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Daily Nurse-Instituted-Care-Interventions (NICI) Impact on Care Transitions Scores

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Executive Summary

Daily Nurse-Instituted-Care-Interventions (NICI) Impact on Care Transitions Scores **Problem:** The principal investigator's organization consistently worked to improve multiple

Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) scores without success. The question for the project was, "Will adult patients receiving Nurse-Instituted-Care-Interventions (NICI) for transition to discharge needs, when compared to the previous three-month baseline, lead to increased HCAHPS Care Transition scores in the Telemetry Unit.?" **Purpose:** Improve HCAHPS Care Transition scores on the adult telemetry unit.

Goal (s): Increase in the (HCAHPS) Care Transition's scores from below the 15th percentile, to the 50th percentile, increase quality and safety of patient care, and improve the patients' perception of their care from suboptimal to that of quality.

Objectives: To communicate the project's mission and vision to nursing staff and provide an understanding of expectations and proposed outcomes. Define program expectations for staff to validate that adult patients receiving (NICI) for transition to discharge needs are prepared to leave the hospital and manage their self-care needs in their previous environment.

Plan: To validate the organizational need for the Nurse-Instituted-Care-Intervention (NICI), developed program interventions, educated telemetry staff on research-based processes, moved evidence-based practice to the bedside, collected data, and completed process evaluation.

Outcomes and Results: Statistical analysis supported that the project intervention aimed at improvement of Care Transition scores was successful. The Paired Samples Statistics pre mean of 2.21 compared to post intervention mean of 3.47 supports a positive change in the mean score of 57%. The Paired Samples Test Sig. (2-tailed) or p=.000 validated that the change in mean was not due to random errors and that it is statistically significant.

Daily Nurse-Instituted-Care-Interventions Impact on Care Transitions Scores

The Centers for Medicare and Medicaid Services (CMS) placed into action a national patient survey of patient perceptions of their care in 2008 (Elliott et al., 2015). The 32-question instrument surveys patients on their discharge from the acute care hospital and was placed into action to determine discharged patients' ratings that measure their perception of their experience with a series of standardized questions. In 2012 the survey became mandatory for hospitals seeking CMS reimbursement. These scores from an organizational leaders' perspective can lead to significant loss of revenue that will incrementally increase annually if not mitigated. For the investigator's organization, this was due in part to a payer mix which is 72% Centers for Medicare and Medicaid Services reimbursement, and a long-term impact on sustainability (Centers for Medicare and Medicaid Services, 2019). These same scores are tied to the Value Based Purchasing (VBP) program and can drive large penalties for healthcare organizations. The purpose of this project was to further define the problem, provide an applicable change model, evaluate literature themes, discuss market and risk analysis, identify project objectives, methodology, and evaluation plan, and discuss project findings discussed.

Problem Recognition and Definition

The principal investigator's organization consistently worked to improve the multiple Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) scores without success. The primary focus for this project was the adult telemetry unit, with the aim to improve the HCAHPS Care Transition scores. Through research, combined with a completed needs assessment conducted with multiple stakeholders, it was concluded that work was needed to mitigate this problem. Through extensive research that will be discussed later in detail, the project statement to guide the process was: "Will adult patients receiving Nurse-Instituted-Care-

Interventions (NICI) for transition to discharge needs, when compared to the previous threemonth baseline, lead to increased HCAHPS Care Transition scores in the Telemetry Unit.?"

The purpose of this project was the outcome of improved Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) scores, with a focus on improvement of the (HCAHPS) Care Transition scores. This is both a patient sensitive and organizational sensitive outcome. The investigator viewed the Care Transitions improvement process as a patient sensitive outcome. This relates to low scores directly correlating to the patient's perception of suboptimal transition from the hospital to home (Sheikh et al., 2018). Transitional care is a reference to the comprehensive plan of care during the patient's transition from hospital to their previous living environment. Patients frequently did not feel protected when leaving the hospital setting because they were unclear of what was expected after discharge and how to navigate their next steps. This aging population was, as a result, suffering from medication errors, poor communication, and an increase in preventable adverse events upon leaving the hospital according to organizational data. As an organizational sensitive outcome, was important to increase the percentage of adult discharged patients from the telemetry units' responses to HCAHPS Care Transition questions to the "Strongly Agree" response for each of the three questions for all eligible sampled patients. This is because only Top Box scores are reported and compared to other hospitals. Top Box scores represent the percentage of patients that responded "Strongly Agree" to each of the three Care Transition questions during their survey (Pottenger et al., 2016). Carefully following improved patient care processes are associated with substantial increases in scores. These improvements support significant reduction in lost revenues from the Centers for Medicare and Medicaid Services (CMS). Addressing current limitations will work to ensure patients are kept safe once they leave the hospital and have the downstream effect of

decreased readmissions as a result (Sheikh et al., 2018). The quality of actual care provided to patients was not projected change through this program. What was projected to change was the level of the patients understanding of their care and next steps upon leaving the hospital. This in turn would improve their perception of their care and result in an increase in patient safety and satisfaction.

The following Population, Intervention, Compare, Outcome (PICO) was used to generate terms used to complete a systematic literature search aimed at best practice. The completion of this process resulted in the PICO that drove the project statement.

P = Population: Adults 18 and older discharged from the Telemetry Unit.

I = Intervention: Nurse-Instituted-Care-Interventions (NICI) processes will be taught to nurses and applied to patients on the telemetry unit from admission through discharge.

C= Comparison: Press Ganey Care Transition and Discharge HCAHPS scores and results from the "My Rounding" tool questions used with patients prior to discharge, will be compared for three months post implementation of interventions, and compared to the three months prior to interventions.

O: Outcome: Care Transition HCAHPS scores will be improved after implementation of the Nurse-Instituted-Care-Interventions (NICI) processes. It is expected that "Discharge Communication, Nurse Communication, and Would Recommend," scores will improve as a downstream result of the (NICI) interventions.

The developed PICO resulted in the following project question: Will adult patients receiving Nurse-Instituted-Care-Interventions (NICI) for transition to discharge needs, when compared to the previous three-month baseline, lead to increased HCAHPS Care Transition

scores on the Telemetry Unit.?" Selection of the right foundational theory to support this program was an important next step.

Foundational Theories

Kristen Swanson's Theory of Caring was explored and selected to help develop and support a theoretical framework to guide nurses both through the Nurse-Instituted-Care-Intervention (NICI) educational and application to the bedside process (Lillykutty & Samson, 2018). Swanson's Theory of Caring is structured around five caring principles that embody the overall definition of caring in nursing practice critical for this proposed project's success. The theory states caring proceeds in a sequence of five categories being; knowing, being with, doing for, enabling, and maintaining belief (Lillykutty & Samson, 2018). These are applicable to nursing practice and supports the caregiver's attitude, while improving overall patient wellbeing. Swanson's theory guided nursing personnel through the delivery of care that promotes dignity, respect, and empowerment to those served. The model provides a conceptual framework built on empirical support applicable to the bedside nurse and works to support the caring behaviors which in turn improved patient satisfaction driven by the perceived change in quality of their care. For this reason, the patient and their family inherently feel safe back in their previous environment. For these reasons Swanson's Theory of Caring middle range theory was the perfect fit. The theory helped nurses impart to the patient a sense of commitment and ownership with their own care. It further accentuated the nurse-client relationship that supports the caring process. The endpoint was a more meaningful avenue to bring nurses back to the bedside and ensure the patient felt supported, while redefining the trusting relationship.

Introduction of a significant process improvement program had to also be supported by an influential framework to guide process. This project required both a framework to support

and drive change and the discussed nursing theory to link the nurse, patient, and caring to the bedside. To drive change, Kotter's Eight-Stage change model process was chosen because of its inherent ability to translate the Nurse-Instituted-Care-Interventions (NICI) program to the practice setting. The model is highly adaptive and successfully used in multiple venues, both in and out of the healthcare setting (Small et al., 2016). The model effectively assists leaders today to create lasting change despite that 70% of change efforts fail. Success surrounded the degree of acceptance and preparedness within the principal investigator's organizational culture.

Influencing nurses to understand patient satisfaction is different than quality and safe patient care, becomes the substantive value associated with the need to improve care transition scores. This same consideration created a sense of urgency toward a program to drive change. To operationalize the Nurse-Instituted-Care-Intervention (NICI) program there had to be a strong framework in place to build upon and ensure consistency of the program and sustainability. To do this required strengthening the existing "1st 45" program that supports all current telemetry department programs. The principal investigator brought the clinical manager and charge nurse team together using the Kotter's 8 Stage change model in the same manner it was used to support the NICI program roll-out, and worked with this team to strengthen the "1st 45 Program". As projected, that action supported the NICI program and all other existing programs for the longterm success. At a high level, the charge nurses' standard operating procedure (SOP) was modified to better define their role with the 1st 45 program. This included the clear purpose of 1st 45 Program and how it would support the clinical manager and charge nurses to support all front-line staff. It provided the foundation that is now used daily at each 12-hour shift huddle by giving the charge nurses carefully defined written expectations of their workload for the first forty-five minutes of their shifts. As example, they would begin the shift, start huddle at exactly

0645 with the expectation that all staff were ready and at the nurse's station to listen to the huddle. Next, the charge nurse attended the pre-determined nurse's bedside shift report to ensure those processes were being completed per a provided protocol. Consistency was ensured with a check-off worksheet that was completed by the charge nurse or department leadership. Coaching in the moment was provided to both support and hold nurses accountable. The initial portion of the NICI program that will be carefully defined later under the project significance, scope, and rationale section, is now embedded in this same shift report, which drives the start of the NICI program. Next steps with the 1st 45 program included the clinical manager following the charge nurses twice per week to ensure they were carefully following protocol and processes did not deviate. The Director of the unit followed the clinical manager and balance of the team twice per month to ensure all were following these carefully defined expectations. This same process was duplicated during evaluation the NICI program for consistency.

With the 1st 45 program in place, the departments charge nurses were able to come together and assist with bringing four volunteer frontline nurses on the telemetry unit on board to help create and support the program vision. They became the champions who supported and assisted to educate, implement, and evaluate the Nurse-Instituted-Care-Intervention (NICI) program. This team continuously supported and promoted the program during huddles and other venues as time allowed. Once program approval was received and program interventions were in place, this team combined with department leaders, assisted the principal investigator with establishing quick wins to maintain momentum while validating the process.

Literature Review

A systematic review of literature was completed to explore this complex problem associated with Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS)

Care Transitions scores. A search strategy was built based on the suggested Regis program literature. The strategy was initiated with multiple phrases and words surrounding the principal investigator's project intent. Identified research needs aimed at multiple aspects of the project were included and explored through search engines. Primary search engines utilized included, CINAHL, Google Scholar and MEDLINE (Houser & Oman, 2011). There were 16 terms or phrases used in the research. The following key words were utilized: patient experience, improve care transitions, avoidable readmissions, transition of care, nurse led interventions, care transitions, HCAHPS patient satisfaction, quality of care, nursing, commit to sit, Studer Group, interventions, complex older people, patient safety, and patient perception. The literature search initially yielded more than 600,000 articles from the 15 terms and phrases. This was narrowed down with a focus to 2014 literature and later, combined with multiple searches integrating Boolean operators like AND, OR, and NOT. This brought the number down to a manageable number of 12,432 in the three primary data bases. Adding AND aging adults as further narrowed the search to less than 100 articles. The resulting articles all provided pertinent information in terms of the relationship to the project. Further analysis of resulting articles provided for the final selection of 25 articles necessary to build the Nurse-Initiated-Care-Interventions (NICI) program. CINAHL yielded 13 articles, Google Scholar seven, and MEDLINE a total of five articles.

