursing to provide patients with safe, high-quality outcomes. The problem subsists that charge nurses are often put in a position of leadership in overseeing their units without any type of formal education, and charge nurse leadership programs are very uncommon in health care organizations. The project was developed to address the lack of charge nurse leadership skills and training at the project facility. The project site identified that there is currently no program to develop leadership skills in charge nurses at their facility. Research has identified that a lack of nursing leadership can lead to negative behaviors of staff nurses and job satisfaction, which can ultimately affect patient outcomes.

This project will assess whether the implementation of a charge nurse leadership program will increase the leadership knowledge and skills of charge nurses in a rural community hospital in Indiana. Results of the project will show a statistically significant increase in overall leadership knowledge and skills of charge nurses after attending the leadership program utilizing the Leadership Practices Inventory.

The increase in leadership skills and knowledge of charge nurses is imperative for the future delivery of safe, high quality patient care. It is vital that health care organizations develop future leaders in the clinical setting. Because of their unique position, charge nurses are in the perfect position to hold these leadership responsibilities. The time and expenditure of providing a charge nurse leadership program will be well worth the investment to organizations as the impact of health care provided to their patients, the overall satisfaction and environment of their nurses, and ultimate improved patient outcomes show a positive effect on the delivery of health care

### Developing a Charge Nurse Leadership Program

Registered nurses are often placed in charge of other nurses without any type of formal leadership education. The role of the charge nurse (CN) is critical for not only the patient's safety and well-being, but also for staff satisfaction, and organizational cost-efficiency (Middleton, 2011) While many nurses are put in charge for their clinical expertise, they do not necessarily have the skills and knowledge to lead other nurses. The leadership role of the CN can be key to providing better outcomes for patients and developing skilled and competent staff. Effective leadership will increase patient satisfaction and the quality of patient care (Frankel, 2011). The problem is that a lack of leadership in charge nurses can contribute to the poor quality of patient care, staff dissatisfaction, and overall negatively affect the welfare of the organization. This lack of leadership can result in a breakdown of the nursing team and ultimately sacrifice patient outcomes (Whitby, 2018). Organizations depend on charge nurses to be front line providers for safe and efficient care, while meeting all regulatory requirements and ensuring an economically feasible system. Literature suggests that one solution to achieve improvements in patient care, increase staff satisfaction, and improve the culture of an organization, is to develop leadership skills in CN's. The leadership skills of a CN can directly impact the patient's healthcare experience and perception of the care they receive (Whitby, 2018).

This project focuses on a rural community hospital with no formal CN leadership program. Many of the CN's are new graduates that are placed in this role within 6 months to a year after graduation. This lack of leadership is threatening to the hospital, staff, and patient.

## **Background**

Long before nursing became a profession, one of the most famous nurses in history Florence Nightingale saw a vision for nursing's future. She knew that for nursing to survive and grow it must focus on leadership skills, as well as, clinical skills. In her book, *Notes on Nursing*, she devotes an entire chapter to leadership management and although she terms this "petty management," her message is clear, that nursing must produce leaders at all levels. (Nightingale, 1912). Historically, leadership in nursing has focused more on top nursing management. With the rapid changes in health care and the need for more nurses, it is imperative that health care organizations concentrate on leadership at all levels of nursing.

In the past, nursing's leadership style derived more from a military background and this style was not favored or conducive to the profession. Over time, the leadership style has shifted from controlling to empowering nurses to practice within their full scope of training (Smith, 2019). As an influx of younger nurses are entering the field, with many of the 'baby boomer' generation close to retirement, the demand for growing nurse leaders will continue to increase. For organizations to sustain excellent care parameters, investing in leadership programs for charge nurses is an essential component of this care. The significance of developing front line nurse leaders that are able to communicate with a variety of stakeholders, lead a team, improve patient services, and resolve conflict is crucial to the healthcare system (Health Leaders Media Staff, 2019).

## **Problem Statement**

CN's frequently become leaders without any type of formal leadership education. This is problematic as research has shown that a lack of nursing leadership is directly

er both staff and patients, and ultimately affect the overall patient experience. The current

related

to suboptimal patient care and the behavior of staff nurses is directly linked to the leadership skills of the CN (Whitby, 2018). The lack of leadership skills in the CN can negatively impact the outcome of patient care, create a hostile environment for both staff and patients, and ultimately affect the overall patient experience. The current facility has no formal leadership program for onboarding CN's. Compounding this lack of a formal leadership program, many of the new CN's are also recent nursing graduates from within the past year. This lack of leadership is threatening to the overall care of patients and the satisfaction of nursing staff. Many of the CN's have reported to management that they feel a lack of knowledge in holding this position and a dissatisfaction in their abilities and other CN abilities to function in this role. One of the most common behaviors created from dissatisfaction is mistrust. Nurses are more likely to leave teams that have trust issues. Trust issues can occur when nurses see younger more inexperienced nurses placed in charge positions on their unit. Charge nurses must maintain a chaotic environment while making their team feel valued and essential to the unit. Being a CN can be a difficult task for even the most seasoned nurse. This facility has stated that it has no option but to place novice nurses in the CN role on many of its units. Yet to be successful, charge nurses need support and development (Sherman, 2015). Part of that development is learning how to lead. Good leadership skills improve patient outcomes, promote workplace engagement, and increase team satisfaction. The facility is committed to improving their processes in providing excellent patient care and increasing nurse satisfaction. They understand that CN's play a key role in maintaining safe environments and providing efficient care to their patients. Developing a charge nurse leadership program

will provide the support and development their nurses need to ensure exceptional patient care.

### **Purpose Statement**

Charge nurse leaders are not an option but a requirement in the rapidly demanding field of health care. Effective organizations require effective leaders. The Joint Commission has suggested that organizations with effective leadership will achieve the desired outcome of high-quality and safe patient care (Huston, 2018).

The overall purpose of this project is to develop, implement, and evaluate an evidence-based charge nurse leadership program at a rural community hospital in southeastern Indiana. The primary objective will be to create a consistent process for onboarding new charge nurses and educating current CN's in the role of leadership development. The end goal will be to increase charge nurse leadership skills which will directly improve patient care and create a welcoming environment for both staff and patients.

### **Project Question**

Will current and prospective CN's at this facility with no charge nurse leadership education report an increase in leadership knowledge on the Leadership Practices Inventory after attending a charge nurse leadership development program? Developing, advancing, and evaluating nursing leadership competency can be difficult. The Leadership Practices Inventory (LPI) was developed through qualitative and quantitative evidence-based research and consists of 30 statements describing various leadership actions and behaviors (Posner, 2016). This tool has been in use for over 30 years in helping to evaluate leadership skills in all professions. Leadership skills in nurses are critical to health care reform. A progress report given in 2015 on the original Institute of Medicine's (IOM) Report *The Future of*

*Nursing: Leading Change, Advancing Health* in 2010, reports that there is still a constant need for nurses to lead and participate in ongoing reform in health care. The committee recommends that the Campaign continue to work on ways to expand efforts and opportunities for leadership development in nursing (IOM, 2015).

### **Project Objectives**

In the timeframe of this DNP Project, the following objectives will be met:

- 1) Develop and implement a charge nurse leadership program for all current and potential charge nurses based on the American Organization of Nurse Executives (AONE) competencies.
- 2) All nurses who attend the charge nurse leadership program will report an increase in their knowledge of leadership skills according to the Leadership Practice Inventory.
- 3) At least 90% of charge nurse attendees will report that the program was beneficial to them in learning the leadership roles of a charge nurse.

### **Significance**

Nursing is a demanding and unpredictable profession. Because nurses spend a significant amount of time with patients, they are more likely to encounter stressful and unexpected situations. It is important that nurses have the skills to take care of patients, but it is equally important that they have the leadership knowledge to know how to handle difficult and unforeseen circumstances in the care of their patients (Ennis, Happel, & Reid-Searl, 2014).

The 2010 Institute of Medicine's (IOM) report on *The Future of Nursing: Leading Change, Advancing Health*, explored the importance of nursing leadership. The



recommendation given by IOM, suggests that all nurses should be prepared and able to be a leader in advancing healthcare.

The report advises that it is critical for nurses at all levels to have leadership abilities to positively advance improvements in our healthcare system (Sherman, Schwarzkopf, & Kiger, 2011). Since then, a committee under the supervision of the National Academies of Sciences, Engineering, and Medicine (2019) has been established to extend the 2010 IOM's vision for the nursing profession into 2030. This ad hoc committee will continue to help move forward the IOM's vision for increased leadership in nursing.

This DNP project focuses on a healthcare facility that has no type of leadership training available for their nurses. Along with being placed in a charge nurse role, the charge nurses at this facility have no formal guidance or experience on how to lead. Many of these charge nurses are still within their first year of nursing. Without leadership abilities in nurses, nursing will suffer.

Nurses must have leaders, and charge nurses must know how to lead in order to provide the best care for patients. Bedside nurses take care of their patients and charge nurses must take care of their nursing team (Ritchie, 2017).

### **Search Terms**

The literature search was completed using CINAHL Plus with full text, ProQuest Nursing and Allied Health, ProQuest One Academic, OVID, and Google Scholar. Search terms included leadership, leadership and nursing, charge nurse leadership, developing leadership skills, developing a leadership program, developing a charge nurse leadership program, and leadership programs. Articles that were published after January 1, 2015, written in the English language, and peer-reviewed were considered. A few articles of

significance were chosen from earlier publishing dates. Articles were excluded which gave the author's descriptive review of a program without describing methods used to measure success; those that used a small sample size without explanation of the limited quantity of participants; those that didn't address nurses; and those that were generalized to other healthcare providers and were not solely focused upon nursing. The healthcare facility has no related protocols to this project available for review.

### **Review of Literature**

The literature review includes information regarding leadership in nursing and the importance of having nursing leaders in providing quality care for patients. It explores the negative impact when there is a lack of leadership versus the positive influence that respectable leadership can have on the nursing profession. This review will address the bearing of the problem when there is a lack of or no leadership of charge nurses within a facility. The selected articles will also review the importance of developing leadership skills in charge nurses and why this is important to the profession of nursing and the care of patients.

### **Impact of the problem**

Over recent years, the role of the charge nurse has expanded, and the complexity of the position has remained unclear in some settings. Despite the intricacy of the position, literature has indicated that many charge nurses do not have the level of leadership training or skill to develop a high functioning team and maintain a healthy work environment (Longo, Cassidy, and Sherman, 2016). This lack of leadership in charge nurses is directly related to suboptimal patient care and can negatively affect the outcome of the patient. Research has also shown

that the negative behavior of staff nurses and job dissatisfaction is directly linked to the leadership skills of the CN, which can ultimately affect the patient experience (Whitby, 2018).

**Suboptimal patient care.** The Joint Commission's *Sentinel Event Alert* (2017) reiterates that a lack of leadership can create an unsafe culture for patients. This type of culture has been found to be a contributing factor to adverse outcomes according to their Sentinel Event Database. An article by Alharbi (2017) points out that nurses' performance can be significantly affected positively or negatively by the leadership of the nurse manager. Poor leadership can lead to patient errors and affect the overall outcome of the patient.

In a qualitative systematic literature review by Sfantou, Laliotis, Patelarou, Sifaki-Pistolla, Matalliotakis, & Patelarou, (2017), they assessed whether an association existed between different leadership styles and healthcare quality measures. What they found in looking at the literature from 18 quantitative studies, was that leadership was a core element for providing excellent patient care and a suitable environment for nursing staff. The effects of leadership were obvious when it came to patient outcomes and a high-quality work environment, leading to an affirmative safety setting for both nurse and patient.

**Nurse satisfaction.** In a cross-sectional study by Asamani, Naab, & Ansah Ofei (2016), survey data from a sample of 273 nursing staff in five hospitals was collected in relation to the leadership style of the manager and how the participants were influenced by this leadership in regard to job satisfaction. The results concluded that the leadership style of the nurse manager was directly related to the job satisfaction of the nurse. Statistically, 51.7% of the nurses intended to leave due to leadership styles of the manager.

Another article by Weberg & Fuller (2019), addressed which behaviors of leaders

created unhealthy work environments leading to unsafe conditions for patients. They also evaluated what consequences these behaviors had on the individual nurse and the system. What they found to be toxic behaviors mostly revolved around communication. Some examples were sharing too much information, inappropriately sharing information with others, giving unclear expectations, not communicating important information, or avoidance of staff. The consequences of these toxic behaviors on the individual nurses caused 12% to quit, 48% to decrease their work effort, 63% lost time avoiding the toxic leader, and 68% reported performance declines. For the healthcare system it caused 80% of individuals increased stress, 78% reported a decrease in commitment to the system with an increase in turnover rates and an increase in error and death rates.

### **Addressing the Problem**

A common theme that appeared in much of the literature was in regard to the complexity of healthcare and its rapidly changing environment. No longer are nurses looked upon just for their bedside skills, but they must also have the knowledge to leverage the immense changes that are occurring in our healthcare system. The literature review pointed out two main concerns, high-quality healthcare cannot be achieved without exceptional nursing care that derives from nursing leadership, and leadership skills in nurses are deficient and this is something that must be addressed for the future of nursing (Hallock, 2019).

Dyess, Sherman, Pratt, & Chiang-Hanisko (2016) studied the best way to develop leadership skills in generation-Y. One of the categories identified from the analysis of the data was how to lead in a challenging practice environment. Many of the respondents felt that the current state of affairs in hospitals and healthcare make it difficult and challenging for the nurse leader. However, they did exude confidence that nursing leaders would provide

a positive change in healthcare.

### **Charge Nurse Responsibility**

Charge nurses have the responsibility to both care for patients and management of their staff. The American Nurses Association (ANA) *Code of Ethics for Nurses* defines the role of the charge nurse as the nurse responsible for operation of the nursing unit during a specified time frame (Ohio Nurses Review, 2016). This charge nurse must have a foundation of clinical knowledge and skills to make decisions regarding the operation of their unit and best care of the patients. The charge nurse is responsible for planning, coordinating, and evaluating unit nursing activities.

### **Recommendations**

Another common theme that appeared in the literature review was the need for the nursing profession to develop leaders at all levels. The facility in this project recognizes that their charge nurses lack leadership capabilities. While many times they are forced to place novice nurses in a charge position, these nurses have no formal training in leadership skills. Currently, the facility has no leadership program for nurses.

A search of the literature was also conducted to find recommendations in building and implementing a charge nurse leadership program. In a study conducted by Abraham (2011), nurse leadership skills of staff nurses were assessed for improvement after attending a leadership program at the Mayo Clinic in Rochester, MN. What they found was that participants reported statistically significant changes in their leadership skills after participation in a leadership program as measured by the Leadership Practices Inventory. It was also noted that professional behaviors were enhanced after attending the leadership program.

Another study conducted by the Florida Action Coalition was completed as a response to the changes in health care and the need to prepare nurses for leadership roles in the future. The study was a cross-sectional, exploratory descriptive research designed to describe leadership competencies, barriers, and succession planning practices. The survey found that there is a strong need to develop future nursing leaders and that respondents identified communication as the top competency needed by a nurse leader. The study concluded that the development of strong diverse nursing leadership was critical to providing quality health care. (Denker, Sherman, Hutton- Woodland, Brunell, & Medina, 2015). A systematic review by McCay, Lyles, & Larkey (2018), also pointed out that there were positive relationships between the leadership skills of nurses, a positive workplace environment, and improved nurse/patient satisfaction.

### **Development of a charge nurse leadership program**

The IOM's 2010 report suggested that nurses need 2 sets of competencies to be effective leaders. What the report failed to mention was what competencies were required within each set. The report also did not suggest or provide a framework on how to achieve these competencies or how to identify nurses who demonstrate leadership skills. The American Association of Colleges of Nursing (AACN) and the American Organization of Nurse Executives (AONE) both identify organizational and systems leadership as one of the essential learning outcomes in nursing education. The AONE is the only nursing organization with the sole focus of nursing leadership. (Wilmoth & Shapiro, 2014).

The American Nurses Association (ANA) provides a competency model for

developing leadership in nursing. The foundation of this model consists of three specific documents: *Nursing Scope and Standards of Practice*, *Code of Ethics for Nursing* and *Nursing's Social Policy Statement*. These foundational documents guide the practice of nursing, frame the standards of care and reflect the patterns of professional performance in the ever-changing and complex environment of health care (ANA, 2018).

Literature has reflected that many organizations design their own internal leadership development programs. Much of this stems from the economic challenges and limited resources

that healthcare organizations are challenged within today's economy. What has also been noted is that few of these programs are targeted to emerging nurse leaders not yet in leadership roles.

Subsequently, a new nurse leader may start in a role without any formal leadership development. This practice is not beneficial to the success of the healthcare organization (Sherman & Saifman, 2018)

**Required nurse leadership competencies.** Transitioning from a staff nurse to a charge nurse can be complicated and complex. Most staff nurses have little comprehension into the intricacy of a leadership role in today's healthcare environment. They are often surprised at the challenges they face in this position, and many times become so frustrated that it can affect patient care and the well-being of their staff (Sherman & Saifman, 2018). In 2005 the AONE published a list of competencies for nurse leaders. They felt the competencies of a nurse leader were professionalism, communication and relationship management, knowledge of the healthcare environment, and business skills and principles (Nurse Leader, 2005). The ANA also lists competencies that they feel are professional

standards of performance for nursing leaders. The top three competencies listed are collaboration, communication, and education (ANA, 2018).

**Professionalism.** The ANA defines professionalism as a competence that all nurses are expected to demonstrate in their career. They believe it is the responsibility of the nurse to maintain accountability for their professional competence. The ANA also believes that it is the nursing professions responsibility to guide any process that assures professional behavior (ANA position statement, 2014). As a leader in nursing, you must be able to address situations in which the lack of professionalism can undermine performance and affect patient care. You must also hold your team accountable for modeling professional behaviors, being able to enforce the nursing code of conduct equally regardless of others seniority or status. Maintaining professionalism maintains a culture of safety for both patients and staff (Dupree, Kapu, Terrell, Pichert, Cooper, & Hickson, 2017).

**Communication.** In a quantitative research study, with a correlation design, Cullen and Gordon, (2014), used an online survey to determine if there was a positive correlation between leadership and communication skills of nurse managers and if these communication skills also affected the behaviors of their staff. The study consisted of 85 registered nurses and 41 nursing assistants. What they found was that nurse manager communication skills had a greater impact on employee behavior than the leadership skill. This research also supported non-medical research that communication skills in leaders had a greater effect on the behavior of staff than just leadership skills alone. The importance of this study confirms that communication of a leader does affect the behavior of staff, which in turn affects staff retention and satisfaction and ultimately the overall care of the patient.



***Relationship Management.*** A healthy work environment sometimes requires leaders to facilitate collaboration among team members in order to provide high-quality care. These relationships are the foundation that can lead a team to feel motivated and empowered. Other times, relationship management may provide for negotiation between team members to resolve conflict. As outlined in the ANA, AONE, and The Joint Commissions leadership standards, the principles of collaborative relationships between nurse leaders and clinical nurses, which includes effective communication are to harbor a safe learning environment and culture for nurses and patients (Chard, 2014).

***Knowledge of the Healthcare Environment.*** Garman & Tran (n.d.), define this competency from the Healthcare Leadership Alliance definition, as the demonstrated understanding of the health care system in which you are functioning as a leader. According to the Healthcare Leadership Alliance, this knowledge of the healthcare environment can then be broken down into the four main themes of customers, staff, systems, and community/environment. Leaders who are competent in the knowledge of a healthcare system are able to provide a deeper understanding and a clearer path of the mission and goals in managing their team. This can lead to better staff satisfaction and subsequently better care for patients.

***Business Skills and Principles.*** Many charge nurses are promoted to charge nurse positions based on their skill performance, leaving them to learn the job as they maneuver through each day. Much of what is learned in relationship to business skills and principles is done so in a reactive versus proactive effort to gain knowledge of the position. Charge nurses who have the leadership skill of business principles can move an organization to a

preemptive rather than a conservative approach, which will foster growth in the healthcare system. Knowledge of employee performance management; financial management; quality improvement processes; and understanding of information management can enhance a charge nurse leader in their new position (Garman, Burkhart, & Strong, n.d.).

### **Theoretical Framework**

The theoretical framework chosen to guide this project was Kurt Lewin's *Change Theory of Nursing*. Change is a difficult process to undertake in any organization. Using a change theory can guide the structural process of modifying an organizational method in an effective and systematic manner. All healthcare organizations today would agree with two concepts; change in healthcare is a constant, and leading healthcare change can be a very difficult task. Changes in healthcare are important in providing patients with the best care and in improving patient outcomes. Developing charge nurse leaders is eminent to the survival of the healthcare organization (Hussain, Lei, Akram, Haider, Hussain, & Ali, 2018).

### **Historical Development of the Theory**

Kurt Lewin was a psychologist that today has become recognized as the founder of modern social psychology. He was born in 1890 to a Jewish family in Prussia. In, 1909 he started his education to study medicine and eventually completed his doctoral degree in 1916 from the University of Berlin. His extensive work included studies of leadership styles, group decision- making, the force field theory, the unfreeze/change/refreeze change model, the action research approach to research, and the group dynamics approach to training (Petiprin, 2016).

Kurt Lewin had an interest in social processes and became involved in various

applied research initiatives linked to these practices. In 1951 Lewin devised a three-stage change management model that was based on the premises that to achieve change effectively, you must first look at all options for moving from the current situation to a future state. It is then important that you evaluate the possibilities of each state and decide on your best option, rather than just aiming for a desired goal and taking an easy route. He also believed that changing the attitudes or behavior of people is synonymous to trying to break an established custom or social habit (Burnes & Bargal, 2017).

### **Applicability of Theory to Current Practice**

Healthcare is an ever-changing environment but managing this change can be difficult and challenging for healthcare facilities. As with most change, resistance of the change is usually inevitable with most staff. Many healthcare organizations have used Kurt Lewin's theory to understand human behavior as it relates to change and patterns of resistance to the subjective change. The purpose of the model is to identify factors that can hinder change from occurring.

These factors might oppose change, or they could promote or drive the change. It is important for the healthcare organization to understand what behaviors drive or oppose change, then they are able to work in strengthening the positive factors, providing for a more successful change transition (Sutherland, 2013).

In an article by Manchester, Gray-Miceli, Metcalf, Paolini, Napier, Coogle, & Owens (2014), they examined the use of Lewin's change model with the use of evidence-based practice education in healthcare professionals. The article explored the use of the model post hoc in the relationship between practice and the organizational system in two separate cases for

quality improvement evaluations of education. It was found that the model can be retrofitted to projects in looking at barriers or success' in programs to help translate reliability and provide implementation research.

In a brief review of literature, Shirey (2013) found that Lewin's change theory was used extensively in clinical nursing practice, nursing education, educational administration, nursing research, and healthcare operations. She assessed that Lewin's theory was versatile, practical, simple, and easy to understand. It is one of the oldest change management models in existence, and because of its extensive use, continues to have applicability and relevance today (Shirey, 2013).

### **Major Tenets of the theory**

There are three major tenets of Kurt Lewin's Change Theory. He defines these as stages and refers to them as the Stage of Unfreezing, the Stage of Moving, and the Stage of Refreezing. These tenets focus on the structure and understanding of change and methods to improve behavior during the change process. Lewin felt that in order for change to be successful, the individual must first make the change amenable to the person. Secondly, they need to shape or present the change. Then lastly, it is important to solidify the change. To begin any successful change process the person must first understand why the change needs to occur. It is important that the person understand and re-examine their current assumption about the subject to begin a successful change process (Sutherland, 2013).

**Stage of Unfreezing.** The first step in Lewin's theory involves identification of the change of focus. It is important at this stage to communicate with all stakeholders. It is most important that communication is open and honest to develop confidence with all those involved in the

proposed change. Making sure to include those individuals who will be affected by allowing them to participate in planning groups can sometimes make the resistance to change less, as they feel more involved and empowered in the understanding and importance of the proposed change (Sutherland, 2013). Bakari, Hunjra, & Niazi (2017) would argue that the stage of unfreezing is basically to create a readiness through delivering change messages. One must change the current mindset and motivate towards change. This stage requires decomposing employees' deliberation of an existing situation, creating discontent with status quo, creating an attractive future vision, increasing self-efficacy and optimism that the future state will be more beneficial than the current state and will have long-term benefits.

During this stage, it can also be important to identify driving and restraining forces to help recognize barriers that may need to be overcome. It is also important to develop a compelling message stating why the existing process cannot continue. This is more easily done when one is able to show declines or decreases in areas of satisfaction, results, etc. Preparation of the organization at the core is also an important step in this stage. One must be prepared to change the existing foundations to build new supports before they risk collapse. This stage is usually the most difficult and stressful for all those involved. Essentially a controlled crisis is being created, which is then motivated to seek new avenues of undertaking a process (Bakari, Hunjra, & Niazi, 2017).

**Stage of Moving.** This stage represents the actual time of change, which also includes the implementation of the project. At this stage, participants start to not feel as much uncertainty and are able to start looking at new ways of completing a process. This transition does not occur quickly and can sometimes take time to occur. It is important for participants to understand the benefit from the proposed change in order for acceptance. Be

prepared that not everyone will see the change as positive. Keeping open lines of communication and giving them time to adjust are two key areas that help to promote a successful change (Hussain, Lei, Akram, Haider, Hussain, & Ali, 2018).

**Stage of Refreezing.** As changes are starting to occur and participants can see the benefits of the new way of undertaking a process, then the organization is ready to refreeze the method.

Signs that can give direction that a refreeze is ready to occur can be stabilization, consistency, promotion of change, and positive outcomes. The important part of this stage is setting the platform for continued use of the change in everyday business. When there is stability, participants will feel a sense of confidence and become comfortable with the new change (Hussain, Lei, Akram, Haider, Hussain, & Ali, 2018; Sutherland, 2013).

At this stage, it is also important to continue evaluation of the new change. Ongoing support of participants by stakeholders is crucial until everyone is comfortable with the new change. When it is felt that operations are stable, then a review of problems and successes should be examined for future reference (Sutherland, 2013).

### **Theory Application to the DNP Project**

Lewin's theory of change is appropriate to this project as it provides a framework for implementation and sustaining change through the actions of the change event. As stated previously, the transition of staff nurse to charge nurse can be very challenging and most nurses are not given any type of formal training nor do they comprehend the complexity of a leadership role in today's healthcare environment. They are often surprised at the challenges they face in this position, and many times become so frustrated that it will affect patient care

and the well-being of their staff (Sherman & Saifman, 2018). The healthcare facility has no current training for transitioning a staff nurse to charge nurse. Nurses are many times being put in a charge position with less than a year of nursing experience. This lack of experience along with no formal leadership training is putting the facility at risk for future problems ([Appendix A](#)).