Due to the complexity of this project, it was necessary to ensure an evidence-based approach to this project was followed. This was accomplished by following a systematic approach to critically grade the level of evidence and strength, that resulted in key practice recommendations (Houser & Oman, 2011). The medical model is a commonly used hierarchical system of classifying evidence to ensure an evidenced based approach to decision making is in

place that was critical to this project. There are numerous medical models available. For this project the seven-tiered level of evidence model was used and is depicted in table 1.1. A brief description of each level of evidence in included in the table. This model was chosen because it was in place in the principal investigator's organization and is considered a strong hierarchical model that identified the proper levels of evidence necessary for this project. For the final selected 25 articles there were four level one articles providing the greatest strength and support for the project. Appendix A provides a sampling of the level of evidence table.

Table 1.1 Levels of Evidence (Houser and Oman, 2011)

Level of Evidence	Number of articles	Melnyk Levels of Evidence
I	4	Systematic review & meta-analysis of randomized controlled trials; clinical guidelines based on systematic reviews or meta-analyses
II	3	One or more randomized controlled trials
III	3	Controlled trial (no randomization)
IV	7	Case-control or cohort study
V	1	Systematic review of descriptive & qualitative studies
VI	2	Single descriptive or qualitative study
VI	2	Expert opinion

The identified void in the literature supported a wide body of research that included organization-wide programs with a result of specifically impacting improved Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) Care Transitions scores. There was a body of literature available that resulted in a positive impact to Care Transition scores through various practices earlier discussed. Thus, there was a gap in the literature suggesting this research could help further illuminate new knowledge. There were many common themes

that emerged from the literature that supported the background of the discussed problem. Before discussion of literature that positively impacted Care Transition scores, it is important to understand key factors associated with suboptimal transition of care that earlier discussed Nurses-Instituted-Care-Interventions (NICI) mitigated. This surrounded communication breakdown and lack of interdisciplinary collaboration (Sheikh et al., 2018). Significant missing elements included the lack of knowledge of patient wishes, their abilities, lack of knowledge of medication related expectations, goals of care post hospitalization, and lack of follow-up physician appointments. Such problems lead to the need for repetitive interventions in the hospital setting, additional unnecessary expenses, and care not concordant with patient's perception of needs. Another significant issue mitigated surrounded nurses' lack of assessment skills to identify the functional status of patients and their ability to follow through with their suggested post hospital care regimen. Potentiating this problem was the nurses' lack of comfort in some situations such as how to communicate properly and how to accurately assess patient needs (Jeffs et al., 2017). There was often a great deal of information discussed and taught to the patient and caregiver. Frequently there was a lack of documentation whether the education occurred and whether next steps for the patient were identified. A summary of events combined with next steps that included a checklist appeared to be missing. For some organizations with such documentation, there was a lack of defined expectations regarding how to transfer the information to the patient and caregiver prior to leaving the hospital (Jeffs et al., 2017).

Project Significance, Scope, and Rationale

Multiple article reviews identified the importance of the nurse's role in leading, and functioning in an integral role in care transition interventions (Dusek, Pearce, Harripaul, & Lloyd, 2015), (Jeffs et al., 2017), (Lidgett, 2016). Methodology of research will be discussed

later in detail. Nurses played a key role in assisting both patients and caregivers to navigate through their hospital journey that included careful coordination of care, enhancement of continuity of care, coaching, and education toward self-care, as they assisted the patient to transition away from the hospital and return to their previous environment. Care transition interventions often include only a single intervention. Evidence validated the need for multifactorial interventions to support the patient (Chan et al., 2015). These factors, when embedded in daily processes, support improved patient satisfaction. Successful application with the right interventions empowers patients to self-manage their complex health conditions and enable improved quality of self-care for the patient outside of the hospital setting. Research led the investigator to apply three focused interventions that are referred to as Nurse-Instituted-Care-Interventions (NICI). Because these interventions represent the independent variable for this project, they are discussed further both in this section and under the Logic Model section.

Evidence concludes that any intervention that encourages positive self-care behavior and is reinforced through clear communication techniques should include the "teach-back" method that supports improved patient comprehension. This improves the ability of the patient and care giver to receive and later utilize information (Chan et al., 2015). The educational materials provided to the patient were in the format of a short booklet that minimally summarizes important patient information to be discussed during their hospitalization. It was important that highlights of referenced information be discussed at least daily. Provided information was in the patient's native language and at an understandable reading level. Findings from multiple studies suggest Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) scores in areas such as Nurse Communication did not improve as projected with this intervention. However, HCAHPS scores surrounding care transitions did demonstrate improvement (HCAHPS)

best practices, 2017). This was further validation of the importance that more than one intervention be utilized to improve practice and supports the overall intent of the project.

Research supports that in order for nurses to manage complex care needs of older adults, they must have adequate quality time to effectively communicate with both the patient and care giver in a consistent manner (Jeffs et al., 2017). This is critical to the success of care transitions but is the most difficult process to manage in day to day patient care. Research also supports the importance of maintaining clear communication is critical to the success of the transition process. There are multiple obstacles that impeded clear communication. As an example, the patient throughput process that aimed to quickly move the patient from the emergency room, had the downstream impact of an expedited patient discharge that resulted in poor communication between the nurse and patient.

An intervention impacting the nurse to patient relationship that results in trust can lead to active listening for both the nurse and patient. Evidence based programs such as the, "Commit to Sit" intervention can support this process (Lidgett, 2016). To ensure success of this type of program, there must be strong leadership support to impact program accountability. Generation of policy and procedures that delineate expectations and roles surrounding Nurse-Instituted-Care-Interventions (NICI) for care transitions will also play a significant role in their success. Multiple research articles explain at a high level this importance. Older adults with complex medical conditions are most vulnerable during their transition from hospital to their previous environment and require a coordinated plan of what is next and how to manage next steps (Sheikh et al., 2018).

Communication regarding transitions of care is a complex and challenging process for clinicians more than ever today (Bucknall et al., 2016). Evidence validates the importance of

involving patients and caregivers in communication during their transition from the hospital to their previous environment. This was intended to prevent communication breakdown that could lead to patient safety and reduced quality of care situations. Active engagement and clear communication from nurses and other care providers prior to discharge is purported to mitigate these concerns by being responsive to patient preferences, needs, and brings value to care (Chan et al., 2015). A significant problem can occur with care providers during patient care transition that can inadvertently deliver what becomes a fragmented message. This occurs when different care providers deliver the same information with a different message. These fragmentations can have devastating patient safety results. They were avoided by bringing care providers together to have the final discussion prior to discharge from the hospital. At this critical point it was important for the nurse and care management team to come together prior to patient discharge and review the patient's care transition book with both the patient and intended primary care giver. This provided an opportunity to answer final questions and prevent communication fragmentation aimed at ensuring the patient understood next steps in self-care.

The primary intent of the investigator's project was to learn what impact the independent variable, "Nurse-Instituted-Care-Interventions (NICI)," in an acute care inpatient hospital setting has on the dependent variable, "Hospital Consumer Assessment of Healthcare Provides and Systems (HCAHPS)," Care Transitions patient survey score. Successful implementation of this model drove the intended primary outcome of improving the telemetry unit's HCAHPS Care Transitions patient survey scores. The interventions were intended to assist nurses to better support not only the patient transition from the adult telemetry unit, to their previous environment, but any other process where communication was key, and concise information was important. The NICI to improve Care Transitions consists of three equally important and linked

interventions. Research supports that a combination of the three interventions, as opposed to a single intervention, would significantly improve the success of the program (Chan et al., 2015). The Care Transition's Booklet, "Commit to Sit Program", and the Multidisciplinary Care Team approach to discharge are the necessary components to manage this intervention.

There was a large body of work necessary initially that went well beyond the design and implementation of the Nurse-Instituted-Care-Interventions (NICI) program. First the care transitions booklet that will later be described in detail had to be designed and created. This completed care transitions booklet required 11 renditions to accomplish the finished product. The principal investigator attended monthly meetings with the newly implemented Patient and Family Advisory Council (PFAC). This committee assisted in recognition and mitigation of identified obstacles the community faced after discharge from the hospital. The completed booklet received input from more than 100 combined employees and community members. It was sent to print and 2,000 copies initially were created. This booklet had a significant impact on how patients perceived their care while in the hospital, and were discharged back to their previous environment. Leader rounding validated the success of the booklets and shift huddles conveyed success stories to the staff who were responsible for making this happen. The "Commit to Sit Program", resulted from multiple bodies of research and has been integrated into multiple patient care programs (Lidgett, 2016). Like other organizations this program had to be modified to fit the organizational culture. Significant staff input ensured this process was brought properly to the patient. In order for this program to be successful it was recognized that an enhanced form of patient education would need to be instilled in nursing staff. This came in the form of the "Teach Back" program and would also need to be taught to the staff (Teach-Back: Intervention 2017). As a result of its subsequent success, this process was disseminated

throughout the facility and was accomplished through the annual orientation process with all current employees and on initial hire. The last aspect of the program, the Multidisciplinary team approach, was the last opportunity to assess discharge readiness by ensuring the patient and their family fully understood what they had learned during their hospital stay.

To bring this significant body of education to all pertinent staff, it was necessary for the principal investigator to create and provide education on the application of the Nurse-Instituted-Care-Interventions (NICI) program for all telemetry unit nurses, certified nurse assistants, monitor technicians, and care management staff. The principal investigator created a 57 slide presentation and all necessary hand-outs to support the program. This program was then delivered to 122 front-line staff. There were three classes held two weeks prior to the program launch date of July 1, 2019, and each class was three hours in length. It should be noted that during the education process, nurses questioned if there were a process that could be placed in to action that would provide them with an increase in available time at the bedside with their patients. A nurse in the audience suggested that decreasing the multiple calls from patient family and friends would provide an increase in available time for nurses to spend with their patients. The principal investigator, with insights from nurses, was able to design a program that is now referred to as "The Point of Contact Program, (POC)". The POC program was quickly developed independently of the NICI program to contribute to the program's success. This has been met with significant success and is now in the process of being moved to most nursing units. When a patient is admitted to the nursing unit, and during the initial assessment, they are provided the option of accepting all personal inquiries surrounding their visit, and answering questions, or provide requested updates. Alternatively, and preferably, they can provide one point of contact person who will manage all inquiries for the patient. This reduced calls to the

nurse by an estimated 40 minutes per 12 hours shift and helped ensure improved patient safety by not allowing the nurse to be constantly interrupted and it decreased the number of angry callers who were in the past told that information they were requesting was a violation of HIPPA laws. Through this program they now had a place to receive appropriate information. A copy of this program is visible in Appendix J.

The Care Transition Booklet

The Care Transition Booklet, titled "Patient Discharge", was provided to the patient upon arrival to the unit and after the initial patient assessment by the nurse. This booklet was collaboratively designed by discharged patients from the community with best practice research, to assist the patient through their journey back to their previous environment (*HCAHPS best practices*, 2017). Pertinent information is embedded in the booklet to support the patient and care giver once they leave the hospital and helps to maintain not only their safety, but their perception of their safety. The nurses review the booklet with patients on admission and throughout their stay. The booklet highlights other materials provided to the patient prior to discharge. It encourages questions prior to leaving the hospital that might otherwise be either forgotten or not considered until after they return home (Chan et al., 2015).