**Stage of Unfreezing.** Using Lewin's Change Model, the first step would be to identify the change or unfreeze the current situation of charge nurses having no formal leadership training for their position. By doing this, it is important to first discuss with management and facility stakeholders the risk of not having any formal charge nurse leadership training and to recognize the need for change. It is also crucial to have discussions with current charge nurses to understand their perspectives of being in charge and frustrations or benefits of this position. This will help to identify those driving and restraining forces that may cause barriers that will need to be overcome. It is also important to look at the overall engagement and dynamics of the staff and charge nurse. Understanding the perspective of all those affected by the charge nurse position is also important in ascertaining those barriers. Keeping an open line of communication and engagement will help to provide motivation in the change process.

The literature further delineates that many charge nurses do not have the level of leadership training or skill to develop a high functioning team and maintain a healthy work environment (Longo, Cassidy, and Sherman, 2016). This lack of leadership in charge nurses is directly related to suboptimal patient care and can negatively affect the outcome of the patient. Both the ANA and AONE define leadership competencies for nurses that are important when in a leadership role.

Research has also shown that the negative behavior of staff nurses and job dissatisfaction is directly linked to the leadership skills of the CN, which can ultimately affect the patient experience (Whitby, 2018). Providing information from the literature along with the need for change, can also remove barriers and provide rationale as facilitating forces for the change project and process.

**Stage of Moving.** The next step of Lewin's change model is the moving stage. During this stage, key stakeholders have accepted that the need for change and development of a charge nurse leadership program is necessary for the organization. Development of a charge nurse leadership program would then take place during this stage of change. The program would be implemented to educate both current and prospective charge nurses at the facility on the competencies of leadership. It is important for participants to understand the benefit of developing leadership competencies in order for acceptance to take place. Keeping open lines of communication and giving them time to adjust are two key areas that will help promote a successful transition (Hussain, Lei, Akram, Haider, Hussain, & Ali, 2018).

**Stage of Refreezing.** In the last stage of Lewin's theory, the facility will refreeze or adopt the ongoing education and training of new charge nurses prior to promotion. The charge nurse leadership program will be included in all new charge nurse orientation prior to the nurse starting in this role. This will create a new norm for onboarding charge nurses at the facility which will provide better services for both staff and patients. This is a time of stability and evaluation.

Management should evaluate processes of the project that were and were not successful or well received by the participants. Evaluation of participants responses to development of



leadership competencies would also be important. At this time, management should be supportive in allowing charge nurses to embrace their new leadership knowledge and competencies. Ongoing leadership training should also be a consideration of the organization in maintaining a high quality of healthcare for patients (Kennedy & Young, 2013).

### **Project Design**

The overall goal of the DNP project is to address a clinical problem by using evidence-based practice (EBP) to improve patient outcomes in a specific healthcare setting (Ginex, 2017). The proposed project was developed to address the lack of CN leadership skills and training at the project facility. The project site identified that there is currently no program to develop leadership skills in charge nurses at their facility. Research has shown that the negative behavior of staff nurses and nurse job dissatisfaction is directly linked to the lack of leadership skills of the CN, which can ultimately affect patient outcomes (Whitby, 2018). Permission to provide the project intervention was granted by the Chief Nursing Officer and hospital board of directors. ([see Appendix C](#)) The facility is committed to improving their processes in providing excellent patient care and increasing nurse satisfaction.

To address the improvement of the facility processes and meet the project objectives, a project design will be used to provide structure and organization of the intervention, ideas, and process needed to implement this project. The design that will be used is a Quality Improvement (QI) design. The QI design is best utilized and most effective when a new process or system is to be introduced to measure the improvement. (Healthcare Quality Improvement Partnership, 2015). The objectives for this project provide the outline of what is to be accomplished. The main project objective is to develop and implement a charge nurse leadership program for all current and potential charge nurses based on the American

Organization of Nurse Executives (AONE) competencies. The project question that is to be answered is will current and prospective CN's at this facility with no charge nurse leadership education report an increase in leadership knowledge on the Leadership Practices Inventory after attending a charge nurse leadership development program? To answer this question the project has established two additional objectives that are time-specific and measurable to determine improvement. These objectives will determine if all nurses who attend the charge nurse leadership program will report an increase in their knowledge of leadership skills according to the Leadership Practice Inventory, and if at least 90% of charge nurse attendees will report that the program was beneficial to them in learning the leadership roles of a charge nurse.

### **Population of Interest and Setting**

The target population for this project will be current and onboarding CN's at the facility. The facility is a rural community hospital in southeastern Indiana that serves 5 rural counties and can hold 81 inpatients (16 Emergency Department (ED) bays with 1 chair; 51 inpatient beds, including 7 in the Intensive Care Unit (ICU), 7 Labor, Delivery, Recover, and Postpartum (LDRP), 4 Post-partum, and 2 Obstetrical triage). It provides services that range from emergency medicine and a birthing center to surgery and rehabilitation. The number of CN's participating will be dependent on their availability at the time of the project implementation. However, the goal of the facility will be to eventually have all CN's attend this program. The facility has identified a total of 58 nurses that fit the inclusion criteria of current or orienting to CN. These nurses will vary from approximately 1-year post RN licensure to 30 plus years of nursing experience. The level of CN education will range from Diploma to

Bachelor of Science. Exclusion criteria will be any staff nurse who would not be eligible as a CN at this particular time.

### **Stakeholders**

For this project, the stakeholders will be the identified CN's; administration, which includes the Director of Nursing, Chief Executive Officer, Director of Patient Care Services, Director of Quality Management and Improvement, and the facilities Executive Board; and the education department, which includes the Director of Nursing Education and a Nurse Educator.

Administration will hold jurisdiction over the project and give approval for movement and changes with the project. The education department will provide support and be involved in assisting with interdisciplinary tasks as needed with the project under the direction of administration. The CN's reception of the proposed intervention will determine its success and sustainability at the facility.

### **Recruitment Methods**

The recruitment method will be completed by the education department at the facility. The education department manager will post the required leadership program for all CN's in their educational management system. The manager of each unit will then be required to register their CN's to attend the program, according to their availability. The manager will then reflect this upcoming educational program on the CN's schedule.

Confidentiality and privacy will be maintained by the use of a number system on a packet that will contain a pre- and post- LPI questionnaire, along with a demographic/program questionnaire, that will be given to each participant. These will be handed out randomly by a member of the education department

that is not directly involved in the project.

### **Tools/Instrumentation**

To meet project objectives, the tools needed will consist of an educational power point program, a pre-LPI questionnaire, a post-LPI questionnaire, and a demographic/program questionnaire.

### **Educational Program**

To meet objective one, an educational program will be developed using a combination of *The Charge Nurse Leader Program Builder* (Swihart & Gantt, 2015) and the Studer Group's *Nurse Leader Handbook* (2010). The facility is currently partnering with the Studer Group, a global advisory firm that assists healthcare organizations to develop strategies and solutions to create sustainable growth. These resources were selected by the facility, as they most closely reflect the facilities' vision and the objectives of this project. These tools along with the AONE and ANA charge nurse leadership competencies will guide the development of an educational presentation that will be offered at the facility site on a date chosen by the facility and within the timeframe of project completion.

The program will consist of a power point presentation along with case scenarios to provide the opportunity for participants to engage in difficult situations utilizing the leadership skills and knowledge that were presented in the first half of the program ([see Appendix F](#)). The program is scheduled to last 2 hours with a 10-minute break at half point. The program will be led by the project leader with assistance from the facility's educational nursing staff. To create a sustainable program, the educational nursing staff will continue to provide a biannual training for new CN's. This training will be added to the required training on their

educational management system for the new CN. Current CN's will be required to attend a yearly CN leadership program to review and improve on continued leadership skills. This program will consist of the same educational material but will offer a more question/answer timeframe that participants can use to build upon their leadership skills. The annual training will also be added to the facilities educational management system and will automatically notify the CN's manager of the required training one year to date of the previous training.

### **Demographic/Program Questionnaire**

Objective three will be met by the use of a program questionnaire ([see Appendix D](#)) that will address the objective question and be given to the CN after the completion of the program. Included with this questionnaire, will be demographic questions addressing age, gender, nursing education level, years of experience as an RN, employment status, and years as a CN. A program question will also be included on the questionnaire to answer objective three of this project.

### **Leadership Practices Inventory Questionnaire**

The Leadership Practices Inventory (LPI) will be used to meet objective two of the project. The LPI is a tool that was created by Jim Kouzes and Barry Posner to enable individuals and organizations to measure their leadership competencies and act on their discoveries. The LPI self, which is one assessment, is an evidence-based, rigorously tested questionnaire made up of 30 statements evaluated on a 10-point Likert-scale that provides a way for individuals to measure the frequency and increase in their leadership behaviors. This assessment is one of a suite of tools that can be used as a 360-degree approach in helping to build leadership in an organization (Wiley & Sons, 2019). Multiple studies have assessed the reliability and

validity of the LPI assessment tool with over 2.8 million respondents. These studies have been conducted in multiple disciplines, including nursing. Using Cronbach alpha coefficients, it has been found that the internal reliability of the tool is overall consistently strong in all disciplines, fields, positions, and hierarchical levels, in industries and organizations, including nursing, in which the reliability ranged from 0.66 to 0.96 (Posner, 2016; Posner, Crawford, & Denniston-Stewart, 2015; Posner, 2016; Denker, 2014). Table 1 will show the correlation between the ANA and AONE leadership competencies and the LPI individual survey items, as created by the author.

*Table 1*

<b>ANA &amp; AONE leadership competencies</b>		<b>Leadership Practices Inventory</b>
Professionalism		Model the Way
Knowledge of the Healthcare environment		Inspire a Shared Vision
Relationship Management		Enable Other to Act
Communication		Encourage the Heart
Business Skills and Principles		Challenge the Process
<b>Leadership Practices Inventory Individual Items</b>		
Category	Individual Survey Items	
Model the Way = Professionalism	<ol style="list-style-type: none"> <li>1. I set a personal example of what I expect of others.</li> <li>2. I spend time and energy making certain that the people I work with adhere to the principles and standards we have agreed on.</li> <li>3. I follow through on the promises and commitments that I make.</li> <li>4. I ask for feedback on how my actions affect other people’s performance.</li> <li>5. I build consensus around a common set of values for running our organization.</li> <li>6. I am clear about my philosophy of leadership.</li> </ol>	
Inspire a Shared Vision = Knowledge of the Healthcare environment	<ol style="list-style-type: none"> <li>1. I talk about future trends that will influence how our work gets done.</li> <li>2. I describe a compelling image of what our future could be like.</li> <li>3. I appeal to others to share an exciting dream of the future.</li> <li>4. I show others how their long-term interests can be realized by enlisting a common vision.</li> <li>5. I paint the “big picture” of what we aspire to accomplish.</li> <li>6. I speak with genuine conviction about the higher meaning and purpose of our work.</li> </ol>	

Challenge the Process= Business skills and Principles	<ol style="list-style-type: none"> <li>1. I seek out challenging opportunities that test my own skills and abilities.</li> <li>2. I challenge people to try out new and innovative ways to do their work.</li> <li>3. I search outside the formal boundaries of my organization for innovative ways to improve what we do.</li> <li>4. I ask, “what can we learn?” when things don’t go as expected.</li> <li>5. I make certain that we set achievable goals, make concrete plans, and establish measurable milestones for the projects and programs that we work on.</li> <li>6. I experiment and take risks, even when there is a chance of failure.</li> </ol>
Enable Others to Act = Relationship Management	<ol style="list-style-type: none"> <li>1. I develop cooperative relationships among the people I work with.</li> <li>2. I actively listen to diverse points of view.</li> <li>3. I treat others with dignity and respect.</li> <li>4. I support the decisions that people make on their own.</li> <li>5. I give people a great deal of freedom and choice in deciding how to do their work.</li> <li>6. I ensure that people grow in their jobs by learning new skills and developing themselves.</li> </ol>
Encourage the Heart = Communication	<ol style="list-style-type: none"> <li>1. I praise people for a job well done.</li> <li>2. I make it a point to let people know about my confidence in their abilities.</li> <li>3. I make sure that people are creatively rewarded for their contributions to the success of our projects.</li> <li>4. I publicly recognize people who exemplify commitment to shared values.</li> <li>5. I find ways to celebrate accomplishments.</li> <li>6. I give the members of the team lots of appreciation and support for their contributions.</li> </ol>

For the purposes of this DNP project, only the LPI self-assessment will be utilized. Permission has been given for use of the assessment in this project by Wiley & Sons ([see Appendix B](#)). The CN’s will complete the questionnaire, self-rating themselves on the frequency in which they believe that they engage in the 30 behaviors prior to the program. The CN’s will then be asked to complete the LPI assessment again two weeks after completion of the CN leadership program to determine if they feel they have increased their learning and ability to utilize leadership skills as a CN. The post- questionnaire will be collected upon exiting. This leadership Inventory can be given every year to continue assessment of leadership skills of the individuals within the organization. A core component of this process includes a personal reflection and analysis for our own behavior as leaders (The Leadership Challenge, 2014)

**Data Collection Procedures**

Each participant will randomly be given two copies of the LPI assessment and one copy of the demographic/program questionnaire with an identification number that will match on both the pre- and post- forms at the beginning of the program. This will ensure that results of the surveys will be kept anonymous but that a correlation can be made of each individual in regard to their pre- and post- score. The CN participant will then self-rate themselves on the frequency in which they believe that they currently engage in the 30 leadership behaviors. The participants will be asked prior to dismissal to complete the demographic/program questionnaire to determine if they feel the program was beneficial in learning the leadership roles and skills of a charge nurse. The post-demographic/program questionnaire will be collected upon exiting. The participant will take the post- LPI assessment with them, and at 2 weeks post-program, will be asked to complete the assessment again to determine if scores have increased and the participant has been able to utilize leadership skills in the practice setting as a CN (The Leadership Challenge, 2014). The facilities nursing education department will then collect the post-LPI surveys from participants.