"Commit to Sit" Program

The "Commit to Sit" Program provides an avenue for the nurse to spend more time with their patient at the bedside while seated with patient (Lidgett, 2016). This promotes improved engagement with the patient and family and increases their trust with the nurse providing care. This initiative further promotes patients becoming more engaged in their own care. The process supports improved nurse communication scores, with a downstream effect of improved care transition scores. Evidence confirms the importance of nurses finding time to sit with their

patients, at least daily, to provide uninterrupted attention. It is important that the nurse ask permission prior to sitting and communicating with the patient (Lidgett, 2016). Evidence further corroborates that when a nurse stands beside their patient to deliver the same message as when sitting, the patient perceives they spent less time with them, and they are too busy.

The Multidisciplinary Care Team

The Multidisciplinary Care Team intervention includes an approach to transition to discharge that is minimally comprised of the Registered Nurse & Care Management Team (Jeffs et al., 2017). The process supports high quality care for older adults, ensures the adult discharged patient is safely transitioned back to their previous environment, and that they are prepared to manage their care as intended. This was accomplished by the both the Registered Nurse and Multidisciplinary Care Team meeting with the patient and caregiver just prior to discharge from the hospital and working going over the checklist a final time in the Care Transitions Booklet.

Market and Risk Analysis

Inquiry prior to moving forward with the Nurse-Instituted-Care-Intervention (NICI) program was crucial. Did this program fit into the organizations strategic plan and is there risk associated with the plan? Was this program feasible and practical for this organization? To ensure feasibility of this program the principal investigator objectively and rationally looked at both strengths and weaknesses through the lens of existing literature and resulting healthcare successes, and how they compared to the proposed project. Additionally considered were opportunities and threats that might be present in the natural environment, combined with ensuring there were resources required to carry the project through fruition and ultimately the prospects for success.

Because this is a quality improvement project with a small initial startup cost, the Senior Team of the organization did not see any form of fiscal risk associated with the project.

Conversely, the Senior Team believed that the program would have significant return on investment. They saw the project's importance and how it correlated with improved Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) Care Transitions scores on the adult telemetry unit. It worked to mitigate the identified issues surrounding the current care transitions process, while decreasing organizational fiscal vulnerability. It further worked to ensure patients transitioned safely to their previous environment. The downstream effect was providing nurses with the necessary skillsets to communicate more effectively with their patients, while improving patient safety and quality of provided care they receive (Dusek, Pearce, Harripaul, & Lloyd, 2015), (Jeffs et al., 2017), (Lidgett, 2016).

The principal investigator recognized the value in fully understanding strengths, weaknesses, opportunities and threats (SWOT) process (Zaccagnini & White, 2017). The SWOT analysis provided the principal investigator with valuable insights in both navigating and moving forward with the Nurse-Instituted-Care-Intervention (NICI) project. These insights surrounded the lens in which to view potential problems associated with the proposed program and then create the roadmap to navigate both perceived and validated obstacles. The analysis helped to pinpoint resources that were in place or needed to be developed, such as the earlier discussed Point of Contract program that required strong interdisciplinary support. The principal investigator placed significant importance surrounding insights of the analysis. Insights guided by the organization's knowledge of its environment assisted the Senior Team to see the relevance of this program and that ultimately drove them to support all associated strategies of this program.

Table 1.2 SWOT Analyses

Strengths	Weaknesses
Senior leadership support Community Partners Support Organizational Culture in place Strong interdisciplinary support	Resources for staff trainingConsistent community inputProgram sustainabilityTime allotment
Opportunities Move process organizationally wide Include in annual orientation New hire orientation	ThreatsPhysician supportAccountabilityNumber of meetings

Strengths of this project included the people in the organization. The senior team supported the project and agreed to manage fiscally related needs to help ensure project success. Community partners included a growing number of community members who were former patients with concerns surrounding their care; these individuals appreciated the opportunity to attend the Patient Family Advisory Committee (PVAC) meetings at the hospital with the intention of making improvements that support the entire community. The processes were an integral aspect of the organizations aim to change the culture from one of a silo mentality to a strong interdisciplinary team who believes the patient comes first over approximately a two-year period of time.

Weaknesses surrounding the project begin with staff resources. The telemetry department continues to work with reduced staff due to illness, vacations, and call outs. This led to the necessary point of view that patient care comes first and attendance to staff education would follow later. Required education time for the program was three hours plus additional time for participant questions. This meant that nurses would not be able to leave work for class,

which resulted in staff needing to work an extra day or partial day to participate. Community input remains important and meetings remain monthly at this point. Maintaining community input can be challenging with this limitation.

Opportunities included extending this program to all inpatient departments after completion of this pilot program to create consistent change organizationally. Maintaining a consistent process is important. Annual orientation for existing employees and initial hire education will take place for all employees who participate in the clinical environment. The greatest opportunities included avoidance of the unintended consequence of not completing this project, which would be no change to current vulnerabilities the organization was exposed to that result from the patients negative perception of their care upon transition from the hospital to home, and resulting poor Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) Care Transitions scores that correlate to the patient's perception of suboptimal transition from the hospital to home (Sheikh et al., 2018).

Threats included physician support. More than 70% of patients are managed by hospitalists who are often assigned more patients than they can manage comfortably. As a result, they believe they do not have time to sit with their patients. Nurses can quickly deviate from new practice. This problem was potentiated when nurses who floated to the department without proper training and diluted the program; this is equally true of the traveling nurses assigned to the unit. Increased numbers of mandatory leadership meetings also pulled leaders away from the agreed leader rounding to monitor that processes are maintained.

Driving, Restraining, and Sustaining Force

Driving forces for this program included the Senior Leadership Teams expectation and support for the project to improve and sustain Hospital Consumer Assessment of Healthcare

Providers and Systems (HCAHPS) scores. Community partners who sat on the Patient Family Advisory Committee brought multiple concerns from their peer group in the community for the team to mitigate. Results were reported back to the community through multiple venues. Organizational Culture supports accountability and forward movement. This process represents a body of work over the last two years. From the first day that clinical staff received education on the Nurse-Instituted-Care-Interventions (NICI), they acquired a strong desire to work together and drive change that improves the patient perception of their care. The end result of these actions includes organizational drive to move research and resulting evidence-based practice to the bedside.

Restraining forces move beyond the walls of the organization. Community physician support was minimal. Many physicians are nearing retirement and do not want to become involved in new processes, nor do they envision the need. Nurse traveler staff were utilized to expand staffing during projected increased winter needs. Travel nurses frequently do not exhibit the embedded culture of this organization. Scheduling of 102 staff for education within the two week window of the intervention roll-out was difficult when competing with the multiple other educational and regulatory expectations placed upon staff.

Sustaining forces included employee recognition that despite previous efforts to improve care transitions scores they remained low and correlate with the patient's perception of poor care by the community they serve. As a result, employees recognize the importance of both receiving education to become proficient with the Nurse-Instituted-Care-Interventions (NICI) interventions, and in turn be able to provide proper education to their patients that ultimately improve their patient's perception of their care, as well as ensuring they safety return to their

previous environment. Continued leadership rounding provides some of the necessary information and data of how the process is working.

Stakeholders and Project Team

The project stakeholders and team for this project worked in tandem to ensure the successful project outcome. The combined stakeholders and team were the intensive care unit Charge Nurses, four telemetry unit Nurse Champions, four community advisors, Dan Blazar the Patient Experience Officer, Hannah Risvold the Clinical Manager, Dr. Patsy McGuire Cullen the Project Chair, Dr. Jeff Hudson who is the principal investigator's Mentor, and Kris Reddell, Director of Critical Care Services who is the principal investigator. For this project to come to fruition both the project team members and stakeholders overlap. Each has their role and play key roles in the success of this project this is a blended group.

Cost-Benefit Analysis

A cost-benefit analysis was applied to this program by the principal investigator because of the power it exudes to further promote and support the program both to the Senior Team and balance of employees organizationally wide (Zaccagnini & White, 2017). The analysis verified the value of this project moving forward versus maintaining current status. The benefit to the

Table 1.3 Program Cost Analyses:

Projected Initial Program Costs:

Initial purchase of 2,000 discharge booklets	\$1,300.00
Training / Education & CEU's for 102 staff x 3 hours each	\$14,200.00
Training materials for each employee	\$360.00
Lunch for each employee in class	\$600.00
Totals:	\$16,460.00

organization and to the community were considered more important than associated expenses that primarily surrounded the project implementation noted in Table 1.3.

There were minimal projected startup costs as detailed in Appendix E and even less to maintain the program annually. Associated expenses post project included maintaining discharge booklets based for current discharges for 12 months at \$5,400.00 and normal training and education costs considered by the organization as those integrated into current staff education practice and result in no further cost to the organization. Projected revenues are considered significant with the successful implementation when measured against the Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) scores that can equal more than \$300,000 savings annually with avoidance of Centers for Medicare and Medicaid Services (CMS) imposed penalties. It remains important to remember this monetary reflection of success only occurs after the patient's perception of their care reflects improved quality and safety in their care.

Project Objectives

To objectify this project properly requires bringing clarity of the direction the project intends to take in terms of improved quality of patient care and how it plans to manage this (Zaccagnini & White, 2017). Development of the project's mission and vision provided a high-level understanding of expectation and proposed outcomes. Understanding the project's intended outcomes was of key importance. The project aim was in line with the vision of the organization and defined through the goals and objectives to achieve the desired outcome. The mission of the project was to promote safe and quality health care, while ensuring access to high quality health care services. The vision was to strengthen the quality of life through the delivery of integrated health care that promotes care coordination and patient care experience.

Project Goals and Outcomes

The aim of the project was to learn what impact the Nurse-Instituted-Care-Interventions (NICI) interventions would have on adult telemetry unit patients, compared to those who did not have the intervention. The primary project goal for the NICI project was to increase the Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) Care Transition's scores. It assumed this would drive the downstream effect of improving the patients' perception of their care from suboptimal to that of quality. Equally anticipated downstream effects included decreased patient return to the hospital, decreased financial penalties to the hospital, and improved HCAHPS discharge scores. The primary objective for the NICI project was to increase the Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) Care Transition's scores from the 15th percentile to the 50th percentile within the 90-day post intervention period, with a stretch goal of the 90th percentile over the next two years. These scores are measured monthly and reported through the performance improvement committee for review and further recommendations. Scores are compared to hospitals both at the state and national levels through Press Ganey. These scores can validate that adult patients receiving Nurse-Instituted-Care-Interventions for transition to discharge needs are better prepared to leave the hospital and return successfully to their previous environment.

Methodology and Evaluation Plan

The principal investigator chose a practical aim for the project that started with a descriptive research approach to identify frequencies, trends, correlations, and characteristics of the population being studied that supported the project (Zaccagnini & White, 2017). This descriptive research approach promoted accurate and systematic understanding of the impact that the independent variable, "Nurse-Instituted-Care-Interventions (NICI)," in an acute care

inpatient hospital setting had on the dependent variable, "Hospital Consumer Assessment of Healthcare Provides and Systems (HCAHPS)," Care Transitions patient survey score in the discharged adult telemetry unit population. There was a reasonable amount of information surrounding the project problem, but further research was necessary to better understand why previous organizational work to improve care transitions HCAHPS scores failed.