### **Intervention/ Project Timeline**

The timeline for this project implementation is four weeks. The timeframe includes the implementation of the project intervention, data collection, and analysis/interpretation. The project implementation will start at the beginning of DNP Project III. Project approval will occur at the end of DNP II.

### **Implementation**

For this DNP project, the plan of implementation is as follows:

*Table 2*



Goal Date	Project Actions
<b>Week 1</b>	
March 4 <sup>th</sup> , 2020	Obtain final count of attendees and create pre- and post- assessment data packets with numerical identifier
<b>Week 2</b>	
March 12 <sup>th</sup> , 2020	Present Charge Nurse Leadership Development Program (2 hours)
March 12 <sup>th</sup> , 2020	Collection of pre-LPI assessment data and demographic/program questionnaire
March 13 <sup>th</sup> , 2020	Analyze data from the demographic/program questionnaire using the descriptive statistics measures of central tendency and dispersion descriptive
	statistics.
<b>Week 3</b>	
March 18 <sup>th</sup> , 2020	Nursing education department to send reminder to complete post- LPI assessment to participants via email
<b>Week 4</b>	
March 27 <sup>th</sup> , 2020	Collect post LPI assessment data from participants
March 30 <sup>th</sup> , 2020	Analyze data using a paired-samples t-test and/or the non-parametric Wilcoxon Signed Rank Test
April 2020	Provide data results to stakeholders

### Synopsis of Implementation

Week one will include the final overview and preparation of the CN leadership development presentation with the facilities education department. This is an important aspect for sustainability of the project as the facilities education department will continue to

provide this program. A final attendee count will also be obtained from the facilities education management system to create pre- and post- assessment data packets. In week two, the presentation/program will take place. This will consist of a 2-hour power point presentation with case scenarios. The first hour will start with a presentation consisting of the fundamental information on leadership and how this applies to the charge nurse. Using the AONE and ANA competencies for charge nurse leaders, the following competencies (professionalism, communication and relationship management, knowledge of the healthcare environment, and business skills and principles) will be discussed along with how each competency aligns with the facilities mission and vision (Nurse Leader, 2005).

In the second hour, a few case scenarios will be presented for participants to utilize and apply the information they have just obtained in the first hour presentation. These scenarios consist of examples of obstacles that these facility CN's have encountered. A discussion will then take place in determining how leadership skills can help participants to achieve a better or more desirable outcome. Prior to the beginning of the program, participants will be asked to complete the pre-LPI assessment in their packet. Upon completion of the program, the participants will be asked to complete the demographic data/program questionnaire. The participant will take the remaining LPI assessment labeled post-test, with them, and will be asked to complete by the end of week four. On exiting the program, the participants will place their pre- LPI assessment and demographic data/program questionnaire into a box. To maintain confidentiality of all participants, packets will only contain a numerical coded number with no names.

In week three, a reminder to complete the post- LPI assessment will be sent to

participants via email by the nursing education department. Week four, the post- LPI assessment will be collected by the nursing education department and analysis and evaluation of the data will take place by the project lead. The data collected will be analyzed utilizing the IBM SPSS software.

The analysis will attempt to determine if there is a significant change in the pre- and post- LPI assessment tool results indicating that the program provided the intended information and education on charge nurse leadership skills. The data will then be evaluated and coded using a code book created by the project lead ([see Appendix E](#)). A review of data will only be seen by the project lead, project mentor, and content expert. Once the project has been completed, all data will be disposed of securely.

### **Ethics/Human Subjects Protection**

The purpose of Institutional Review Board (IRB) review is to assure that the rights and welfare of humans are protected when participating in research. The following project is a staff quality improvement program that will not be collecting private information about the individual when performing data analysis, and therefore, will likely not require IRB review.

The project site does not require IRB review for this project.

The benefits of this project for participants will include an increased knowledge of leadership, an increase in leadership skills, and an increased ability to utilize these leadership skills as a CN. The participants will receive their normal hourly rate while attending the program at the facility. Data that is collected will be coded by a numerical system to assure confidentiality of all participants. Review of data will only be seen by the project lead, project mentor, and content expert. Once the project has been completed, all data will be

disposed of in a secure manner.

There is no perceived risk to participants in this project, however, IRB determination forms will be submitted per Touro University Nevada (TUN) policy. It is expected that the project will likely fall under the category of a TUN quality improvement project, which would not require IRB review.

### **Plan for Analysis/Evaluation**

Project evaluation will be performed by collection of data prior to the implementation of the CN leadership program and then compared to the data two weeks post- implementation of the program. If the assumption of normality is met for the pre- and post- administration of the LPI questionnaires, then the data will be evaluated and analyzed using a paired-samples t-test. This test can analyze data that is measuring two sets of data on the same person at two different times. This analysis provides information on the statistically significant difference in the mean scores of two different occasions. If the assumption is violated for either or both observations of the questionnaire, then the non-parametric Wilcoxon Signed Rank Test (WRST) will be used to determine if the group of participants, as a whole, show statistically significant scores from pre- to post- implementation of the program. This test can be used to analyze the differences between two paired sets of data but also takes into account the magnitude of the observed differences. It can be used to test the null hypothesis that two populations have the same continuous distribution and the basic assumption is that the data are from the same population and are paired (Pallant, 2013). The information will then be used to determine if each CN, and/or the group of participants, had an increase in their knowledge of leadership skills from pre-program to post-program, making the assumption that the program was beneficial to their learning

leadership skills.

For this project, the two occasions will be before and two weeks post-implementation of the CN leadership program. To measure the effectiveness of the program, the LPI assessment tool will be utilized and analyzed using the paired-samples t-test. This will allow for measurement of continuous data both prior to and 2 weeks post-program implementation. If the probability value ( $p$ ), in the paired-samples t-test, is less than 0.05, then it can be concluded that there is a significant difference between the two occasions of pre- and post-program and that the program was effective in increasing the knowledge of leadership skills in each of the CN's. If the probability value ( $p$ ), in the paired-samples t-test, is greater than 0.05, then the non-parametric Wilcoxon Signed Rank Test will be used to determine the significance level. A significance level of 0.05 on this test will conclude that there is a statistically significant difference between the pre- and post- implementation time (Pallant, 2013).

The demographic/program questionnaire will be analyzed using the descriptive statistics measures of central tendency and dispersion. This data will provide a description of the characteristics of the sample and check for variables that might violate the assumption of the project question (Pallant, 2013).

### **Significance and Implications for Nursing**

Developing charge nurse leaders is a paramount evidence-based practice in nursing that will not only sustain and improve growth of the health care facility but will ultimately provide the best care and outcomes for patients. Leadership is no longer for those individuals in top management positions. With the rapid growth and changes occurring in the health care industry, it

is imperative that nurse leaders are on the ground floor helping to encourage and build units that can work together as teams in high pressure situations. CN leaders can promote an environment that makes their staff more passionate about their work, provides organization, encourages professionalism, and promotes positive growth (Millburn, 2019).

The significance of this CN leadership program is to help current and prospective CN's at this facility develop their leadership skills, feel more competent as a nurse leader, and promote the attribute of leadership. Literature demonstrates that charge nurses who increase leadership skills and feel more competent as a nurse leader, will in turn create a better atmosphere for their nursing team, which can ultimately increase both staff and patient satisfaction, leading to improved patient outcomes. Data may reveal the outcomes of an increase in leadership skills, therefore, aligning with the literature.

Literature also supports that nursing leadership is imperative for the delivery of safe, high quality patient care. Despite the knowledge that the development of future leaders is a vital obligation for nursing, there continues to be an absence of adequate leadership education and training in the clinical setting. Because of their unique position, CN's are in the perfect position to captivate on these leadership responsibilities (Dyess, Sherman, Pratt, & Chiang-Hanisko, 2016).

The time and expenditure of this CN leadership program will be worth the investment by the project facility to create a more positive impact on the healthcare provided to their patients, the overall satisfaction and environment for their nurses, and ultimately improve their patient outcomes.

### **Analysis of Results**

The overall objectives of this quality improvement project were to develop and

implement an evidence-based charge nurse leadership program at a rural community hospital in southeastern Indiana based on the AONE competencies. The end goals of the objectives were for at least 90% of charge nurse program attendees to report a benefit in learning the leadership role of a charge nurse, and that the attendees would then increase these leadership skills in practice which could directly assistance them to improve patient care and create a more welcoming environment for both staff and patients.

The creation of a CN leadership education program was developed and implemented by the project lead. The LPI self, an evidence-based leadership questionnaire, was used to gather data on the 13 attending CN’s both pre- and post-2 weeks implementation, to measure the increase in their leadership behaviors.

**Statistical Methods**

Descriptive and frequency statistics were used to describe the sample’s demographic characteristics. The survey scores for the pre-intervention and post-intervention LPI questionnaire were calculated ([see Appendix G](#)) using the associated scoring rubric ([see Appendix E](#)). The scores were then assessed for the assumption of normality for continuous distributions using skewness and kurtosis statistics. If either statistic was above an absolute value of 2.0, then the assumption was violated as shown below in Table 1.

Table 1

*Descriptive Statistics and Correlations for Study Variables*

	N	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
PreTotal	13	227.00	39.000	-1.270	.616	2.117	1.191
PostTotal	13	261.54	23.908	.009	.616	-.531	1.191

Valid N (listwise)	13						
--------------------	----	--	--	--	--	--	--

Because the assumption was violated for the pre-intervention survey score, a non-parametric within-subjects analysis was conducted using the Wilcoxon Signed Ranks Test. This test can be used to measure two nominal variables such as ‘before’ and ‘after’ on one measurement variable which often can represent an individual. Medians and interquartile ranges (IQR) were reported and interpreted for the non-parametric analysis in Table 2.

Table 2  
*Wilcoxon Signed Ranks Test Statistics*

Pre-Total to Post-Total	
Z	-2.934 <sup>b</sup>
Asymp. Sig. (2-tailed)	.003

- a. Wilcoxon Signed Ranks Test
- b. Based on negative rank

All analyses were performed using SPSS Version 26 (Armonk, NY: IBM Corp.) and statistical significance was assumed at an alpha value of 0.05 indicating a 5% risk of concluding that a difference exists when there is no actual difference. If the p-value is less than or equal to the significance level, the decision would be to reject the null hypothesis.

**Statistical Results**

The demographics and benefit of the CN leadership program are presented in Table 3. The mean age of participants was 43.9 years, with a mean year of nursing at 18.8 years. Of the 13 participants, only two were male and all were of full-time status but one



participant. The mean number of charge nurse years was 12.6. The education of the charge nurses ranged from Diploma to Master's degree. To answer the question regarding the benefit of the program to the participant, 84.6% of participants felt that this educational program benefited them in learning the leadership behaviors and skills of a charge nurse.

Table 3

*Demographic Characteristics of Participants*

Variable	Level	Frequency (%)
Age*	-	43.9 (11.4)
Years as a nurse*	-	18.8 (10.8)
Years as a charge nurse*	-	12.6 (10.5)
Gender**	Male	2 (15.4%)
	Female	11 (84.6%)
Education**	Diploma	1 (7.7%)
	Associate's	4 (30.8%)
	Bachelor's	6 (46.2%)
	Master's	2 (15.4%)
Employment**		

## DEVELOPING AN EVIDENCE-BASED

	Part-time	1 (7.7%)
	Full-time	12 (92.3%)
Benefit**		
	No	2 (15.4%)
	Yes	11 (84.6%)

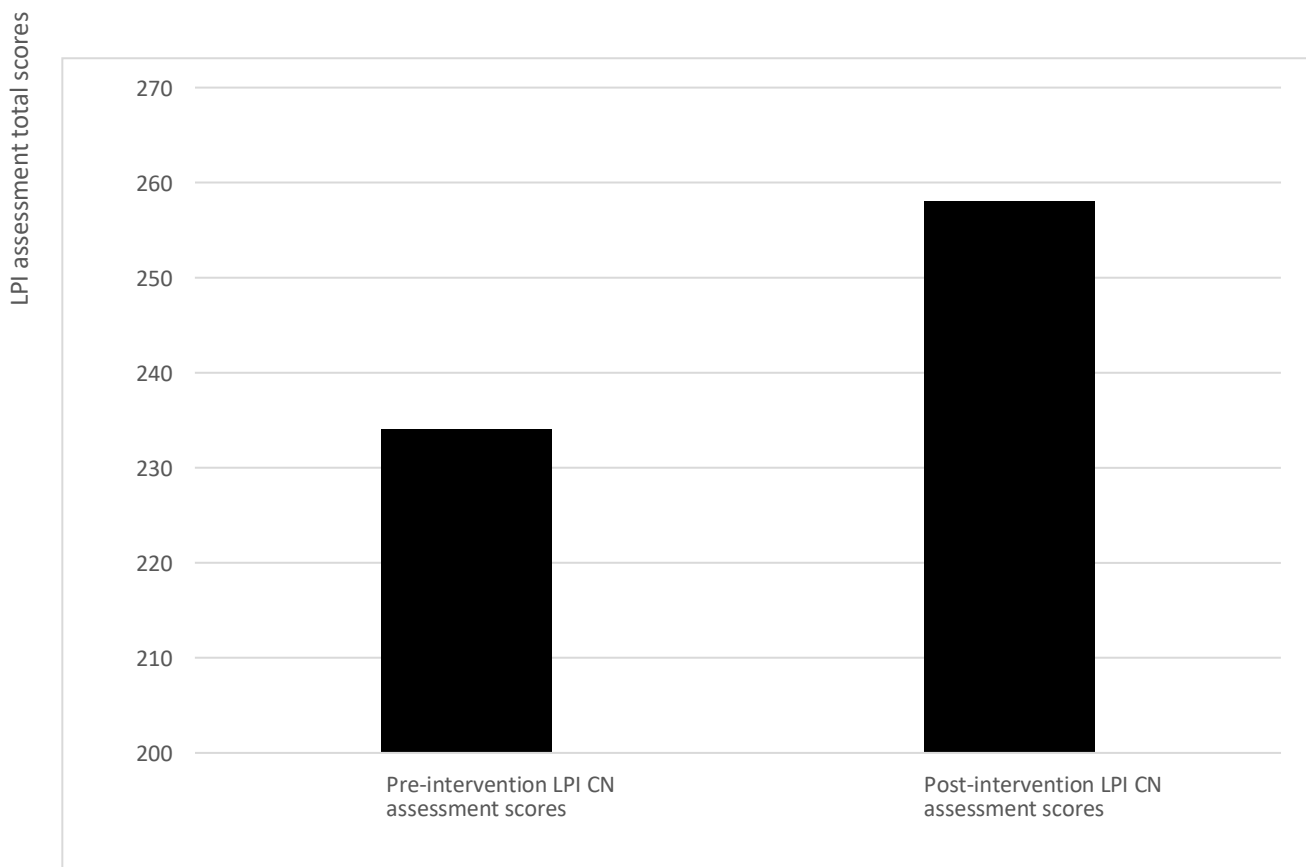
---

Note: \* Values are mean (standard deviation), \*\* Values are frequency (percentage)

When using the Wilcoxon test due to violations of normality, it was found that there was a statistically significant increase in survey scores from pre-intervention (median = 234.0, IQR = 50.0) to post-intervention (median = 258.0, IQR = 37.0),  $Z = -2.93$ ,  $p = 0.003$ . The difference in scores is depicted in Table 4 and graphically in Figure 1. This data supports the project question, will current and prospective CN's at this facility with no charge nurse leadership education report an increase in leadership knowledge on the Leadership Practices Inventory after attending a charge nurse leadership development program, by showing that there was a statistically significant increase in leadership knowledge of charge nurse attendees after attending the leadership development program.