Research Design

The project study design followed a quasi-experimental quantitative methods approach. This was the best approach because it is was a quality improvement project aimed at mitigating a gap in current practice on the adult telemetry unit (Terry, 2018). The quasi-experimental design allowed manipulation of the independent variable. Randomization was not employed in the project, and a convenience sample was utilized. This allowed identification and analysis of causal relationships between the variables in the project (Zaccagnini & White, 2017). Sample size was important for this project as it would be for any project, and the larger the sample size the better representation of the population being sampled (Zaccagnini & White, 2017). For this project in particular, the probability of a large and preferred sample size was not projected to be possible, but was considered to be reflective of a trend. The driver of the projected low numerator was the low number of actual patients discharged from the unit and the limited timeframe for the project.

This is further related to the number of patients who are approached to complete the survey provided by the Press Ganey group. For this project the investigator needed to establish a correlational and causal relationship between two variables (Terry, 2018). Learning what impact the independent variable of, "Nurse-Instituted-Care-Interventions (NICI)," in an acute care inpatient hospital setting has on the dependent variable, "Hospital Consumer Assessment of

Healthcare Provides and Systems (HCAHPS)," Care Transitions patient survey score. Choosing the correct statistical tests was critical for this project because data can be analyzed in multiple ways (Polit, 2010). Some of the most common include the one-sample t-test, paired sample t-test, Chi-square test, Pearson's correlation, Cronbach's alpha, and the one-way Analysis of Variance (ANOVA) tests. It was important to select the tests that were intended to test a single intervention with two levels being the dependent and independent matched groups. The one-sample t-test works well with zero intervention needs. The Chi-square test is appropriate with single interventions and two levels of independent groups. Cronbach's alpha is useful to evaluate reliability of multiple-question Likert scale surveys similar to this one, and that could be important if the associated survey had not been approved and managed through the Centers for Medicare and Medicaid Services (CMS) program (Elliott et al., 2015). The one-way ANOVA test works best with single interventions and two or more levels of independent groups. After consideration of these and other tests it was decided that the primary tests to apply were the paired sample t-test and Pearson's correlation.

To analyze intervention results, inferential statistics were used to see trends from the larger population based on a study of a sample taken from it (Polit, 2010). The Paired Sample T-Test and Pearson correlation tests were chosen because the independent variable will interval level data the two matched groups. Using these tests, the investigator was able to draw inferences about the difference between the adult discharged patients from the telemetry unit who received Nurse-Instituted-Care-Interventions (NICI) and those who did not.

The Paired Samples T-Test is a parametric test used to determine whether there is statistical evidence that the mean difference between paired observations on a particular outcome is significantly different from zero (Polit, 2010). The paired sample t-test provides a measure of

difference between the mean score pre and post on two or more samples. Statistical significance is determined by looking at the p-value which is denoted by "Sig. (2-tailed)". The p-value offers the probability of observing the test results under the null hypothesis. The lower the p-value, the lower the probability of obtaining a result like the one that was observed if the null hypothesis was true. The t-score is a ratio of the difference between two groups and the difference within the groups. The further from 0 the t-score, the more difference there is between the two groups. The bigger the t-value, the more likely it is that the results are repeatable.

The Pearson correlation tests evaluates whether two variables are related without assuming cause-and-effect relationships (Polit, 2010). The Pearson correlation test measured any difference between the mean score between a pre and post or two or more samples that is usually completed with a t-test. The effect size and the Pearson correlation coefficient are measured on a standard scale ranging between -1.0 and +1.0 that helps to interpret the correlation coefficient as representing an effect size. It provides the strength of the relationship between the two variables. The range of -1 represents a strong negative relationship, and 1 a strong positive relationship, with zero no relationship. Effect size is valuable because it provides information about the magnitude of the effect, it provides evidence for definitive conclusions, and used for future research.

Coding is an analytical process in which data in quantitative formats such as questionnaire results are categorized to facilitate analysis (Polit, 2010). The purpose of coding was to transform the data from the pre and post 90-day intervention into a suitable computer-aided analysis used with Statistical Package for the Social Sciences (SPSS). This categorization of information was an important step in preparing data for computer processing with statistical software in SPSS. One code is applied to only one category to provide clarity. Clear guidelines

were used during the coding process to ensure coding was consistent. There were three questions related to Care Transitions that provided raw data from Press Ganey. There were four categories noted in table 1.4 assigned to the questions to choose from by the respondent. Each of the categories was assigned a nominal number aimed to rank the categories.

Table 1.4 Four categories:

Strongly Disagree	1
Disagree	2
Agree	3
Strongly Agree	4

Descriptive statistics were used to describe coefficients that summarize the provided data set that were representative of the entire or a sample of the population (Polit, 2010). The descriptive statistics are further broken down into measures of central tendency and measures of variability or the spread. The measures of central tendency include the mean, median, and mode.

These further include measures of variability that for this project are standard deviation (SD) and standard error of the mean (SEM) (Polit, 2010). The standard deviation (SD) measures the amount of variability, or dispersion, for a subject set of data from the mean, while the standard error of the mean (SEM) measures how far the sample mean of the data is likely to be from the true population mean (Polit, 2010). The SEM is always smaller than the SD.

Descriptive statistics were also used to describe frequencies and percentages for categorical nominal data and standard deviations for continuous data. Using the test result provided data to compute the percentage of change of the mean by taking the pre mean minus the post mean, and dividing the pre mean. Results explain if the post 90-day Nurse-Instituted-Care-Interventions (NICI) intervention improved Care Transition scores as projected over the pre 90-day intervention period. It was important to show the percentage of improvement of the Hospital

Consumer Assessment of Healthcare Provides and Systems (HCAHPS)," Care Transitions patient survey scores.

Population and Sampling Parameters

Inferential statistics uses sample statistics to estimate population parameters (Polit, 2010). The parameters versus sample statistics parameter is a value that describes a characteristic of the entire population, such as the population mean. The statistic is data that describes a sample of that population. A sample is a part, or a subset, of a population. Inferential statistics allow the use of sample statistics to make conclusions about a population.

The investigator used a power analysis to estimate the approximate sample size needed for the project and decrease the incidence of a type II error (Polit, 2010). A significance criterion of .05 was used with a power of .80 to solve for *N*. The population effect size (ES) was completed to understand the strength of the relationship between the variable in the adult discharged patients from the telemetry unit (Polit, 2010). The pooled standard deviation for both groups is represented by the standard deviation.

Probability sampling means that every member of the population has a chance of being selected (Polit, 2010). This will produce results that are representative of the whole population, through this probability sampling technique. During the sampling stages, every member of the whole population has an equal chance of being selected. The principal investigator's organization uses Press Ganey as their survey vendor because it is recognized by the Centers for Medicare and Medicaid Services (CMS) and it provides Press Ganey with their data collection tools (CMS, 2019). This made Press Ganey the logical choice to survey the adult patient's from the Telemetry unit to acquire the Hospital Consumer Assessment of Healthcare Provides and Systems (HCAHPS) survey results and understand if there was a difference in collected data for

the 90-day pre and post intervention period. This HCAHPS survey tool employees a 32-item standardized survey administered to patients discharged from all Medicare-participating hospitals in the United States (http://www.hcahpsonline.org/en/). The phone survey methodology was used for this project's population of patients discharged from the hospital. The survey process followed a standard protocol for quality assurance and sampling adequacy. There were three questions in the Care Transitions section representing this projects data. These questions are listed under Appendix C. The mode of telephone survey was chosen due to the population's average reading level of less than fifth-grade. For this survey process there was not be a need for informed consent because there are no patient identifying criteria involved in the survey process. Press Ganey follows a random sampling methodology to acquire data considered to be the next most efficient method outside of real-time or near-time.

The population studied included adults 18 and older discharged from the hospital setting. Discharged adults from the acute care hospital provide the approved public reporting agency such as Press Ganey with their perception of the care received during their hospital stay, and the resulting data is submitted to the Centers of Medicare and Medicaid Services (CMS), where it is publicly published annually. The sample of the population was adults 18 and older discharged from the Telemetry Unit. The focus on the Telemetry unit discharged adult population was determined through research combined with a completed needs assessment conducted with multiple stakeholders who concluded work was needed to mitigate this problem. Through extensive research it was decided a project aimed at improving Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) scores, with a focus on improvement of the (HCAHPS) Care Transition scores was necessary to mitigate the communities declining perception of their care. There were discharged patients from the telemetry unit who do not meet

established criteria and are excluded. These included patients who were under 18, patients who died in the hospital, patients who were discharged to hospice, patients who were prisoners, short-term observation patients, or patients who had an international address.

Logic Model

The logic model which can be viewed under Appendix B provides proposed causal linkages aimed at providing a brief explanation of the project that is denoted by boxes and processes delineated by directional arrows with the endpoint of creating a visual picture representing the project and focus of the planned interventions (Earp & Ennett 1991). The project question was: Will adult patients receiving Nurse-Instituted-Care-Interventions (NICI) for transition to discharge needs, when compared to the previous three-month baseline, lead to increased Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) Care Transition scores in the Telemetry Unit? Answering this question was the intent of the project.

The input section provides high level resources necessary to implement and evaluate the project (Zaccagnini & White, 2017). The constraints embed potential aspects of the project that would impact the project to the point of not being able to meet needed deadlines, if not mitigated. The activities section defines utilization of resources to achieve projected outcomes. The output section was descriptive of the more immediate project results following project implementation. Short term outcomes supported increased HCAHPS scores in care transitions and discharge information minimally, as well as significant improvements in nurse to patient and care giver communication, with the endpoint of a sustained practice change (Dusek, Pearce, Harripaul, & Lloyd, 2015). Long term outputs include departmental movement toward further culture change being imparted to care givers, with a specific focus on the care transitions providing a downstream impact of discharge process improvement. This led to improved

engagement between the community and hospital. The resulting impact for the population was improved patient safety as patients move back to their original setting and understand their next steps. This further resulted in patients remaining safe in their current environment, and not return to the hospital (Zaccagnini & White, 2017). For the organization, there are decreased financial penalties, collaboration between the community and hospital, and improved HCAHPS scores. HCAHPS discharge scores significantly improved as they apply new skills at the point of care.

Instrument Validity and Reliability

Validity looks at the test or instrument's accuracy and compatibility with the concept that is being measured (Polit, 2010). Statistical validity is the extent to which the conclusions drawn from a statistical test are accurate and reliable. Correlation plays a key role in validity assessments. Correlations are considered significant with a p < .001. If a method measures what it claims to measure, and the results closely correspond to real-world values, then it can be considered valid. Because this is descriptive research, there is not necessarily a need to look at either internal or external validity that is typically dealt with during experimental designs. For this project internal validity was considered because it can support the hypothesis that the independent variable will cause the intended change of the dependent variable. It was important to minimize bias to reduce threats to internal validity and in this study, randomization can help to mitigate issues with the survey process.

Internal validity considers whether the independent variable of Nurse-Instituted-Care-Interventions (NICI) is associated with specific changes in the dependent variable of the Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) Care Transition scores (Terry, 2018). Internal validity supported the hypothesis that the independent variable will

impact the intended change on the dependent variable (Terry, 2018 p. 75). A low statistical value will be a credible risk, but one that can be managed. Since this is a Quality Improvement (QI) project, this was discussed with facility and the Institutional Review Board (IRB) letter was submitted. Discussion addressed the understanding that if this were a field research project, a large "N" would be required to help prevent a type II error (Cullen, n.d.). The investigator for this project is conducting a QI project that mitigated the potential for type II error.