Table 4  
*Survey Scores*

		Statistic
PreTotal	Median	234.00
	Interquartile Range	50
PostTotal	Median	258.00
	Interquartile Range	37



*Figure 1. LPI Assessment Scores Pre- and Post- Intervention*

### **Discussion**

As discussed previously, the leadership role of the CN can be the key to providing better outcomes for patients and developing skilled and competent staff. Effective leadership can increase patient satisfaction and the quality of patient care (Frankel, 2011). The suggestion of

## DEVELOPING AN EVIDENCE-BASED

this analysis implies that the educational leadership program developed by the project lead in meeting objective one of the project was statistically significant in increasing the overall leadership knowledge and skills of the participants. The implications of the Wilcoxon-Signed Rank test found that there was a statistically significant increase in survey scores from pre-intervention to post-intervention of the educational leadership CN program. These results met objective two of the project that all nurses who attended the charge nurse leadership program would report an increase in their knowledge of leadership skills according to the LPI. However, the data did not meet objective three that at least 90% of charge nurse attendees would report the program was beneficial to them in learning the leadership roles of a charge nurse. Data analysis instead showed that the overall benefit to the participants was slightly less than the projected goal. Conversely, the total number of participants being only 13, made the probability of a 90% more difficult to attain.

The project question of will current and prospective CN's at this facility with no charge nurse leadership education report an increase in leadership knowledge on the Leadership Practices Inventory after attending a charge nurse leadership development program was answered by the analysis of the overall pre- and post-intervention data (Figure 1). This data indicated that there was an increase from the pre-total score of 234 to the post-total score of 258 on the LPI assessment tool, indicating that the participants rated themselves to have an increase in leadership knowledge after attending the CN leadership program.

This project further aligns with previous studies by Abraham (2011) and the Florida Action Coalition, that also found a statistically significant change in the leadership skills of CN's after participating in a leadership program as measured by the LPI. The conclusion of both studies established that the development of nursing leadership programs and increasing

## DEVELOPING AN EVIDENCE-BASED

leadership skills in CN's were critical to providing quality health care (Denker, Sherman, Hutton- Woodland, Brunell, & Medina, 2015).

### **Significance**

Nursing is a demanding and unpredictable profession. Nurses spend substantial amounts of time with patients, and they are more likely to encounter stressful and unexpected situations. It is important that nurses have the skills to take care of patients, but it is equally important that they have the leadership knowledge to know how to handle difficult and unforeseen circumstances in the care of their patients (Ennis, Happel, & Reid-Searl, 2014). Charge nurses must not only have the knowledge and skill to take care of patients, but they must also be able to manage and lead a team.

Sfantou et al. (2017), found that leadership was a core element for providing excellent patient care and provided a nourishing environment for nursing staff. This CN leadership program offered a core element in providing the leadership knowledge and skills that will allow the facility to maintain positive patient outcomes and a high-quality work environment, leading to a favorable safety setting for both nurse and patient. Charge nurse leaders are no longer an option but a requirement in the rapidly demanding field of health care.

### **Limitations**

A few limitations of the project were identified during implementation. One limitation relevant to the project design was the large difference in experience level of the CN's. The educational tool was developed with the approach that each CN would

## DEVELOPING AN EVIDENCE-BASED

have limited leadership experience. This difference most likely led to not meeting objective three, that at least 90% of the charge nurse attendees would report the program was beneficial to them in learning the leadership roles of a charge nurse. Another limitation was the small number of participants (N=13). The sample size was smaller than desired due to being implemented in a small community hospital. This limitation can make it more difficult to generalize to the larger population. A final limitation to the project was the suggestion to offer this program on an annual basis, in which a continuity of screenings on the same individual was impossible during the timeframe of the project. Time also presented a limitation, as participants had limited time to utilize the leadership skills and knowledge learned before completion of the second LPI assessment which may have caused a smaller statistically significant difference in pre- and post- data.

### **Dissemination**

Dissemination of knowledge is a responsibility of nursing, and the DNP project provides a unique opportunity to advance nursing art and science. The dissemination of findings can improve practice decisions based on current project evidence (Smith-Stoner, 2018). The dissemination of findings was presented to the administration of the facility. There is also a plan to present the project as a podium presentation at the Indiana University-Purdue University Indianapolis Annual Patient Safety and Quality Day Conference in the near future. This conference is a multidisciplinary conference that allows all fields of healthcare to present their research and projects in areas related to quality improvement and patient safety. It is designed to facilitate collaboration and innovative discussion to advance patient safety. The completed project will also be

## DEVELOPING AN EVIDENCE-BASED

submitted to the Doctors of Nursing Practice, Inc. website in their DNP project repository at <http://www.doctorsofnursingpractice.org/> to support the dissemination of professional practice innovation and help to improve healthcare outcomes while enhancing the doctorally prepared nursing professional (Doctors of Nursing Practice, 2020). And finally, the project will be disseminated to faculty and student colleagues at Touro University Nevada.

The Charge Nurse Leadership Program is a sustainable initiative for this community hospital. The educational program will be adopted and delivered to all new onboarding charge nurses and also continue as an annual leadership program. Plans to continue development for additional successive CN leadership programs are also planned by the facilities education department with assistance by the project lead.

## References

- Abraham, P. (2011). Developing nurse leaders: A program enhancing staff nurse leadership skills and professionalism. *Nursing Administration Quarterly*, 35(4).
- American Nurses Association (ANA). (2018). ANA leadership competency model. Retrieved from: <https://www.nursingworld.org/~4a0a2e/globalassets/docs/ce/177626-ana-leadership-booklet-new-final.pdf>
- American Nurses Association (ANA). (2014). Professional Role Competence Position Statement. Retrieved from: <https://www.nursingworld.org/practice-policy/nursing-excellence/official-position-statements/id/professional-role-competence/>
- Asamani, J., Naab, F., & Ansah Ofei. (2016). Leadership styles in nursing management: implications for staff outcomes. *Journal of Health Sciences*, 6(1).
- Bakari, H., Hunjra, A. I., & Niazi, G. S. K. (2017). How Does Authentic Leadership Influence Planned Organizational Change? The Role of Employees' Perceptions: Integration of Theory of Planned Behavior and Lewin's Three Step Model. *Journal of Change Management*, 17(2), 155–187. <https://doi.org/10.1080/14697017.2017.1299370>
- Burnes, B., & Bargal, D. (2017). Kurt Lewin: 70 Years on. *Journal of Change Management*, 17(2), 91–100. <https://doi.org/10.1080/14697017.2017.1299371>



## DEVELOPING AN EVIDENCE-BASED

- Chard, R. (2014). *Communication and Relationship Management* (3rd ed.). Competency & Credentialing Institute; United States.
- Cullen, C. & Gordon, P. (2014). The relationship between leadership and communication skills of nurse manager and the organizational citizenship behaviors of medical-surgical nurses and nursing assistants. *Management and Organizational Studies*. 1(2).
- Denker, A. (2014). Transformational leadership in nursing: A pilot nurse leader development program. Retrieved from: <https://scholarworks.bellarmino.edu/cgi/viewcontent.cgi?article=1004&context=tdc>
- Denker, A, Sherman, R., Hutton-Woodland, M., Brunell, M., & Medina, P. (2015). Florida nurse leader survey findings: Key leadership competencies, barriers to leadership, and succession planning needs. *The Journal of Nursing Administration*. 45 (7/8).
- Doctors of Nursing Practice. (2020). About Us. Retrieved from: <https://www.doctorsofnursingpractice.org/about-us/>
- Dubree, M., Kapu, A., Terrell, M., Pichert, J., Cooper, W., & Hickson, G. (2017). Nurses' essential role in supporting professionalism. *American Nurse Today*. 12(4). Retrieved from: <https://www.americannursetoday.com/nurses-essential-role-supporting-professionalism/>
- Dyess, S., Sherman, R., Pratt, B., & Chiang-Hanisko, L. (2016). Growing nurse leaders: Their perspective on nursing leadership and today's practice environment. *Online Journal of Issues in Nursing*. 21(1).

## DEVELOPING AN EVIDENCE-BASED

- Ennis, G., Happell, B., & Reid-Searl, K. (2014). Clinical leadership in mental health nursing: the importance of a calm and confident approach. *Perspectives in Psychiatric Care*. (51).
- Frannkel, A. (2011). What leadership styles should senior nurses develop? *Nursing Times*. Retrieved from:  
<https://www.nursingtimes.net/Journals/2011/08/24/j/n/i/Leadership-Skills-for-Nurses.pdf>
- Garmin, A. & Tran, L. (n.d.). Knowledge of the healthcare environment. Retrieved from:  
<http://www.healthcareleadershipalliance.org/Knowledge%20of%20the%20HC%20Environment.pdf>
- Garmin, A., Burkhart, T., & Strong, J. (n.d.). Business knowledge and skills. Retrieved from:  
<http://www.healthcareleadershipalliance.org/Business%20Knowledge%20and%20Skills.pdf>
- Ginex, P. (2017). The difference between quality improvement, evidence-based practice, and research. *Oncology Nursing Society*. Retrieved from:  
<https://voice.ons.org/news-and-views/oncology-research-quality-improvement-evidence-based-practice>
- Hallock, A. (2019). A case for leadership development in nursing practice. *Nephrology Nursing Journal*, 46(3).
- Health Leaders Media Staff. (2019). Charge nurses: developing frontline leaders. Retrieved from: <https://www.healthleadersmedia.com/nursing/charge-nurses-developing-frontline-leaders>

## DEVELOPING AN EVIDENCE-BASED

- Healthcare Quality Improvement Partnership (HQIP). (2015). A guide to quality improvement methods. Retrieved from:  
[https://nhfd.co.uk/20/hipfracturer.nsf/b83841ab51769e1d802581a4005978ed/205c2976b502ffc2802581ee0053a23f/\\$FILE/HQIP%20guide%20to%20QI%202017.pdf](https://nhfd.co.uk/20/hipfracturer.nsf/b83841ab51769e1d802581a4005978ed/205c2976b502ffc2802581ee0053a23f/$FILE/HQIP%20guide%20to%20QI%202017.pdf)
- Hussain, S., Lei, S, Akram, S., Haider, M., Hussain, S., & Ali, M. (2018). Kurt Lewin's change model: A critical review of the role of leadership and employee involvement in organizational change. *Journal of Innovation & Knowledge*. 3(3). Retrieved from:  
<https://www.sciencedirect.com/science/article/pii/S2444569X16300087>
- Huston, C. (2018). What defines a true leader in healthcare? Retrieved from:  
<https://www.todayswoundclinic.com/articles/what-defines-true-leader-healthcare>
- IBM Corp. Released 2018. IBM SPSS Statistics for Windows, Version 26.0. Armonk, NY: IBM Corp.
- Institute of Medicine (IOM). (2015). Assessing Progress on the Institute of Medicine Report The Future of Nursing. Retrieved from:  
[http://www.nationalacademies.org/hmd/~media/Files/Report%20Files/2015/AssessingFO N\\_releaseslides/Nursing-Report-in-brief.pdf](http://www.nationalacademies.org/hmd/~media/Files/Report%20Files/2015/AssessingFO N_releaseslides/Nursing-Report-in-brief.pdf)
- Kennedy, C., & Young, W. (2013). Influencing practice with m-Health: Using Lewin's change theory to implement the usage of cell phones in the delivery of healthcare. *Canadian Journal of Nursing Informatics*. 8(1&2). Retrieved from:  
<https://cjni.net/journal/?p=28>
- Liaw, S. Y., Wong, L. F., Wai-Chi Chan, S., Yin Ho, J. T., Mordiffi, S. Z., Leng Ang, S.

## DEVELOPING AN EVIDENCE-BASED

- B., Goh, P. S., Neo, E., & Angm, K. (2015). Designing and evaluating an interactive multimedia web-based simulation for developing nurses' competencies in acute nursing care: Randomized control trial. *Journal of Medical Internet Research*, 17(1), e5.
- Longo, J., Cassidy, L, & Sherman, R. (2016). Charge nurses' experiences with horizontal violence: Implications for leadership Development. *The Journal of Continuing Education in Nursing*. 47(11). DOI:10.3928/00220124-20161017-07
- Manchelster, J., Gray-Miceli, D., Metcalf, J., Paolini, C., Napier, A., Coogle, C., & Owens, M. (2014). Facilitating Lewin's change model with collaborative evaluation in promoting evidence-based practices of health professionals. *Evaluation and Program Planning*. 47.  
<https://doi.org/10.1016/j.evalprogplan.2014.08.007>
- McCay, R., Lyles, A, & Larkey, L. (2018). Nurse leadership style, nurse satisfaction, and patient satisfaction: A systematic review. *Journal of Nursing Care Quality*. 33(4). DOI: 10.1097/NCQ.0000000000000317
- Middleton, J. (2011). A dynamic profession needs confident leaders at all levels. *Nursing Times Leadership Supplement*. Retrieved from:  
<https://www.nursingtimes.net/Journals/2011/08/24/j/n/i/Leadership-Skills-for-Nurses.pdf>
- Millburn, N. (2019). Importance of strong nursing leadership. Retrieved from:  
<https://work.chron.com/importance-strong-nursing-leadership-29867.html>
- MindTalk. (2019). Lewin's Change Management Model: Understanding the three stages of change. Retrieved from:

## DEVELOPING AN EVIDENCE-BASED

[https://www.mindtools.com/pages/article/newPPM\\_94.htm](https://www.mindtools.com/pages/article/newPPM_94.htm)

Nightingale, Florence. (1912). *Notes on Nursing*. New York: D. Appleton and Company.

Nurse Leader (2005). AONE nurse executive competencies. Retrieved from:

[https://www.nurseleader.com/article/S1541-4612\(05\)00007-8/pdf](https://www.nurseleader.com/article/S1541-4612(05)00007-8/pdf)

Ohio Nurses Association (ONA). (2016). Practice statement. The role of the registered

nurse as charge nurse nursing practice statement NP21. Retrieved from:

<http://secureservercdn.net/50.62.174.113/z9m.f77.myftpupload.com/wp-content/uploads/2016/08/FINAL-NP-21-The-Role-of-the-RN-as-Charge-Nurse.pdf>

Ohio Nurses Review. (2016). The role of the registered nurse as charge nurse. Ohio

Nurses

Review. Retrieved from: [www.ohionurses.org](http://www.ohionurses.org)

Pallant, J. (2013). *SPSS Survival Manual: A step by step guide to data analysis using IBM*

SPSS. McGraw Hill: New York, NY. 5th ed.

Petiprin, A. (2016). Kurt Lewin-nursing theorist. Retrieved from: [http://nursing-](http://nursing-theory.org/nursing-theorists/Kurt-Lewin.php)

[theory.org/nursing-theorists/Kurt-Lewin.php](http://nursing-theory.org/nursing-theorists/Kurt-Lewin.php)

Posner, B. (2016). Bringing the rigor of research to the art of leadership. Retrieved from:

<http://www.leadershipchallenge.com/Research-section-Our-Authors-Research-Detail/bringing-the-rigor-of-research-to-the-art-of-leadership.aspx>

Posner, B. (2016). Investigating the reliability and validity of the leadership practices inventory.

Retrieved from: <https://www.mdpi.com/2076-3387/6/4/17/htm>

Posner, B., Crawford, B., & Denniston-Stewart, R. (2015). A longitudinal study of

## DEVELOPING AN EVIDENCE-BASED

Canadian student leadership practices. *Journal of Leadership Education*. Retrieved from: [https://journalofleadershiped.org/wp-content/uploads/2019/02/14\\_2\\_posner.pdf](https://journalofleadershiped.org/wp-content/uploads/2019/02/14_2_posner.pdf)

Ritchie, L. (2017). What happens without nursing leadership? *Nursing New Zealand*. 23(5).

Retrieved from: <https://search.proquest.com/pq1academic/docview/1927525139/9AFA4ECA5A6D4EF9PQ/9?accountid=14375>

Sfantou, D., Laliotis, A., Patelarou, A., Sifaki-Pistolla, D., Matalliotakis, M., & Patelarou, E. (2017). Important of leadership style towards quality of care measures in healthcare settings: a systematic review. Retrieved from: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5746707/>

Sherman, R. (2015). The charge nurse as team leader. *Emerging RN Leader*. Retrieved from: <https://www.emergingrnleader.com/charge-nurse-3/>

Sherman, R. & Saifman, H. (2018). Transitioning emerging leaders into nurse leader roles. *Journal of Nursing Administration*. 48(7).

Sherman, R., Schwarzkoph, R., & Kiger, A. (2011). Charge nurse perspectives on frontline leadership in acute care environments. *International Scholarly Research Network*. doi:10.5402/2011/164052

Shirey, M. R. (2013). Lewin's theory of planned change as a strategic resource. *Journal of Nursing Administration*, 43(2), 69-72. doi: 10.1097/NNA.0b013e31827f20a9

Silver, S., Harel, Z, McQuillan, R., Weizman, A., Thomas, A., Chertow, G., Nesrallah, G., Bell, C., & Chan, C. (2016). How to begin a quality improvement project. *Clinical*

## DEVELOPING AN EVIDENCE-BASED

Journal of the American Society of Nephrology, 11(5).

Smith, N. (2012). Nurses as leaders: The past, present and future of nursing leadership.

Retrieved from: <https://www.articlemyriad.com/nurses-leaders-present-future-nursing-leadership/>

Smith-Stoner, M. (2018). A Guide to Disseminating Your DNP Project. New York; NY;

Springer Publishing.

Studer Group. (2010). The Nurse Leader Handbook. Gulf Breeze, FL: Fire Starter

Publishing.

Sutherland, K. (2013). Applying Lewin's change management theory to the

implementation of bar-coded medication administration. Canadian Journal of

Nursing Informatics. 8(1&2). Retrieved from: <https://cjni.net/journal/?p=2888>

Swihart, D. & Gantt, K. (2015). The Charge Nurse Leadership Program Builder.

Brentwood, TN; HCPro.

The Joint Commission. (2019). National patient safety goals effective January 2019.

Retrieved from:

[https://www.jointcommission.org/assets/1/6/NPSG\\_Chapter\\_NCC\\_Jan2019.pdf](https://www.jointcommission.org/assets/1/6/NPSG_Chapter_NCC_Jan2019.pdf)

The Joint Commission. (2017). Sentinel Event Alert Issue 57. Retrieved from:

[https://www.jointcommission.org/assets/1/18/SEA\\_57\\_Safety\\_Culture\\_Leadership\\_0317.pdf](https://www.jointcommission.org/assets/1/18/SEA_57_Safety_Culture_Leadership_0317.pdf)

The Leadership Challenge. (2014). Leadership practices inventory (LPI) assessments.

## DEVELOPING AN EVIDENCE-BASED

Retrieved from: <http://www.leadershipchallenge.com/leaders-section-assessments.aspx>

The National Academies of Sciences, Engineering, and Medicine. (2019). The future of nursing 2020-2030. Retrieved from:

<http://www.nationalacademies.org/hmd/Activities/Workforce/futureofnursing2030.aspx>

Weberg, D. & Fuller, R. (2019). Toxic leadership: three lessons from complexity science to identify and stop toxic teams. *Nurse Leader*. Retrieved from:

[https://www.nurseleader.com/article/S1541-4612\(18\)30173-3/pdf](https://www.nurseleader.com/article/S1541-4612(18)30173-3/pdf)

Whitby, P. (2018). Role of front-line nurse leadership in improving care. *Nursing Standard*.  
33(8).

Wilmoth, M. & Shapiro, S. (2014). The intentional development of nurse as leaders: A proposed framework. *The Journal of Nursing Administration*. 44(6).

Wiley & Sons, J. (2019). *The Leadership Challenge: Achieve the extraordinary*. Retrieved from: <http://www.leadershipchallenge.com/professionals-section-lpi-about.aspx>



## Appendix A

### Lewin's Three Step Change Model

<b>Unfreezing</b>	<b>Moving</b>	<b>Refreezing</b>
<ul style="list-style-type: none"> <li>▪ Discussion with management and facility stakeholders regarding the need for a change</li> <li>▪ Discussions with charge nurses about their perception of being in charge</li> <li>▪ Staff engagement</li> <li>▪ Identify driving and resistance forces</li> <li>▪ Review literature for charge nurse leadership competencies supported by evidence-based practice</li> </ul>	<ul style="list-style-type: none"> <li>▪ Develop a charge nurse leadership program</li> <li>▪ Educate current and prospective charge nurses on the competencies of leadership and importance to the organization</li> <li>▪ Implementation of charge nurse leadership program</li> </ul>	<ul style="list-style-type: none"> <li>▪ Ongoing education and training</li> <li>▪ Education of new charge nurses prior to promotion</li> <li>▪ Review of feedback from charge nurse leadership program</li> </ul>

**Appendix B**  
**LPI Tool and Approval Letter**

The logo for Wiley, consisting of the word "WILEY" in a bold, serif, all-caps font.

September 9<sup>th</sup>, 2019

Tammy

Schwing

50,

Walnut St.  
Lawrenceburg, IN

47025-1836 Dear

Tammy Schwing:

Thank you for your request to use the LPI®: Leadership Practices Inventory® in your research. This letter grants you permission to use either the print or electronic LPI [Self/Observer/Self and Observer] instrument[s] in your research. You may *reproduce* the instrument in printed form at no charge beyond the discounted one-time cost of purchasing a single copy; however, you may not distribute any photocopies except for specific research purposes. If you prefer to use the electronic distribution of the LPI you will need to separately contact Joshua Carter ([jocarter@wiley.com](mailto:jocarter@wiley.com)) directly for further details regarding product access and payment. Please be sure to review the product information resources before reaching out with pricing questions.

Permission to use either the written or electronic versions is contingent upon the following:

- (1) The LPI may be used only for research purposes and may not be sold or used in conjunction with any compensated activities;
- (2) Copyright in the LPI, and all derivative works based on the LPI, is retained by James M. Kouzes and Barry Z. Posner. The following copyright statement must be included on all reproduced copies of the instrument(s); "Copyright © 2013 James M. Kouzes and Barry Z. Posner. Published by John Wiley & Sons, Inc. All rights reserved. Used with permission";
- (3) One (1) **electronic** copy of your dissertation and one (1) copy of all papers, reports, articles, and the like which make use of the LPI data must be sent **promptly** to my attention at the address below;

## DEVELOPING AN EVIDENCE-BASED

and,

(4) We have the right to include the results of your research in publication, promotion, distribution and sale of the LPI and all related products.

Permission is limited to the rights granted in this letter and does not include the right to grant others permission to reproduce the instrument(s) except for versions made by nonprofit organizations for visually or physically handicapped persons. No additions or changes may be made without our prior written consent. You understand that your use of the LPI shall in no way place the LPI in the public domain or in any way compromise our copyright in the LPI. This license is nontransferable. We reserve the right to revoke this permission at any time, effective upon written notice to you, in the event we conclude, in our reasonable judgment, that your use of the LPI is compromising our proprietary rights in the LPI.

Best wishes for every success with your research project.

Cordially, Mélanie Mortensen

Rights

Coordinator

[mmortensen@wiley](mailto:mmortensen@wiley)

[y.com](#)

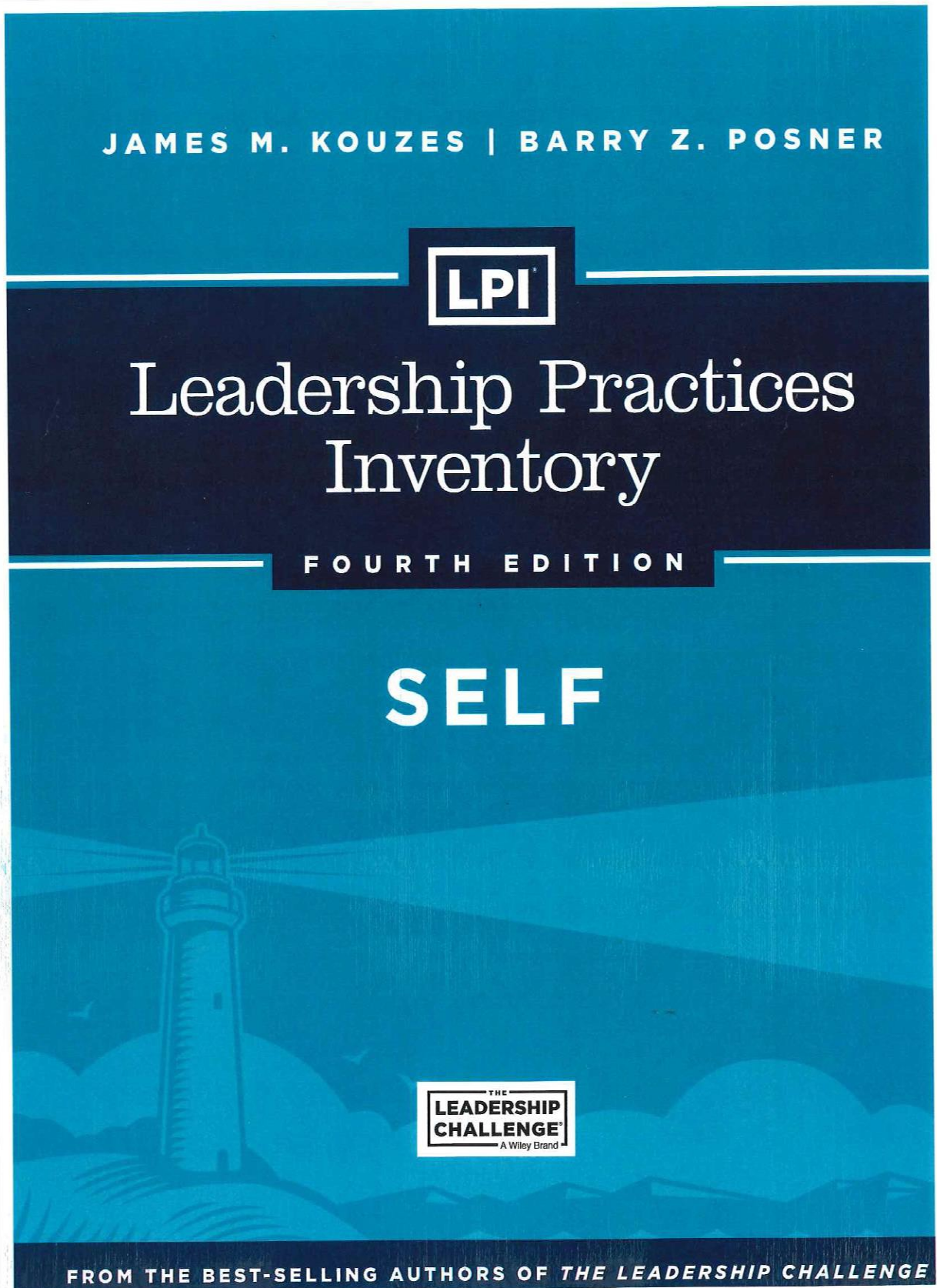


A handwritten signature in blue ink, appearing to be 'G' or similar, written over a horizontal line.