Randomization can help to mitigate issues with survey process (Terry, 2018). Another concern could be changes in the independent variable responsible for the observed variation in the dependent variable. Consideration must be noted that there could be variation or improvement of the dependent variable of HCAHPS scores due to other programs initiated during the same period. Another concern of variation could relate to nurses being floated to the Telemetry unit during the 90-day post Nurse-Instituted-Care-Interventions (NICI) data collection period that are not trained in the new process aimed at supporting the patient to their next destination. External validity includes ensuring the adult population in this project's generalizability of results must not be too specific. Otherwise the projected successful results would not be readily implemented in application to other venues (Terry, 2018).

Reliability is a measure of the stability or consistency of test scores and works to if research findings are reproducible and how well a test measures what it should consistently. Reliability can be assessed in several ways. Calculating the Pearson's r coefficient is a common method used with correlations to test reliability (Polit, 2010). The Pearson's r correlation coefficient provides the degree of correlation between two variables in this study and is one of the most commonly used correlation coefficients. For this project, reliability would be measured by the consistency of the measurement tool from the Centers for Medicare and the Medicaid

(CMS) approved Hospital Consumer Assessment of Healthcare Provides and Systems scores (CMS, 2019). An example of the measurement instrument is located under Appendix C.

Protection of Human Subjects

The primary intent of this project was to learn what impact, "Nurse Instituted-Care-Interventions (NICI)," in and adult telemetry unit will have on the "Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS). The focus was to improve HCAHPS Care Transitions scores. Resulting project data did not contain patient identifiers. All data were reported in aggregate. The investigator maintained all study information in a locked file cabinet or in a password protected computer. The results of this quality improvement project were shared with the facility just prior to completion of the Doctor of Nursing Practice matriculation. Data from the survey were reported to the Centers for Medicare and the Medicaid and are public knowledge. The project was considered a non-research project by the principal investigator. Application for Institutional Review Board Determination of Human Subjects Research Form for Quality Improvement/Quality Assessment Activities exception was submitted for approval on April 22, 2019 and can be viewed under Appendix E. Institutional review board approval was received on May 07, 2019 and can be viewed under Appendix G. The Collaborative Institutional Training Initiative (CITI) certificate can be viewed under Appendix H and was completed February 07, 2019. The final step in this process was to provide a detailed synopsis of this project to the Chief Executive Officer and receive written approval to conduct the body of research in her facility. Permission was received to move forward with the project and a copy of the approval letter can be viewed under Appendix I.

Project Timeline

The comprehensive timeline provided a high-level format that enabled the principal investigator to consistently maintain focus and remain on track with the project. The Project implementation began as planned on July 2, 2019 and both the pre and post 90-day intervention data collection period was completed September 30, 2019. The complete and detailed timeline is located in Appendix D representing the project. Post intervention detail on the timeline depicts completed data collected prior to winter break in December 2019 and ensured that the primary investigator was prepared for the projected January 2020 data input and resulting analysis.

Project Findings and Results

The aim of this project was to answer the question: "Will adult patients receiving Nurse-Instituted-Care-Interventions (NICI) for transition to discharge needs, when compared to the previous three-month baseline, lead to increased HCAHPS Care Transition scores in the Telemetry Unit." The results from the completed analysis support that the project intervention aimed at improvement of HCAHPS Care Transition scores was successful. The answer to the project question is that: Adult patients receiving Nurse-Instituted-Care-Interventions (NICI) for transition to discharge needs, when compared to the previous three-month baseline, lead to increased HCAHPS Care Transition scores in the Telemetry Unit does result in improved Care Transition HCAHPS scores. Actual HCAHPS Care Transition's scores went from the 15th percentile to the 57th percentile within the 90-day post intervention period, which was 7% above that projected.

Inferential statistics testing provided the primary investigator methods to draw conclusions about the adult population of the telemetry unit based on the project sample. (Polit, 2010). This was accomplished using Statistical Package for Social Sciences (SPSS) software to

run the paired samples test. The paired samples t-test yielded statistical evidence the Nurse-Instituted-Care-Intervention (NICI) intervention made a difference. SPSS paired samples t-test is a procedure for testing whether the means of two metric variables are equal in the population. Although "paired samples" suggests that multiple samples are involved, there's really only one sample and two variables. Looking at the SPSS output results there are four tests discussed to support the statement that there is a difference in pre and post intervention scores.

The principal investigator was interested to learn whether the mean scores from two experimental conditions were statistically different from one another. It is of interest to learn what effect the independent variable, "Nurse Instituted Care Interventions (NICI) program", had on the dependent variable of, "Hospital Consumer Assessment of Healthcare Provides and Systems (HCAHPS)," Care Transitions patient survey scores in the adult telemetry unit population that is being measured through repeated samples. Scores ranged from 1 to 4 have been assigned to represent the Strongly Disagree, Disagree, Agree, or Strongly Agree choices as earlier noted. Data input into Statistical Package for Social Sciences (SPSS) have resulted in the following tables to be discussed.

Table 1.5 Paired Samples Statistics:

Paired Samples Statistics – Pre & Post NICI Intervention

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Pre	2.21	118	1.668	.154
	post	3.47	118	.609	.056

The paired samples statistics Table 1.5 displays descriptive statistics for the two conditions. Of primary interest is the mean and the standard deviation. Results of the statistical analysis from table 1.5 support that the project intervention aimed at improvement of Care Transition scores was successful. The Paired Samples Statistics pre mean of 2.21 compared to

post intervention mean of 3.47 supports a positive change in the mean score of 57%. The percentage of change of the mean was computed by taking the pre mean – post mean / pre mean $x 100: 2.21-3.47 / 2.21 \times 100 = 57\%$. This further validated that the post 90-day Nurse-Instituted-Care-Interventions (NICI) intervention improved Care Transition scores by 57% over the pre 90-day intervention period. Note that the value under N refers to the number of participants in each condition and that the same participants take part in both conditions. The Standard Deviation (SD) provided an indication of how far the individual responses from the three questions from the Press Ganey survey data deviate from the mean, and how spread out the responses are (Polit, 2010). It further describes the shape of the distribution or how close the individual data values are from the mean value. The standard error of the mean (SEM) demonstrates how close the sample mean is to the true mean of the overall population. This provided a more complete picture than the mean alone. The SD for pre 90-day intervention of 1.668 versus post intervention of .609 supports that post data indicating that post data responses are less spread out and help validate improved care transition scores. The SEM for pre was .154 verses post of .056 which is smaller and reflects that the actual sample of the SD is not directly affected by sample size. Standard deviation also measures the confidence of the statistical conclusion later discussed. Standard deviation (SD) is sometimes called the standard error of the mean, which is computed as the SD of all means from the known population.

The principal investigator will now explain the results of the paired samples test. The first column provides the sample mean taken from the previously discussed statistics test with the pre 2.21 and post 3.47 within-subject difference (2.21-3.47) between the two variables of -1.263. This represents the difference between the pre and post paired sample statistics.

Table 1.6 Paired Samples Test:

Paired Samples Test - Pre & Post NICI Intervention

	Paired Differences								
				95% Confidence Interval of the					
				Std. Error	Difference				Sig. (2-
		Mean	Std. Deviation	Mean	Lower	Upper	t	df	tailed)
Pair 1	pre - post	-1.263	1.776	.163	-1.586	939	-7.725	117	.000

The standard deviation (SD) is the standard deviations of the two variables, being the independent variable of, "Nurse-Instituted-Care-Interventions (NICI)," in an acute care inpatient hospital setting and the dependent variable of, "Hospital Consumer Assessment of Healthcare Provides and Systems (HCAHPS)," Care Transitions patient survey scores in the adult telemetry unit population (Polit, 2010). So, -1.263 represents the differences for each person sampled, the Statistical Package for Social Sciences (SPSS) has calculated the difference between their total improvements of care transition scores pre and post intervention, and this is the SD of all those differences.

The t-score is a ratio of the difference between two groups and the difference within the groups (Polit, 2010). The t score of -7.725 is large and negative which is a very small number and correlates to a very small significance value of .000. Since there may be numbers beyond the .000 it will be said that is the significance value or p value is less than .001. Evaluating this t-test the principal investigator will reject the earlier mentioned null hypothesis. The null hypothesis is H_0 : p = P and the alternative hypothesis: H_A : $p \neq P$. The table 2 paired samples test table supports that there is enough of a difference between the pre and post intervention means (t = -7.725; p=.000). These data provide enough evidence to suggest this difference between the pre and post intervention scores, are statistically significant and not due to random error. This is determined because the p-value of .000 is less than the level of significance which is .05.

Because this is two tailed test it means that the ultimate hypothesis was there is a difference between the means and the test sample of those receiving the NICI intervention had significantly higher care transition scores. For this DNP project the principal investigator accepts the research question based on the p-value of .000.

The 95% Confidence Interval of the Difference is described as the lower and upper bound of the confidence interval for the mean difference of the mean value of -1.263 (Polit, 2010). Thus, there is 95% confidence that the actual mean difference between the pre and post Nurse-Instituted-Care-Interventions (NICI) intervention is between -1.586 and -.939. Specifically this means we are confident that the score after the NICI intervention will always be significantly improved over those who do not receive the intervention.

The standard error of the mean (SEM) is the estimated standard deviation of 1.776 of the sample mean. If one drew repeated samples of N size 118, you would expect the standard deviation of the sample means to be close to the standard error. The standard deviation of the distribution of sample mean is estimated as the standard deviation of the sample divided by the square root of sample size: 1.776/(sqrt(118)) = .163. Since the SEM measures the variability of the sample mean, the smaller the SEM, the more likely that our sample mean is close to the true population mean.

The degree of freedom (df) signifies the degrees of freedom for the single sample t-test represents the number of valid observations minus 1(Polit, 2010). For this project there were 118 valid observations, minus 1 and thus the df for this project was 117. This is the number of valid (i.e., non-missing) observations used in calculating the t-test.

The Pearson Correlation tests for the strength of the association between two continuous variables (Polit, 2010). Correlation tests check whether two variables are related without

assuming cause-and-effect relationships. By extension, the Pearson Correlation evaluates whether there is statistical evidence for a linear relationship among the same pairs of variables in the population, represented by a population correlation coefficient. The Pearson Correlation is a parametric measure. The Pearson Correlation only reveals associations among continuous variables, and does not provide any inferences about causation, no matter how large the correlation coefficient is.

The Pearson Correlation was used to test whether there was a statistically significant linear relationship between the pre and post values to provide inference whether the association was significant in the population and are represented in Table 1.6. It will also test whether there is a statistically significant linear relationship between the pre and post scores to determine the strength and direction of the association (Polit, 2010).

Table 1.6 Correlations:

Correlations

			е	post	
pre	Pearson Correlation	Cell A	1	Cell B	.001
	Sig. (2-tailed)				.990
	N		118		118
post	Pearson Correlation	Cell C	.001	Cell D	1
	Sig. (2-tailed)		.990		
	N		118		118

Correlation is significant at the 0.01 level (2-tailed)

If one evaluates cell A the Pearson Correlation of pre with itself is (r-1), and the number of nonmissing observations for pre (n=118). If one then reviews the cell B Correlation of pre and post (r=.001), based on n=118 observations with nonmissing pairs. Cell C is the Correlation of pre and post (r=.001) based on n=118 observations with nonmissing pairs. Cell D Correlation of post with itself is (r=1) and the number of nonmissing observations for post is (n=118). It is important to note that cells B and C are identical, because they include information about the

same pair of variables. Cells B and C contain the correlation coefficient for the correlation between pre and post, its p-value, and the number of complete paired observations that the calculation was based on. Correlations in the *main diagonal* or cells A and D are all equal to 1. This indicates that the variable is always being perfectly correlated with itself. Based on these results, the principal investigator will state that pre and post do not have a statistically significant linear relationship because p=.990 which is >.001 (Kent State University Libraries 2017). With a correlation of (1), the direction of the relationship between pre and post are positively correlated; this means that these variables tend to increase together, or that greater pre is associated with greater post. With a p-value of .990 which is >.01 there is no correlation. It should be noted that when you have large samples, including many participants, small correlations turn out to be misleadingly significant.

Frequency Table 1.7 provides the number of times a data value occurs and describes the number of occurrences that occurred within a dataset (Polit, 2010). The principal investigator will introduce the table, identify its purpose, and then describe zero as shown below. Table 1.7 describes the frequency, percent, valid percent, and cumulative percent. Looking at the pre data are the noted frequency, percent, valid percent, and cumulative percent headings. Next, looking at the Valid 0 first row, the response of zero which is the dummy variable, there were 40 pairs that did not have a pre response to the post data. So, when looking at the frequency heading, it describes that there were 40 missing pretests. This means that for the zero there were 40 tests that had 0 and that equals 33.9% of the total. For the one there was 1 test that had 1 that equals .8% of the total. For the two there was 3 pairs. For the three there was 42 pairs, and for the four there was 32 pairs. This method should be applied for interpretation of the balance of the pre and post tables to read and understand the data. Careful analysis of this table validates that pre 90-

day intervention data has a higher frequency of 1 and 2's than the post intervention period. It further provides evidence that post intervention data has more 3 and 4 data points then the pre 90-day data.

Table 1.7 Frequency tables:

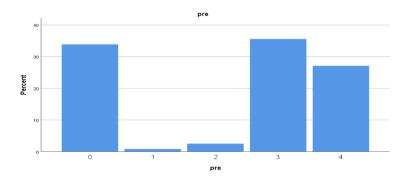
pre									
					Cumulative				
		Frequency	Percent	Valid Percent	Percent				
Valid	0	40	33.9	33.9	33.9				
	1	1	.8	.8	34.7				
	2	3	2.5	2.5	37.3				
	3	42	35.6	35.6	72.9				
	4	32	27.1	27.1	100.0				
	Total	118	100.0	100.0					

post									
					Cumulative				
		Frequency	Percent	Valid Percent	Percent				
Valid	1	1	.8	.8	.8				
	2	4	3.4	3.4	4.2				
	3	51	43.2	43.2	47.5				
	4	62	52.5	52.5	100.0				
	Total	118	100.0	100.0					

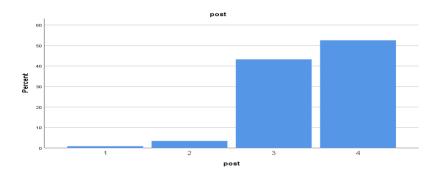
Press Ganey moves collected raw data to the Centers for Medicaid and Medicare (CMS) as required for HCAHPS scores reporting on a monthly basis for it to be compared to other hospitals nationally (CMS, 2019). They give comparable credit only to the data point of 4. Table 1.7 shows that post data points with a 4 occur 54% of the time compared to only 27% of the time with pre data points.

Bar chart 1 provides another method to display frequencies and supports that pre 90-day intervention data had a higher frequency of 1 and 2's than the post intervention period. It further shows that post intervention data had more 3 and 4 data points then the pre 90-day data.

Bar Chart: 1



When Press Ganey moves collected raw data the Centers for Medicaid and Medicare as required for HCAHPS scores reporting on a monthly basis to be compared to other hospitals nationally, they give comparable credit only to the data point of 4 (CMS, 2019). Bar chart 2 supports that post data points with a 4 occur 54% of the time compared to only 27% of the time.



The non-parametric tests of central tendency are the mean, median, and mode and are summary statistics that represent the center point or typical value of a dataset and are typically used for nominal and ordinal tests as compared to the parametric central tendency tests (Polit, 2010). The mean is the average and was derived by adding up all of the values from the excel spreadsheet for both the pre and post data and dividing by the number of observations in the data set. Statistical Package for Social Sciences (SPSS) calculated these data which was a pre mean of 2.21 and post mean of 3.47. The median is the middle value. It is the value that splits the dataset in half and is also known as the 50th percentile. When one has a skewed distribution, the

median is a better measure of central tendency than the mean since outlier scores can alter the mean significantly. The median pre data was 3.00 and the post data was 4.00. In a symmetric distribution, the mean and median both find the center accurately. They are approximately equal. Since post data is about 25% higher than pre data of 3.00, this indicates asymmetric distribution. The mode is the value that occurs the most frequently in a distribution. For this dataset value 4 occurs most frequently, which makes it the mode. With symmetrical distribution for continuous data, the mean, median, and mode are equal. With this skewed distribution, the median of 4 could be considered the best measure of central tendency.

Table 1.8 Statistics:

CI4.	4	4
Sta	US	tics

		pre	post
N	Valid	118	118
	Missing	0	0
Mean		2.21	3.47
Median		3.00	4.00
Mode		3	4
Std. Deviation		1.668	.609
Percentiles	100	4.00	4.00

Limitations

Most research has some limitations because there are certain variables that the researcher is unable to control (Houser & Oman, 2011). Sometimes these limitations are more or less significant, depending on the type of research and the subject of the research. Some possible limitations in projects include a lack of available or reliable data, lack of prior research on the subject, the sample size available, or the measure used to collect the data. Limitations in research methods can cause problems in the research, but typically the research project can

continue despite the limitations present. It is important to minimize bias to reduce threats to internal validity and in this study, randomization would help to mitigate issues with the survey process.

The first limitation for this project surrounded potential changes in the independent variable due to variation of the dependent variable being the HCAHPS scores because the intervention was not consistently followed and may have led to the decline in the second months scores of the 90-day post Nurse-Instituted-Care-Intervention (NICI) interventions data collection period. These nurses were not educated in the NICI process aimed at supporting the patient to their next destination? The next potential limitation was the lack of enough subjects that could shift results. The last potential limitation surrounded the Statistical Package for Social Sciences (SPSS) software. This is considered a short coming of SPSS and a limitation for this project. These data were uploaded from an ExcelTM spreadsheet by the principal investigator and placed into SPSS software to begin the process of running statistical tests. The first data run provided results significantly different than projected. Looking closely at the data process from the point where all data were inputted from Excel TMto SPSS, it was found that SPSS lost 40 pairs of data. As a result, the same data were entered using dummy data because SPSS throws out any pair that does not have a number. Using the dummy variable of zero was a limitation, but does not alter the outcome negatively, but made the test more realistic (Polit, 2010).

Recommendations

Final Nurse-Instituted-Care-Intervention (NICI) project results were discussed with the Principal investigator's Chief Nursing Officer. The discussion included multiple project successes that occurred throughout the program and ended with the resulting statistical data that he agreed supported there was strong enough evidence to suggest the difference between the pre

and post intervention scores were statistically significant and not due to random error. He further agreed that the p-value of .000 which was less than the level of significance which is .05 and the large t-value of -7.725 supports the results are reproducible. As a result of this conversation he and his colleagues in the Senior Team accepted recommendations of next steps that included moving the NICI program to the balance of most inpatient nursing units. This will increase the likelihood that the program will become a consistent practice free of some of the current limitations that can drive variability such as untrained nursing staff who float to the Telemetry unit that have not been oriented to the NICI program. It is further recommended that nurses from all units be provided the same level of education prior to an anticipated hospital-wide activation date. All telemetry unit nurses will receive a short refresher class on the NICI program to reduce the potential of practice variation that may have occurred. The anticipated activation date should be August 1, 2020. It is recommended to use pre 90-day intervention data from May, June, and July and post 90-day intervention data from August, September, and October, and repeat the SPSS analysis for this second NICI program rollout. On January 23, 2020 formal approval was received to move this program forward without changes. The timeline may be moved forward do to conflicting program demands.

Implications for Change

With this body of research now validated through this carefully designed project that included a representative sample and controlled variables, replication by other investigators is encouraged. This work can help other organizations improve their Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) scores in the area of Care Transitions and avoid the growing penalties associated with substandard scores. It is important to keep in mind that the primary reasoning behind improving these scores surrounds healthcare's

duty to empower patients to self-manage their complex health conditions and enable improved quality of self-care for the patient outside of the hospital setting.

It is projected that the implementation of this program will achieve significant results for other organizations working to improve Hospital Consumer Assessment of Healthcare Provides and Systems (HCAHPS) Care Transition scores. This will result in more discharged patients receiving Nurse-Instituted-Care-Interventions (NICI) being better prepared to leave the hospital and return successfully to their previous environment. It can be projected that discharged adult telemetry unit patients will positively respond to the Hospital Consumer Assessment of Healthcare Provides and Systems (HCAHPS) Care Transition surveys. Literature confirmed that providing patients with a multifactorial care transition plan that includes coordination and management of care, can both improve quality and safety of care for the patient, and increase Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) Care Transition scores (Dusek, Pearce, Harripaul, & Lloyd, 2015). This would further provide for improvements in patient-centered care as the program engages patients and their families during delivery of their healthcare and upon transition of care to their previous environment (Bucknall et al., 2016).

Conclusion

The Centers for Medicare and Medicaid Services (CMS) implemented a national survey of patients' perceptions of their care; the survey is mandatory for hospitals seeking CMS reimbursement (Elliott et al., 2015). The implementation of this project resulted in adult patients receiving Nurse-Instituted-Care-Interventions (NICI) for transition to discharge needs being better prepared to leave the hospital and return successfully to their previous environment. It further resulted in adult telemetry unit discharged patients positively responding to the Hospital

Consumer Assessment of Healthcare Provides and Systems (HCAHPS) Care Transition survey with that increased the Care Transition HCAHPS scores for this facility. Increased HCAHPS Care Transition's scores went from the 15th percentile pre intervention period to the 57th percentile post intervention period. These data moves the organization closer to its 90th percentile long-term goal over the next two years. This project demonstrated improvement in patient-centered care since the program engaged patients and their families during delivery of their healthcare and upon transition of care to their previous environment that is important (Bucknall et al., 2016). Literature that confirmed providing patients with multifactorial care transitions plan that includes coordination and management of care, can both improve quality and safety of care for the patient, and increase Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) Care Transition scores is now further validated (Dusek, Pearce, Harripaul, & Lloyd, 2015).

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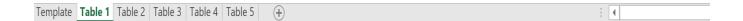
Burlington, MA: Jones & Bartlett Learning.