**WILEY**

10475 Crosspoint Blvd., Suite 100 • Indianapolis, IN 46256 • Main Office: (317) 572-3010



FROM THE BEST-SELLING AUTHORS OF THE LEADERSHIP CHALLENGE



BY JAMES M. KOUZES & BARRY Z. POSNER

**INSTRUCTIONS**

Write your name in the space provided at the top of the next page. Below your name, you will find thirty statements describing various leadership behaviors. Please read each statement carefully, and using the rating scale below, ask yourself:

## “How frequently do I engage in the behavior described?”

- Be realistic about the extent to which you actually engage in the behavior.
- Be as honest and accurate as you can be.
- DO NOT answer in terms of how you would like to behave or in terms of how you think you should behave.
- DO answer in terms of how you typically behave on most days, on most projects, and with most people.
- Be thoughtful about your responses. For example, giving yourself 10s on all items is most likely not an accurate description of your behavior. Similarly, giving yourself all 1s or all 5s is most likely not an accurate description either. Most people will do some things more or less often than they do other things.
- If you feel that a statement does not apply to you, it's probably because you don't frequently engage in the behavior. In that case, assign a rating of 3 or lower.

For each statement, decide on a response and then record the corresponding number in the box to the right of the statement. After you have responded to all thirty statements, go back through the LPI one more time to make sure you have responded to each statement. *Every* statement *must* have a rating.

The Rating Scale runs from 1 to 10. Choose the number that best applies to each statement.

<b>RATING SCALE</b>	1-Almost Never	3-Seldom	5-Occasionally	7-Fairly Often	9-Very Frequently
	2-Rarely	4-Once in a While	6-Sometimes	8-Usually	10-Almost Always

When you have completed the LPI-Self, please return it to:

---



---



---

Thank you.

Your name: \_\_\_\_\_

To what extent do you engage in the following behaviors? Choose the response number that best applies to each statement and record it in the box to the right of that statement.

1. I set a personal example of what I expect of others.	<input type="text"/>
2. I talk about future trends that will influence how our work gets done.	<input type="text"/>
3. I seek out challenging opportunities that test my own skills and abilities.	<input type="text"/>
4. I develop cooperative relationships among the people I work with.	<input type="text"/>
5. I praise people for a job well done.	<input type="text"/>
6. I spend time and energy making certain that the people I work with adhere to the principles and standards we have agreed on.	<input type="text"/>
7. I describe a compelling image of what our future could be like.	<input type="text"/>
8. I challenge people to try out new and innovative ways to do their work.	<input type="text"/>
9. I actively listen to diverse points of view.	<input type="text"/>
10. I make it a point to let people know about my confidence in their abilities.	<input type="text"/>
11. I follow through on the promises and commitments that I make.	<input type="text"/>
12. I appeal to others to share an exciting dream of the future.	<input type="text"/>
13. I search outside the formal boundaries of my organization for innovative ways to improve what we do.	<input type="text"/>
14. I treat others with dignity and respect.	<input type="text"/>
15. I make sure that people are creatively rewarded for their contributions to the success of our projects.	<input type="text"/>
16. I ask for feedback on how my actions affect other people's performance.	<input type="text"/>
17. I show others how their long-term interests can be realized by enlisting in a common vision.	<input type="text"/>
18. I ask "What can we learn?" when things don't go as expected.	<input type="text"/>
19. I support the decisions that people make on their own.	<input type="text"/>
20. I publicly recognize people who exemplify commitment to shared values.	<input type="text"/>
21. I build consensus around a common set of values for running our organization.	<input type="text"/>
22. I paint the "big picture" of what we aspire to accomplish.	<input type="text"/>
23. I make certain that we set achievable goals, make concrete plans, and establish measurable milestones for the projects and programs that we work on.	<input type="text"/>
24. I give people a great deal of freedom and choice in deciding how to do their work.	<input type="text"/>
25. I find ways to celebrate accomplishments.	<input type="text"/>
26. I am clear about my philosophy of leadership.	<input type="text"/>
27. I speak with genuine conviction about the higher meaning and purpose of our work.	<input type="text"/>
28. I experiment and take risks, even when there is a chance of failure.	<input type="text"/>
29. I ensure that people grow in their jobs by learning new skills and developing themselves.	<input type="text"/>
30. I give the members of the team lots of appreciation and support for their contributions.	<input type="text"/>

Copyright © 2013 James M. Kouzes and Barry Z. Posner. All rights reserved.

**LPI: LEADERSHIP PRACTICES INVENTORY SELF**

Copyright © 2013 by James M. Kouzes & Barry Z. Posner. All Rights Reserved.

Published by The Leadership Challenge®  
A Wiley Brand  
One Montgomery Street, Suite 1200, San Francisco, CA 94104-4594  
www.leadershipchallenge.com

No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, scanning, or otherwise, except as permitted under Section 107 or 108 of the 1976 United States Copyright Act, without either the prior written permission of the Publisher, or authorization through payment of the appropriate per-copy fee to the Copyright Clearance Center, Inc., 222 Rosewood Drive, Danvers, MA 01923, 978-750-8400, fax 978-646-8600, or on the web at www.copyright.com. Requests to the Publisher for permission should be addressed to the Permissions Department, John Wiley & Sons, Inc., 111 River Street, Hoboken, NJ 07030, 201-748-6011, fax 201-748-6008, or online at http://www.wiley.com/go/permissions.

Limit of Liability/Disclaimer of Warranty: While the publisher and author have used their best efforts in preparing this book, they make no representations or warranties with respect to the accuracy or completeness of the contents of this book and specifically disclaim any implied warranties of merchantability or fitness for a particular purpose. No warranty may be created or extended by sales representatives or written sales materials. The advice and strategies contained herein may not be suitable for your situation. You should consult with a professional where appropriate. Neither the publisher nor author shall be liable for any loss of profit or any other commercial damages, including but not limited to special, incidental, consequential, or other damages. Readers should be aware that Internet websites offered as citations and/or sources for further information may have changed or disappeared between the time this was written and when it is read.

For additional copies or bulk purchases of this book or to learn more about The Leadership Challenge®, please contact us toll free at 1-866-888-5159 or by email at leadership@wiley.com.

Wiley also publishes its books in a variety of electronic formats and by print-on-demand. Some material included with standard print versions of this book may not be included in e-books or in print-on-demand. If the version of this book that you purchased references media such as a CD or DVD that was not included in your purchase, you may download this material at http://booksupport.wiley.com. For more information about Wiley products, visit www.wiley.com.

ISBN: 978-1-118-18271-0

Printed in the United States of America

Printing 10 9 8 7 6 5 4 3 2 1



**Appendix C**  
**Project Site Approval Letter**



---

November 22, 2019

Tammy Schwing, RN, MSN, WHNP-BC  
Associate Professor, Nursing Program Co-Chair  
Ivy Tech Community College  
50 Walnut Street  
Lawrenceburg, IN 47025

Tammy:

I have approved your project, "Development of a Charge Nurse Leadership Program," that we discussed for your DNP program. I believe it will be a positive addition to Highpoint Health and a positive experience for you.

Sincerely,

A handwritten signature in black ink, appearing to read 'Angela K. Scudder'.

Angela K. Scudder, MSN, CENP  
Chief Nursing Officer



## Appendix D

### Demographic/Program questionnaire

1. What is your gender? Responses include male and female.
2. What is your age? Responses include 18-29, 30-44, 45-59, and 60+.
3. What is the highest level of school you have completed? Responses include diploma nurse, Associate degree, Bachelor degree, Master degree, Terminal degree:  
  
DNP, PhD, EdD.
4. How many years have you been practicing as a registered nurse? Responses include 0 – 5; 6 – 10; 11 – 15; 15 – 20; 20 – 29; more than 30 years.
5. Which of the following categories best describes your employment status?  
Responses include working full time; working part-time
6. How long have you been in a charge nurse position? Responses include I have not yet been in a charge nurse position; 0 – 2; 3-5; 6 – 10; 11 – 15; 15 – 20; 20 – 29; more than 30 years.
7. Was this program beneficial to you in learning the leadership roles of a charge nurse? Responses include yes or no

## Appendix E

### Schwing Code

Book ID – Give each participant a unique ID number, categorical Sex – 0 = male and 1 = female, categorical

Age – Enter the age IN YEARS, continuous

Education – 0 = Associates, 1 = Bachelors, 2 = Masters, and 3 = Doctorate, categorical YearNursing – Enter the number of years as a nurse IN YEARS, continuous

Employment – 0 = part-time and 1 = full-time, categorical

Charge – Enter the actual number of charges, continuous

Benefit – 0 = No and 1 = Yes, categorical

Pre1 – 1 = almost never, 2 = rarely, 3 = seldom, 4 = once in a while, 5 = occasionally, 6 = sometimes, 7 = fairly often, 8 = usually, 9 = very frequently, 10 = almost always, ordinal Pre2 – 1 = almost never, 2 = rarely, 3 = seldom, 4 = once in a while, 5 = occasionally, 6 = sometimes, 7 = fairly often, 8 = usually, 9 = very frequently, 10 = almost always, ordinal Pre3 – 1 = almost never, 2 = rarely, 3 = seldom, 4 = once in a while, 5 = occasionally, 6 = sometimes, 7 = fairly often, 8 = usually, 9 = very frequently, 10 = almost always, ordinal Pre4 – 1 = almost never, 2 = rarely, 3 = seldom, 4 = once in a while, 5 = occasionally, 6 = sometimes, 7 = fairly often, 8 = usually, 9 = very frequently, 10 = almost always, ordinal Pre5 – 1 = almost never, 2 = rarely, 3 = seldom, 4 = once in a while, 5 = occasionally, 6 = sometimes, 7 = fairly often, 8 = usually, 9 = very frequently, 10 = almost always, ordinal Pre6 – 1 = almost never, 2 = rarely, 3 = seldom, 4 = once in a while, 5 = occasionally, 6 = sometimes, 7 = fairly often, 8 = usually, 9 = very frequently, 10 = almost always, ordinal Pre7 – 1 = almost never, 2 = rarely, 3 = seldom, 4 = once in a while, 5 = occasionally, 6 = sometimes, 7 = fairly often, 8 = usually, 9 = very frequently, 10 = almost always, ordinal Pre8 – 1 = almost never, 2 = rarely, 3 = seldom, 4 = once in a while, 5 = occasionally, 6 = sometimes, 7 = fairly often, 8 = usually, 9 = very frequently, 10 = almost always, ordinal Pre9 – 1 = almost never, 2 = rarely, 3 = seldom, 4 = once in a while, 5 = occasionally, 6 = sometimes, 7 = fairly often, 8 = usually, 9 = very frequently, 10 = almost always, ordinal Pre10 – 1 = almost never, 2 = rarely, 3 = seldom, 4 = once in a while, 5 = occasionally, 6 = sometimes, 7 = fairly often, 8 = usually, 9 = very frequently, 10 = almost always, ordinal Pre11 – 1 = almost never, 2 = rarely, 3 = seldom, 4 = once in a while, 5 = occasionally, 6 = sometimes, 7 = fairly often, 8 = usually, 9 = very frequently, 10 = almost always, ordinal Pre12 – 1 = almost never, 2 = rarely, 3 = seldom, 4 = once in a while, 5 = occasionally, 6 = sometimes, 7 = fairly often, 8 = usually, 9 = very frequently, 10 = almost always, ordinal Pre13 – 1 = almost never, 2 = rarely, 3 = seldom, 4 = once in a while, 5 = occasionally, 6 = sometimes, 7 = fairly often, 8 = usually, 9 = very frequently, 10 = almost always, ordinal Pre14 – 1 = almost never, 2 = rarely, 3 = seldom, 4 = once in a while, 5 = occasionally, 6 = sometimes, 7 = fairly often, 8 = usually, 9 = very frequently, 10 = almost always, ordinal Pre15 – 1 = almost never, 2 = rarely, 3 = seldom, 4 = once in a while, 5 = occasionally, 6 = sometimes, 7 = fairly





almost never, 2 = rarely, 3 = seldom, 4 = once in a while, 5 = occasionally, 6 = sometimes, 7 = fairly often, 8 = usually, 9 = very frequently, 10 = almost always, ordinal Post28 – 1 = almost never, 2 = rarely, 3 = seldom, 4 = once in a while, 5 = occasionally, 6 = sometimes, 7 = fairly often, 8 = usually, 9 = very frequently, 10 = almost always, ordinal Post29 – 1 = almost never, 2 = rarely, 3 = seldom, 4 = once in a while, 5 = occasionally, 6 = sometimes, 7 = fairly often, 8 = usually, 9 = very frequently, 10 = almost always, ordinal Post30 – 1 = almost never, 2 = rarely, 3 = seldom, 4 = once in a while, 5 = occasionally, 6 = sometimes, 7 = fairly often, 8 = usually, 9 = very frequently, 10 = almost always, ordinal PostTotal – Statistician will calculate

## Appendix F CN Leadership Program Powerpoint

**LEARNING TO LEAD**  
Developing leadership skills as a Charge Nurse  
By: Tammy Schwing, MSN, RN, WHNP-BC

Objectives:

- Define Leadership and its importance to nursing
- Understand why charge nurses need to develop leadership skills
- Identify leadership skills that are important for charge nurses
- Begin your personal development of leadership as a charge nurse

What is a Leader?