Appendix A

Student Name: Kris Reddell NR706 DNP Capstone Project Week 13 Systematic Review Table Entries

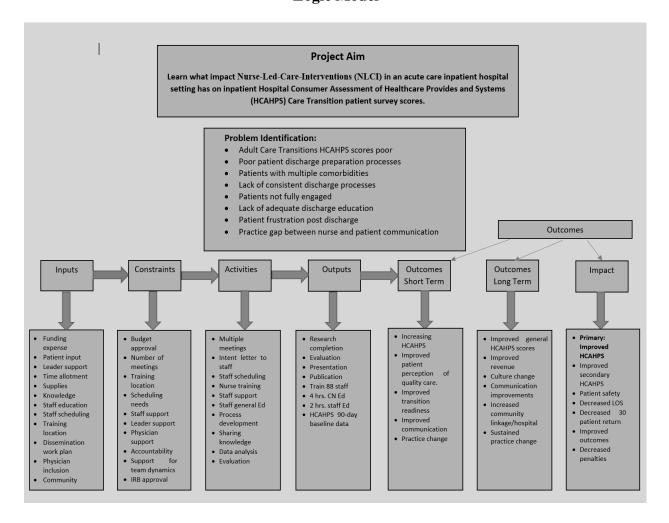
Systematic Review Evidence Table Format [adapted with permission from Thompson, C. (2011). Sample evidence table format for a systematic review. In J. Houser & K. S. Oman (Eds.), Evidence-based practice: An implementation guide for healthcare organizations (p. 155). Sudbury, MA: Jones and Bartlett.]

Article Title and	Dusek, B., Pearce,	Jeffs, L., Kuluski, K.,	Hachem, F., Canar,	Schmocker, R. K.,	Lidgett, C. D. (2016,	George, S.,	Kennedy, B., Craig,
Journal	N., Harripaul, A., &	Law, M., Saragosa,	J., Fullam, F.,	Holden, S. E., Vang,	May). Improving	Rahmatinick, S., &	J. B., Wetsel, M.,
	Lloyd, M. (2015, July	M., Espin, S., Ferris,	Gallan, A. S., &	X., Leverson, G. E.,	the patient	Ramos, J. (2018,	Reimels, E., &
	September). Care	E., Bell, C. M.	Hohmann, S. (2014,	Stafford, L. M., &	experience through	April). Commit to sit	Wright, J. (2013,
	Transitions: A	(2017). Identifying	Fall). The	Winslow, E. R.	a commit to sit	to improve nurse	December). Three
	systematic review	effective nurse-led	relationaships	(2015). Association	service excellence	communication.	nursing
	of best practices.	care transition	between HCAHPS	of patient-reported	initiative. Patient	Critical Care Nurse,	interventions'
	Journal Of Nursing	interventions for	communication and	readiness for	Experience Journal,	38 (2).	impact on HCAHPS
	Care Quality, 30,	older adults with	discharge	discharge and	3, 67-72. Retrieved	https://doi.org/10.	scores. Journal of
	233-239.	complex needs	satisfaction items	hospital consumer	from	4037/ccn2018846	Nursing Care
	https://doi.org/10.1	using a structured	and hospital	assessment of	https://pxjournal.or		Quality, 28 (4), 327
	097/NCQ.	expert panel.	readmissions.	health care	g/journal/vol3/iss2		334.
	0000000000000097	Worldviews on	Patient Experience	providers and	/11/		https://doi.org/10
		Evidence-Based	Journal, 1, 71-77.	systems patient			1097/NCQ.0b013e
		Nursing, 14(2), 136-	Retrieved from	satisfaction scores:			1828b494c
		144.	https://pxjournal.or	A retrospective			
		https://doi.org/10.	g/journal/vol1/iss2	analysis. American			
		111/wvn.12196WV	/12/	College of			
		N2017;14:136-144		Surgeons, 221(6).			
				https://doi.org/10.			
				1016/j.jamcollsurg.			
				2015.09.009			
Author/Year	(Dusek, Pearce,	(Jeffs et al., 2017)	(Hachem, Canar,	(Schmocker et al.,	(Lidgett, 2016)	(George,	(Kennedy, Craig,
	Harripaul, & Lloyd,		Fullam, Gallan, &	2015)		Rahmatinick, &	Wetsel, Reimels, &
	2015)		Hohmann, 2014)			Ramos, 2018)	Wright, 2013)



Appendix B

Logic Model



Appendix C

CAHPS Hospital Survey Administration Explanation and Tool

Overview

This chapter describes guidelines for the Telephone Only mode of the CAHPS Hospital Survey (HCAHPS) administration.

Data collection for sampled discharged patients must be initiated between 48 hours and six weeks (42 calendar days) after discharge. Hospitals/Survey vendors must wait 48 hours to make the first attempt to contact discharged patients. This will allow enough time to pass for the patient to return home and feel settled after his or her hospital stay. The HCAHPS Survey must **not** be administered while the patient is still in the hospital. A total of five telephone attempts must be made to contact non-respondents.

Note: If the hospital/survey vendor learns that a sampled patient is ineligible for HCAHPS, the hospital/survey vendor must not make further attempts to contact that patient. After the sample has been drawn, any patients who are found to be ineligible <u>must not</u> be removed or replaced in the sample. Instead, these patients are assigned the "Final Survey Status" code of ineligible (2, 3, 4, or 5; as applicable). An Administrative Data Record must be submitted for these patients.

Data collection must be closed out for a sampled patient by six weeks (42 calendar days) following the first call attempt. If it is known that the patient may be available in the latter part of the 42 calendar day data collection time period (e.g., patient is on vacation the first 2 or 3 weeks of the 42 calendar day data collection time period and there would be an opportunity to reach the patient closer to the end of the data collection time period), then hospitals/survey vendors must use the entire data collection time period to schedule telephone calls. Telephone call attempts are to be made between the hours of 9 AM and 9 PM respondent time. Patients who receive the HCAHPS Survey must not be offered incentives of any kind. Patients who do not respond to the survey are assigned a "Final Survey Status" code of non-response.

Centers for Medicare & Medicaid Services HCAHPS Quality Assurance Guidelines V15.0 99

Telephone Interviewing Systems Telephone Script

Hospitals/Survey vendors are provided standardized telephone scripts in English, Spanish, Chinese, and Russian (Appendices H through K) for HCAHPS Survey administration. These telephone scripts must be read verbatim without adding any other scripting or tag questions, such as "How are you?" Hospitals/Survey vendors are not permitted to make or use any other language translations of the HCAHPS Telephone Scripts. We strongly encourage hospitals to administer the HCAHPS Survey in both English and Spanish, including offering the official HCAHPS Survey translations (Chinese or Russian) for hospitals with significant patient populations speaking in these languages.

Each hospital/survey vendor must submit a copy of their HCAHPS Telephone Script and interviewer screen shots (including skip pattern logic) for review by the HCAHPS Project Team. Please see the *Oversight Activities* chapter for more detail.

Required for the Telephone Script

The HCAHPS Survey (Questions 1-29) must remain together. The HCAHPS Survey questions cannot be eliminated from the script.

Appendix C – Continued

Telephone Only Survey Administration

Initiate systematic telephone contact with sampled patient(s) between 48 hours and six weeks (42 calendar days) after discharge.

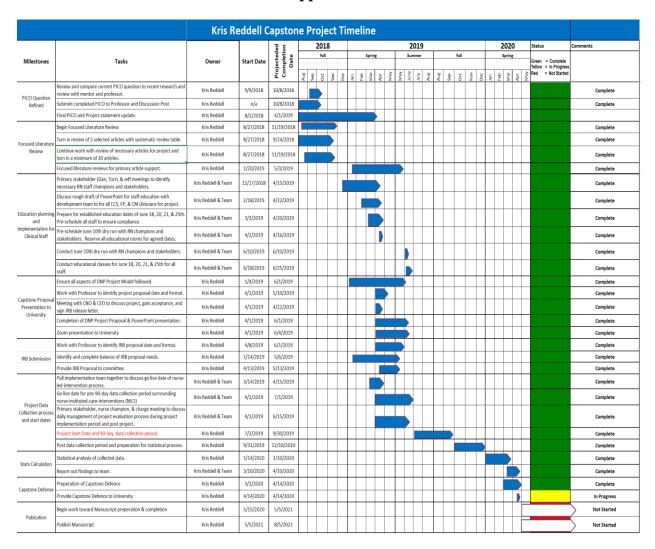
Complete telephone sequence so that a total of five telephone calls are attempted at different times of the day, on different days of the week and in different weeks within the six weeks (42 calendar days) after initiation of the survey (initial contact). The five telephone call attempts must span more than one week (eight or more days) to account for patients who are temporarily unavailable. If it is known that the patient may be available in the latter part of the 42 calendar day data collection time period (e.g., patient is on vacation the first 2 or 3 weeks of the 42 calendar day data collection time period and there would be an opportunity to reach the patient closer to the end of the data collection time period), then hospitals/survey vendors must use the entire data collection time period to schedule telephone calls.

Submit final data files to CMS via the QualityNet Secure Portal by the data submission deadline. No files will be accepted after the submission deadline date.

Global Domain Care Tranistions Questions

20. During this hospital stay, staff took my preferences and those of my family or caregiver into account in deciding what my health care needs would be when I left. 1 Strongly disagree 2 Disagree 3 Agree 4 Strongly agree	21.	When I left the hospital, I had a good understanding of the things I was responsible for in managing my health. 1 Strongly disagree 2 Disagree 3 Agree 4 Strongly agree	22.	When I left the hospital, I clearly understood the purpose for taking each of my medications. 1 Strongly disagree 2 Disagree 3 Agree 4 Strongly agree 5 I was not given any medication when I left the hospital
--	-----	--	-----	---

Appendix D



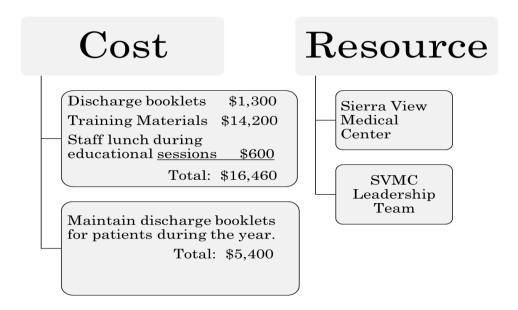
Appendix E: Budget and Requred Resources

This program is considered to have a small initial program implementation expense.

Staff education and training expenses include the associated payroll for the 122 staff and the

Director providing the classes. The program maintains nominal expenses moving forward as you will note in table 1.5.

Table 1.5



Total start-up costs and associated costs to maintain discharge booklets are based on current discharges for 12 months at \$5,400.00. Resources to approve and cover these costs are within the organization, with the Senior Team considering these costs as part of normal operational training and education.

Appendix F



Determination of Human Subjects Research Form for Quality Improvement/Quality Assessment Activities

Project Description: The investigators project intent is to learn what impact, "Nurse-Initiated-Care-Interventions (NICI)," in an acute care inpatient hospital setting will have on, "Hospital Consumer Assessment of Healthcare Provides and Systems (HCAHPS) Care Transition patient survey scores on the Telemetry Unit? **The actual project question is:** Will adult patients receiving Nurse-Initiated-Care Interventions (NICI) for transition to discharge needs, when compared to the previous three-month baseline, lead to increased HCAHPS Care Transition scores on the Telemetry Unit?

- 1. Submit a summary (one page or less) within IRBNet describing the project goals. The abstract must: Please reference the last page.
 - 1) describe the reasons for conducting the proposed project,
 - 2) provide a brief description of the project including objectives, and
 - 3) describe the proposed activities for the project.
- **2.** What organization or department will be reviewed during the quality improvement or quality assessment project? The quality improvement project will be completed at Sierra View Medical Center. The Chief Executive Officer, Donna Hefner will be providing a site approval letter for Regis University IRB indicating there is not an IRB requirement at this facility.
- 3. Answer the questions below in <u>either</u> the **Quality Improvement**/Professional Development Projects section or the Program Evaluation Projects section to determine if your project is actually quality improvement or if it is program evaluation. ALL questions must be answered TRUE to be considered a Quality Improvement Project or a Program Evaluation Project.