[https://youtu.be/18UWjWx2\\_8](https://youtu.be/18UWjWx2_8)

SIGNIFICANCE OF LEADERSHIP IN NURSING

[https://youtu.be/K4i9\\_nfH4](https://youtu.be/K4i9_nfH4)

Why Charge Nurses?

The Photo by Unknown Author is licensed under CC BY-NC-SA

**Patient:**  
Improved safety and outcomes  
Improved quality of patient care  
Increased patient satisfaction

**Nursing Staff:**  
Improved staff competency  
Increased staff satisfaction  
Increased team model

**Organization:**  
Improved welfare  
Decrease in nurse turn-over

**ANA & AONE CHARGE NURSE LEADERSHIP COMPETENCIES**

- Professionalism (Model the Way)
- Knowledge of the Health care environment (Inspire a Shared Vision)
- Relationship Management (Enable Others to Act)
- Communication (Encourage the Heart)
- Business Skills and Principles (Challenge the Process)

The Photo by Unknown Author is licensed under CC BY-NC-SA

**PROFESSIONALISM (MODEL THE WAY)**

- ❖ I set a personal example of what I expect of others.
- ❖ I spend time and energy making certain that the people I work with adhere to the principles and standards we have agreed on.
- ❖ I follow through on the promises and commitments that I make.
- ❖ I ask for feedback on how my actions affect other people's performance.
- ❖ I build consensus around a common set of values for running our organization.
- ❖ I am clear about my philosophy of leadership.

**KNOWLEDGE OF THE HEALTHCARE ENVIRONMENT (INSPIRE A SHARED VISION)**

- ❖ I talk about future trends that will influence how our work gets done.
- ❖ I describe a compelling image of what our future could be like.
- ❖ I appeal to others to share an exciting dream of the future.
- ❖ I show others how their long-term interests can be realized by enlisting a common vision.
- ❖ I paint the "big picture" of what we aspire to accomplish.
- ❖ I speak with genuine conviction about the higher meaning and purpose of our work.

### RELATIONSHIP MANAGEMENT (ENABLE OTHERS TO ACT)

- ❖ I develop cooperative relationships among the people I work with.
- ❖ I actively listen to diverse points of view.
- ❖ I treat others with dignity and respect.
- ❖ I support the decisions that people make on their own.
- ❖ I give people a great deal of freedom and choice in deciding how to do their work.
- ❖ I ensure that people grow in their jobs by learning new skills and developing themselves.

### COMMUNICATION (ENCOURAGE THE HEART)

- ❖ I praise people for a job well done.
- ❖ I make it a point to let people know about my confidence in their abilities.
- ❖ I make sure that people are creatively rewarded for their contributions to the success of our projects.
- ❖ I publicly recognize people who exemplify commitment to shared values.
- ❖ I find ways to celebrate accomplishments.
- ❖ I give the members of the team lots of appreciation and support for their contributions.

### BUSINESS SKILLS AND PRINCIPLES (CHALLENGE THE PROCESS)

- ❖ I seek out challenging opportunities that test my own skills and abilities.
- ❖ I challenge people to try out new and innovative ways to do their work.
- ❖ I search outside the formal boundaries of my organization for innovative ways to improve what we do.
- ❖ I ask, "what can we learn?" when things don't go as expected.
- ❖ I make certain that we set achievable goals, make concrete plans, and establish measurable milestones for the projects and programs that we work on.
- ❖ I experiment and take risks, even when there is a chance of failure.

What Challenges do you face as a Charge Nurse

Charge Nurse Leader Competencies	HPH Charge Nurse Responses=33
Professionalism	2
Knowledge of the Health care Environment	4
Relationship Management	4
Communication	16
Business Skills and Principles	7

Communication Skills

Finished files are the result of years of scientific study combined with the experience of many years.

[https://youtu.be/A4aV\\_NKUnRU](https://youtu.be/A4aV_NKUnRU)

T= transparent; talk to your team  
 R= relay what is necessary  
 I= include everyone  
 A= ask for feedback  
 G= give the 'why'  
 E= engage, expectation, excite

C= connect  
 A=apologize  
 R=repair  
 E=exceed

The Studer Group (2010). The nurse leader's handbook. Fire Starter Publishing, Gulf Breeze, FL.

A thought to ponder:

When I talk to Managers I get the feeling that they are important.  
 When I talk to Leaders I get the feeling that I am important.

References

American Nurses Association (ANA). (2018). ANA leadership competency model. Retrieved from <https://www.nursingworld.org/~4a0a2e/globalassets/docs/ce/177626-ana-leadership-booklet-new-final.pdf>

Chard, R. (2014). *Communication and Relationship Management* (3<sup>rd</sup> ed.). Competency & Credentialing Institute; United States.

Dubree, M., Kapu, A., Terrell, M., Pichert, J., Cooper, W., & Hickson, G. (2017). Nurses' essential role in supporting professionalism. *American Nurse Today*, 12(4). Retrieved from: <https://www.americannursestoday.com/nurses-essentialrole-supporting-professionalism/>

Garmin, A., & Tran, L. (n.d.). Knowledge of the healthcare environment. Retrieved from: <http://www.healthcareleadershipalliance.org/Knowledge%20of%20the%20HC%20Environment.pdf>

References cont'd

Garmin, A., Burkhart, T., & Strong, J. (n.d.). Business knowledge and skills. Retrieved from: <http://www.healthcareleadershipalliance.org/Business%20Knowledge%20and%20Skills.pdf>

Hallock, A. (2019). A case for leadership development in nursing practice. *Nephrology Nursing Journal*, 46(3).

Health Leaders Media Staff. (2019). Charge nurses: developing frontline leaders. Retrieved from: <https://www.healthleadersmedia.com/nursing/charge-nurses-developing-frontline-leaders>

Institute of Medicine (IOM). (2015). Assessing Progress on the Institute of Medicine Report *The Future of Nursing*. Retrieved from: [http://www.nationalacademies.org/hmd/~media/Files/Report%20Files/2015/Assessing\\_FOIR\\_release\\_slides/Nursing-Report-in-brief.pdf](http://www.nationalacademies.org/hmd/~media/Files/Report%20Files/2015/Assessing_FOIR_release_slides/Nursing-Report-in-brief.pdf)

References cont'd

Nightingale, Florence. (1912). *Notes on Nursing*. New York: D. Appleton and Company.

Studer Group. (2010). *The Nurse Leader Handbook*. Gulf Breeze, FL: Fire Starter Publishing.

The Leadership Challenge. (2014). Leadership practices inventory (LPI) assessments. Retrieved from: <http://www.leadershipchallenge.com/leaders-section-assessments.aspx>

Wiley & Sons, J. (2019). *The Leadership Challenge: Achieve the extraordinary*. Retrieved from: <http://www.leadershipchallenge.com/professionals-section-lpi-about.aspx>





### Appendix G

#### Pre-intervention LPI questionnaire data

Participant ID	pre1	pre2	pre3	pre4	pre5	pre6	pre7	pre8	pre9	pre10	pre11	pre12	pre13	pre14	pre15	pre16	pre17	pre18	pre19	pre20	pre21	pre22	pre23	pre24	pre25	pre26	pre27	pre28	pre29	pre30	PreTotal	
1	9	9	10	9	9	8	9	8	9	9	9	8	8	10	9	8	9	8	10	9	9	8	9	7	10	8	8	8	9	9	262	
2	8	3	5	5	9	5	4	2	5	3	6	2	8	7	3	2	2	2	5	5	5	4	4	8	4	1	1	5	4	3	130	
3	10	9	10	10	9	8	8	10	10	8	9	8	10	10	8	8	7	8	8	8	8	9	9	8	8	10	8	9	9	9	263	
4	9	6	4	9	8	9	4	8	7	8	9	1	1	9	4	7	4	6	10	9	9	8	9	9	4	7	8	6	9	8	209	
5	9	6	6	10	9	5	4	7	10	10	10	7	6	10	3	5	5	9	10	6	5	5	8	9	7	5	8	8	9	9	200	
6	8	8	7	8	8	8	7	7	7	8	8	7	7	8	8	7	6	8	7	8	6	7	7	6	8	6	7	6	7	8	218	
7	10	9	10	9	8	9	10	10	9	9	9	10	10	9	7	8	9	10	9	7	9	10	10	10	7	10	10	10	10	7	274	
8	10	5	5	10	8	5	2	4	8	8	10	2	2	10	8	8	4	4	6	4	6	5	5	9	8	5	5	5	5	8	194	
9	9	6	10	10	9	9	6	6	8	5	10	6	9	10	7	5	5	7	6	9	8	8	6	7	10	8	9	8	8	10	234	
10	8	8	9	8	10	8	5	7	9	10	9	6	7	10	5	6	7	9	9	9	9	9	7	7	7	7	7	7	8	10	237	
11	8	6	9	8	10	9	3	7	8	7	10	2	6	8	9	6	7	8	6	6	9	7	5	7	8	3	8	7	8	8	212	
12	9	8	7	7	10	10	6	7	9	8	8	6	8	10	7	6	6	9	9	8	8	9	10	9	10	6	9	10	10	9	240	
13	10	9	9	10	10	9	9	9	9	10	6	8	8	10	9	10	8	9	9	9	9	9	9	6	8	9	9	9	3	8	9	259

#### Post-intervention LPI questionnaire data

Participant ID	post1	post2	post3	post4	post5	post6	post7	post8	post9	post10	post11	post12	post13	post14	post15	post16	post17	post18	post19	post20	post21	post22	post23	post24	post25	post26	post27	post28	post29	post30	PostTotal		
1	9	9	10	9	9	8	9	8	9	9	9	8	8	10	9	8	9	9	9	10	9	9	9	9	9	9	10	9	9	9	10	10	271
2	8	6	9	9	9	8	8	8	9	8	9	8	9	9	8	8	8	7	9	9	8	9	9	9	9	9	8	8	7	8	8	249	
3	10	9	10	10	9	8	8	10	10	8	9	8	8	10	10	7	8	7	9	8	8	9	8	8	10	8	9	9	9	9	9	263	
4	9	7	6	6	9	9	9	6	9	9	9	4	4	9	6	9	6	8	10	9	9	8	9	9	6	8	9	7	9	8	235		
5	10	8	8	10	10	9	8	9	10	10	10	9	9	10	10	9	8	10	9	10	9	9	10	9	10	9	9	8	9	10	10	278	
6	8	8	7	8	8	8	7	7	7	8	8	7	7	8	8	7	6	8	7	8	6	7	7	6	8	6	7	6	7	8	218		
7	10	9	10	9	8	9	10	10	10	10	10	10	10	10	8	9	10	10	10	10	9	8	10	10	10	9	10	10	10	10	9	287	
8	10	6	6	10	10	6	5	8	9	10	10	8	8	10	8	8	8	8	8	8	8	8	8	8	8	9	9	8	8	7	8	245	
9	9	7	9	10	10	9	6	8	8	7	10	9	10	10	10	8	8	8	8	8	7	7	9	9	9	8	8	8	8	9	10	256	
10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	300	
11	9	7	8	8	9	7	7	8	9	9	10	7	7	10	10	9	7	7	8	8	7	7	8	9	6	7	10	9	10	9	10	246	
12	10	9	9	9	8	8	9	9	10	9	8	10	8	10	8	7	6	7	9	8	9	9	10	8	9	7	8	9	9	9	9	258	
13	10	10	10	10	10	9	9	9	10	10	10	10	10	10	9	10	9	10	10	10	10	10	10	10	9	10	10	10	10	10	10	10	294

#### Demographic data

Participant ID	Sex	age	Educ	yearnurs	employ	charge	benefit
1		1	56	1	25	1	5
2		1	61	2	30	1	20
3		1	52	1	29	1	20
4		1	26	0	4	1	2
5		0	33	0	11	1	4
6		1	51	0	25	1	6
7		0	41	1	18	1	17
8		1	31	0	10	1	9
9		1	35	2	7	0	2
10		1	39	1	7	1	6
11		1	50	1	28	1	24
12		1	37	1	13	1	12
13		1	58	4	37	1	37