Quality Improvement/Professional	Program Evaluation Projects
Development Projects	
The project is intended to improve or evaluate a practice or process within a particular institution, classroom, or specific program.	The evaluation is being initiated based on the request and needs of a partner organization or department for internal purposes only.
	☐True ☐ False
□ True □ False	

The primary intent of the project is not designed to expand knowledge of a scientific	The intent of the evaluation is to improve a specific program and/or to meet
discipline or scholarly field of study.	funding agency requirements.
☐ True ☐ False	☐ True ☐ False
All activities are "best practices", "routine care", or "standard practice" and conducted	The program or intervention being evaluated has been tested and is evidence
by staff where the project will take place.	based (already shown to be effective).
Untested methods and/or interventions are not being evaluated.	
	☐ True ☐ False
☑ True ☐ False	
The project does not involve a control group or randomization of subjects or blinded	The evaluation does not involve randomization of participants, but may
interventions.	involve comparison of variations in
	programs.
	□True □ False
⊠ True □ False	
The project is not funded externally (outside Regis) as a human subjects	The project is not funded externally (outside Regis) as a human subjects
research project.	research project.
☐ True ☐ False	☐ True ☐ False
The project will not involve testing of an	The project will not involve testing of an
experimental intervention, methodology,	experimental drug, device (including medical
drug, device (including medical software or assays), or biologic.	software or assays), or biologic.
☐ True ☐ False	
	☐ True ☐ False
1	1

Proposed Project Goals

The Centers for Medicare and Medicaid Services placed into action a national patient survey to understand patient perceptions of their care in 2008. Surveys are provided to patients after their discharge to determine their perception of their experience while in the

hospital. Low scores drive large penalties for healthcare organizations and correlate to the patient's perception of suboptimal care as they transition from the hospital to home.

The primary intent of the investigator's proposed project is to learn what impact, "Nurse Instituted-Care-Interventions (NICI)," in and adult telemetry unit will have on the "Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS). The focus will be improved HCAHPS Care Transitions scores. This would decrease fiscal vulnerability and ensure patients transition safely to their previous environment.

The Nurse-Instituted-Care-Interventions (NICI) is comprised of three interventions which research supports improves program success over single intervention programs. The first is a Care Transition Booklet that will be provided to the patient by the nurse and referenced daily. Next is the, "The "Commit to Sit" program that encourages the nurse to spend more time with their patient at the bedside while seated with their patient. This promotes patient and family engagement. Last is the "Multidisciplinary Care Team" who meet with the patient just prior to discharge to ensure all objectives are met.

This study would compare the three-month baseline scores (pre-implementation) to the post-implementation HCAHPS Care Transition scores on the Telemetry Unit. This data will not contain any patient identifies. All data will be reported in aggregate. The investigator will keep all study information in a locked file cabinet or in a password protected computer. The results of this QI project will be shared with the facility upon completion of the Doctor of Nursing Practice matriculation.

Appendix G



REGIS.EDU

Institutional Review Board

DATE: May 9, 2019

TO: Kris Reddell, MSN

FROM: Regis University Human Subjects IRB

PROJECT TITLE: [1434067-1] Daily Nurse-Instituted-Care-Interventions (NICI) Impact on Care

Transitions Scores

SUBMISSION TYPE: New Project

ACTION: DETERMINATION OF NOT RESEARCH

DECISION DATE: May 9, 2019

Thank you for your submission of New Project materials for this project. The Regis University Human Subjects IRB has determined this project does not meet the definition of human subject research under the purview of the IRB according to federal regulations.

We will retain a copy of this correspondence within our records.

If you have any questions, please contact the Institutional Review Board at irb@regis.edu. Please include your project title and reference number in all correspondence with this committee.

This letter has been electronically signed in accordance with all applicable regulations, and a copy is retained within Regis University Human Subjects IRB's records.

Appendix H

COLLABORATIVE INSTITUTIONAL TRAINING INITIATIVE (CITI PROGRAM) **COMPLETION REPORT - PART 1 OF 2**

COURSEWORK REQUIREMENTS*

* NOTE: Scores on this Requirements Report reflect quiz completions at the time all requirements for the course were met. See list below for details. See separate Transcript Report for more recent quiz scores, including those on optional (supplemental) course elements.

Kris Reddell (ID: 7753759) • Name: • Institution Affiliation: Regis University (ID: 745) redde568@regis.edu · Institution Email:

• Institution Unit: Nursing 5597301655 • Phone:

· Curriculum Group: Human Research

 Course Learner Group: Social Behavioral Research • Stage: Stage 2 - Refresher Course

100

30497847 · Record ID: · Completion Date: 07-Feb-2019 06-Feb-2022 · Expiration Date: Minimum Passing: 80 · Reported Score*:

REQUIRED AND ELECTIVE MODULES ONLY	DATE COMPLETED	SCORE
SBE Refresher 1 - Instructions (ID: 943)	26-Jan-2019	No Quiz
SBE Refresher 1 – History and Ethical Principles (ID: 936)	26-Jan-2019	2/2 (100%)
SBE Refresher 1 – Federal Regulations for Protecting Research Subjects (ID: 937)	01-Feb-2019	2/2 (100%)
SBE Refresher 1 – Informed Consent (ID: 938)	07-Feb-2019	2/2 (100%)
SBE Refresher 1 – Defining Research with Human Subjects (ID: 15029)	07-Feb-2019	2/2 (100%)
SBE Refresher 1 – Privacy and Confidentiality (ID: 15035)	07-Feb-2019	4/4 (100%)
SBE Refresher 1 – Assessing Risk (ID: 15034)	07-Feb-2019	2/2 (100%)
SBE Refresher 1 – Research with Prisoners (ID: 939)	07-Feb-2019	2/2 (100%)
SBE Refresher 1 – Research with Children (ID: 15036)	07-Feb-2019	2/2 (100%)
SBE Refresher 1 – Research in Educational Settings (ID: 940)	07-Feb-2019	2/2 (100%)
SBE Refresher 1 – International Research (ID: 15028)	07-Feb-2019	2/2 (100%)
Biomed Refresher 1 - Instructions (ID: 960)	07-Feb-2019	No Quiz

For this Report to be valid, the learner identified above must have had a valid affiliation with the CITI Program subscribing institution identified above or have been a paid Independent Learner.

Verify at: www.citiprogram.org/verify/?k687cf098-9e74-4c17-9102-b2c5e9f985ba-30497847

Collaborative Institutional Training Initiative (CITI Program)

Email: support@citiprogram.org Phone: 888-529-5929 Web: https://www.citiprogram.org

Appendix H - Continued

COLLABORATIVE INSTITUTIONAL TRAINING INITIATIVE (CITI PROGRAM) COMPLETION REPORT - PART 2 OF 2

COURSEWORK TRANSCRIPT**

** NOTE: Scores on this <u>Transcript Report</u> reflect the most current quiz completions, including quizzes on optional (supplemental) elements of the course. See list below for details. See separate Requirements Report for the reported scores at the time all requirements for the course were met.

• Name: Kris Reddell (ID: 7753759)
• Institution Affiliation: Regis University (ID: 745)
• Institution Email: redde568@regis.edu

• Institution Unit: Nursing • Phone: 5597301655

• Curriculum Group: Human Research

Course Learner Group: Social Behavioral Research
 Stage: Stage 2 - Refresher Course

• Record ID: 30497847 • Report Date: 07-Feb-2019 • Current Score**: 100

REQUIRED, ELECTIVE, AND SUPPLEMENTAL MODULES	MOST RECENT	SCORE
SBE Refresher 1 - Instructions (ID: 943)	26-Jan-2019	No Quiz
Biomed Refresher 1 - Instructions (ID: 960)	07-Feb-2019	No Quiz
SBE Refresher 1 – History and Ethical Principles (ID: 936)	26-Jan-2019	2/2 (100%)
SBE Refresher 1 – Federal Regulations for Protecting Research Subjects (ID: 937)	01-Feb-2019	2/2 (100%)
SBE Refresher 1 – Defining Research with Human Subjects (ID: 15029)	07-Feb-2019	2/2 (100%)
SBE Refresher 1 – Informed Consent (ID: 938)	07-Feb-2019	2/2 (100%)
SBE Refresher 1 – Assessing Risk (ID: 15034)	07-Feb-2019	2/2 (100%)
SBE Refresher 1 – Privacy and Confidentiality (ID: 15035)	07-Feb-2019	4/4 (100%)
SBE Refresher 1 – Research with Prisoners (ID: 939)	07-Feb-2019	2/2 (100%)
SBE Refresher 1 – Research with Children (ID: 15036)	07-Feb-2019	2/2 (100%)
SBE Refresher 1 – Research in Educational Settings (ID: 940)	07-Feb-2019	2/2 (100%)
SBE Refresher 1 – International Research (ID: 15028)	07-Feb-2019	2/2 (100%)

For this Report to be valid, the learner identified above must have had a valid affiliation with the CITI Program subscribing institution identified above or have been a paid Independent Learner.

Verify at: www.citiprogram.org/verify/?k687cf098-9e74-4c17-9102-b2c5e9f985ba-30497847

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Appendix I



April 22, 2019

Regis University 3333 Regis Boulevard Denver, CO 80221

Subject: Site Approval Letter

To whom it may concern:

This letter acknowledges that I have received and reviewed a request by Kris Reddell to conduct a research project entitled "Nurse-Led-Care-Interventions (NLCI)" at Sierra View Medical Center and I approve of this research to be conducted at our facility.

When the researcher receives approval for his/her research project from the Regis University's Institutional Review Board, I agree to provide access for the approved research project. If we have any concerns or need additional information, we will contact the Regis University's IRB at irb@regis.edu.

Sincerely,

Donna Hefner President/CEO

Appendix J

SIERRA VIEW MEDICAL CENTER

POINT OF CONTACT COMMUNICATION PROGRAM

By providing one point of contact, our nurses can provide the utmost safety to their patients and give their full attention to all patients' needs at all times. It is important that our patients, and their family and friends understand that patient safety is our top priority.

Why SVMC Uses This Program

- When the patient is unable to provide appropriate medical releases for procedures, tests, etc. **
- When the patient is not feeling well and prefers their identified point person to speak on their behalf. **
- Ensures that the nurse is able to concentrate their time with the patient's needs to ensure their safety.

How the Program Works

The following requests do not change actual visitation rules that were previously communicated.

- We ask that the patient (you) identify one individual who will serve as your point person for hospital communication.
- This person will also be the liaison for keeping the patient's family and friends updated and informed.
- We ask that no calls for updates are made to the patient's nurse from 8am-10am and 8pm-10pm.

Point Person Name:			_ Date:	
Password:	M. A.			
Signature of agreement:			Date:	
	(Patient or designed	e)		

For this program to work as intended, it is important to note that in the event the identified point person is calling with excessive frequency, the unit leader will let them know that while we want to ensure they are updated in a timely manner, we cannot always accommodate the frequency of their calls because it interferes with patient care. We will assure them that we will get back to them at our earliest opportunity.

We thank you for your assistance in helping our teams provide you with safe and quality care at all times.

** This Point of Contact Communication Program is not intended to replace or change any previously signed Durable Power of Attorney or other Advance Directives signed.



Form # XXXXXX REV 08/19

PATIENT'S LABEL

Sierra View Medical Center is a service of the Sierra View Local Health Care District.